2009 Compilation

Federal Reserve BULLETIN

The *Federal Reserve Bulletin* (ISSN 0014-9209) is published annually by the Board of Governors of the Federal Reserve System, Washington, DC 20551, and may be obtained from Publications Fulfillment, Mail Stop N-127, Board of Governors of the Federal Reserve System, Washington, DC 20551. Calls pertaining to orders should be directed to Publications Fulfillment (202) 452-3245. E-mails should be sent to Publications-BOG@frb.gov. The *Federal Reserve Bulletin* may also be obtained by using the publications order form available on the Board's website, at www.federalreserve.gov/pubs/order/htm.

The price in the United States and its commonwealths and territories, and in Bolivia, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Haiti, Republic of Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, El Salvador, Uruguay, and Venezuela is $25.00 per copy; elsewhere, $35.00 per copy. Remittance should be made payable to the order of the Board of Governors of the Federal Reserve System in a form collectible at par in U.S. currency.

The content of the *Federal Reserve Bulletin* is also published, as it becomes available, on the Board's website, at www.federalreserve.gov/pubs/bulletin.

Volume 95 □ 2009 Compilation

Federal Reserve BULLETIN

Board of Governors of the Federal Reserve System, Washington, D.C.

Publications Committee

Rosanna Pianalto, *Chair* ☐ Scott G. Alvarez ☐ Sandra F. Braunstein ☐ Elizabeth A. Coleman ☐ Lynn S. Fox ☐ Maureen Hannan ☐ Jennifer J. Johnson ☐ Brian F. Madigan ☐ Stephen R. Malphrus ☐ Patrick M. Parkinson ☐ H. Fay Peters ☐ Louise L. Roseman ☐ D. Nathan Sheets ☐ Michelle A. Smith ☐ David J. Stockton

The *Federal Reserve Bulletin Compilation* is published annually under the direction of the Federal Reserve Board's Publications Committee. This committee is responsible for opinions expressed except in official statements and signed articles. It is assisted by the Publishing & Communications Services Department in the Office of Board Members, under the direction of Lucretia M. Boyer.

Table of Contents

Preface

The *Federal Reserve Bulletin* was introduced in 1914 as a vehicle to present policy issues developed by the Federal Reserve Board. Throughout the years, the *Bulletin* has been viewed as a journal of record, serving to provide the public with data and research results generated by the Board. Authors from the Board's Research and Statistics, Monetary Affairs, International Finance, Banking Supervision and Regulation, Consumer and Community Affairs, Reserve Bank Operations, and Legal divisions contribute to the *Bulletin,* which includes topical research articles, orders on banking applications, and enforcement actions.

Starting in 2004, the *Bulletin* was published quarterly rather than monthly. In 2006, in response to the increased use of the Internet—and in order to release articles and reports in a more timely fashion—the Board discontinued the quarterly print version of the *Bulletin* and began to publish the contents of the *Bulletin* on its public website as the information became available. All articles, orders on banking applications, and enforcement actions that were published in the online *Bulletin* in 2009 are included in this print compilation.

The tables that appeared in the Financial and Business Statistics section of the *Bulletin* from 1914 through 2003 were removed and published monthly as a separate print and online publication, the *Statistical Supplement to the Federal Reserve Bulletin,* from 2004 to 2008. Effective with the publication of the December 2008 issue, the Board discontinued both the print and online versions.

The majority of data published in the *Statistical Supplement* are available elsewhere on the Federal Reserve Board's website at www.federalreserve.gov. The Board has created a webpage that provides a detailed list of links to the most recent data on its site and links to other data provided by the Federal Reserve Bank of New York, the U.S. Treasury, and the Federal Financial Institutions Examination Council.

Online access to the *Bulletin* is free. A free e-mail notification service is available to alert subscribers to the release of articles and orders in the *Bulletin*, as well as press releases, testimonies, and speeches. The notification message provides a brief description and a link to the recent posting.

Federal Reserve Bulletin:
www.federalreserve.gov/pubs/bulletin

Data sources for the tables in the discontinued *Statistical Supplement to the Federal Reserve Bulletin:*
www.federalreserve.gov/pubs/supplement/statsupdata/statsupdata.htm

Subscribe to e-mail notification service:
www.federalreserve.gov/generalinfo/subscribe/notification.htm

Articles

February 2009

Changes in U.S. Family Finances from 2004 to 2007: Evidence from the Survey of Consumer Finances

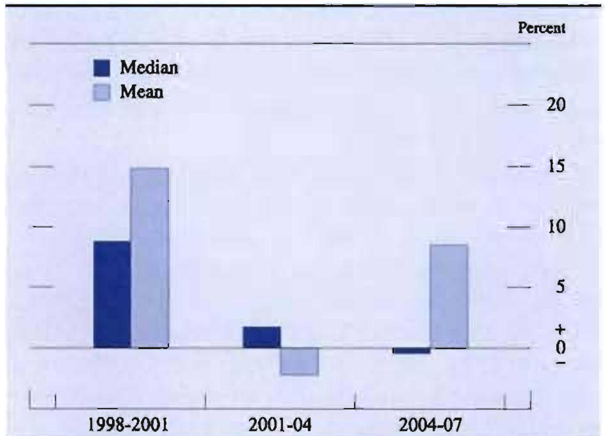
(Errata paragraph added on March 6, 2009; see p. A56)

Brian K. Bucks, Arthur B. Kennickell, Traci L. Mach, and Kevin B. Moore, of the Board's Division of Research and Statistics, prepared this article with assistance from Gerhard Fries, Daniel J. Grodzicki, and Richard A. Windle.

The Federal Reserve Board's Survey of Consumer Finances for 2007 provides insights into changes in family income and net worth since the 2004 survey.[1] The survey shows that, over the 2004–07 period, the median value of real (inflation-adjusted) family income before taxes was little changed; median income had grown slightly in the preceding three-year period (figure 1). Across most demographic groups, the pattern of change was mixed, but a few changes stand out: Income increased markedly for Hispanic or nonwhite families, while it declined substantially for families living in the Northeast or the Midwest and for families headed by a person who was retired or otherwise not working. In contrast to median income, mean income in the recent period climbed 8.5 percent, and the increases were spread broadly across demographic groups. The increases were most striking for families in the top 10 percent of the distribution of net worth and for families headed by a single parent, a person who was self-employed, or a person who was aged 65 to 74. Over the preceding three years, mean income had declined broadly. Differences in the rates of change in the median and mean signal a change in the distribution of income.

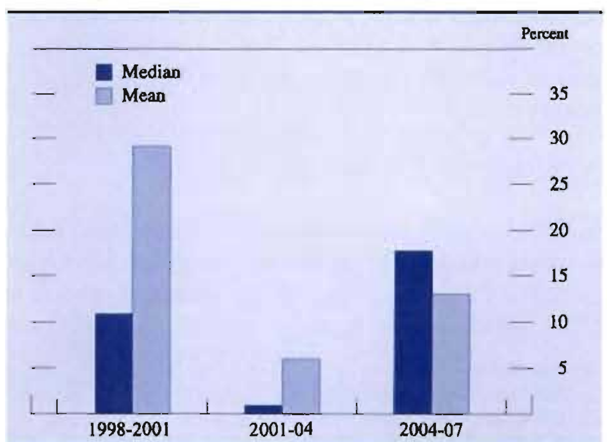
Unlike family income over the 2004–07 period, both median and mean net worth increased; the median rose 17.7 percent, and the mean rose 13.0 percent (figure 2). The increases were fairly broadly spread, but with a number of noteworthy exceptions, some of which entailed changes in medians and means within demographic groups that differed substantially, either in terms of relative magnitude or in the direction of change. Median and mean net worth for the lowest 25 percent of the distribution of net worth plunged 36.8 percent and 43.8 percent, respectively; median net worth for the lowest 20 percent of the distribution of income fell 1.2 percent, but the mean rose 31.8 percent. Percentage increases in

1. Change in median and mean incomes, 1998-2007 SCF



SOURCE: Federal Reserve Board, Survey of Consumer Finances.

2. Change in median and mean net worth, 1998-2007 SCF



SOURCE: Federal Reserve Board, Survey of Consumer Finances.

1. For a detailed discussion of the 2001 and 2004 surveys as well as references to earlier surveys, see Brian K. Bucks, Arthur B. Kennickell, and Kevin B. Moore (2006), "Recent Changes in U.S. Family Finances: Evidence from the 2001 and 2004 Survey of Consumer Finances," *Federal Reserve Bulletin*, vol. 92, pp. A1–A38, www.federalreserve.gov/pubs/bulletin/default.htm.

median and mean net worth were similar for white non-Hispanic families, while the increase in the median for nonwhite or Hispanic families was only about one-fifth of that for other families, and the increase in the mean was nearly three times the size of that for other families. Relative to other regions, both the Northeast and the Midwest saw sizable declines in median net worth. The clearest gains in both median and mean net worth were for high-net-worth families, high-income families, families headed by a person aged 65 or older, and families headed by a person who worked for someone else or who worked in a technical, sales, or service occupation. In the preceding three years, median net worth had increased only slightly (1.0 percent), while the mean had risen more strongly (6.0 percent); over that time, the data had shown a more complex pattern of mixed increases and decreases in wealth.

Unrealized capital gains were a particularly important factor in the increase in net worth over the 2004–07 period. The share of total assets attributable to unrealized capital gains from real estate, businesses, stocks, or mutual funds rose 5.1 percentage points, to 35.8 percent in 2007. Although the level of debt owed by families rose noticeably, debt as a percentage of assets was little changed. The largest percentage change in debt was in borrowing for residential real estate other than a primary residence.

With median and mean debt advancing faster than income, payments relative to income might be expected to increase substantially. In fact, total payments relative to total income barely increased, and the median of payments relative to income rose at a slower pace than it did between 2001 and 2004. Nonetheless, the share of families with high payments relative to their incomes increased notably.

This article reviews these and other changes in the financial condition of U.S. families between 2004 and 2007.[2] The discussion draws on data from the Federal Reserve Board's Survey of Consumer Finances (SCF) for those years; it also uses evidence from earlier years of the survey to place the 2004–07 changes in a broader context.

Economic Background

Families' finances are affected by both their own decisions and the state of the broader economy. Over the 2004–07 period, real gross domestic product (GDP) increased, on average, about 2.5 percent per year. However, toward the end of 2007, the pace of economic activity slowed noticeably. The unemployment rate stood at 5.5 percent in mid-2004, fell to 4.5 percent by late 2006, and then increased to 5.0 percent at the end of 2007. The rate of inflation, as measured by the consumer price index for all urban consumers (CPI-U-RS), increased somewhat over the period, from an annual average of 2.7 percent in 2004 to 2.9 percent in 2007; the increase was driven, in part, by the escalation of food and energy prices.

Developments in financial markets over the three-year period were varied. The major stock market indexes climbed over most of the period before beginning a decline in late 2007; from September 2004 to September 2007, the Wilshire 5000 index rose 41.7 percent. Interest rates on new consumer loans generally increased; for example, the interest rate on a new 30-year fixed-rate mortgage averaged 5.75 percent in September 2004, when about one-half of the interviews for the 2004 survey had been completed, and was 6.38 percent three years later. Yields also rose on liquid deposits, time deposits, and bonds; for example, the rate on a three-month certificate of deposit rose from an average of 1.86 percent in September 2004 to 5.46 percent in September 2007.

The national purchase-only LoanPerformance Home Price Index, produced by First American CoreLogic, increased more than 12.4 percent between September 2004 and September 2007. Price increases varied sharply across areas of the country. The largest increase in the index was a 49.9 percent rise for Hawaii. While most states saw an increase, the index declined 8.0 percent for Michigan and by smaller amounts for Ohio, Rhode Island, and Massachusetts. Homeownership rates were little changed over the period after a long and steady increase. Nonetheless, the number of homeowners rose with population growth, and subprime mortgages are generally thought to have played an important part in financing home purchases.

No major tax legislation was passed during the period, but other important institutional changes occurred. The Bankruptcy Abuse Prevention and Consumer Protection Act of April 2005 altered the rules for liquidation of consumers' liabilities under bankruptcy. In particular, the new rules require that consumers with a certain level of income pay back at least part of their outstanding debts, whereas in the past the entire amount might have been liquidated. The law also mandated financial counseling for anyone declaring bankruptcy. Continuing innovation in financial markets over the period supported further

---

2. See box "The Data Used in This Article" for a general description of the data. The appendix to this article provides a summary of key technical aspects of the survey. See also Bucks, Kennickell, and Moore, "Recent Changes in U.S. Family Finances."

proliferation of hedge funds and other sophisticated instruments for money management.

Several demographic shifts had important consequences for the structure of the population. The aging of the baby-boom population from 2004 to 2007 drove a 12.5 percent increase in the population aged 55 to 64. Overall population growth was about 2.9 percent, and, according to figures from the U.S. Census Bureau, 37.3 percent of that growth was due to net immigration. Also according to Census Bureau estimates, the number of households increased 2.3 percent—about the same pace as in the 2001–04 period—and the average number of persons per household rose slightly, from 2.59 people in 2004 to 2.61 in 2007.

Only a small fraction of the 2007 SCF interviews took place in 2008. Thus, the survey data are largely unaffected by the declines in economic activity in 2008, the fall in the market price of corporate equities, and the continued slide in house prices. Nonetheless, readers' views of the survey results may be colored by the knowledge that, in the first three quarters of 2008, a broad measure of the value of corporate equities declined more than one-third, and house prices overall declined approximately an additional 5 percent. At a few places in the article, an attempt is made to gauge the first-order effects of these changes on families' finances.

Income

The change in real before-tax family income between 2004 and 2007 diverged from the pattern seen in the preceding three-year period.[3] While median income declined slightly over the more recent period, the mean rose 8.5 percent (table 1).[4] Over the preceding three-year period, the median had increased 1.7 percent, and the mean had declined 2.3 percent. The changes for both periods stand in much stronger contrast to a pattern of substantial increases in both the median and the mean dating to the early 1990s.

Underlying the recent change was a shift in the composition of income between 2004 and 2007 (table 2). The share of family income attributable to wages and salaries fell 5.2 percentage points over the period, which approximately balanced a 3.5 percentage point rise in the share of realized capital gains and a 2.7 percentage point increase in income from self-employment, a farm, or a business. These shifts were seen across all wealth groups except the group between the 75th and 90th percentiles. As may be seen across the years shown in the table, wage income tends to be a smaller factor for the highest wealth group.

Some patterns of income distribution hold generally across the years of SCF data shown in table 1.[5] Across age classes, median and mean incomes show a life-cycle pattern, rising to a peak in the middle age groups and then declining for groups that are older and increasingly more likely to be retired. Couples tend to have higher incomes than single persons, in part because couples have more potential wage earners. Income also shows a strong positive association with education; in particular, incomes for families headed by a person who has a college degree are substantially higher than for those with any lesser amount of schooling. Incomes of white non-Hispanic families are substantially higher than those of other families.[6] Families headed by a self-employed worker consistently have the highest median and mean incomes of all work-status groups. Families headed by a person in a managerial or professional

3. To measure income, the interviewers request information on the family's cash income, before taxes, for the full calendar year preceding the survey. The components of income in the SCF are wages; self-employment and business income; taxable and tax-exempt interest; dividends; realized capital gains; food stamps and other, related support programs provided by government; pensions and withdrawals from retirement accounts; Social Security; alimony and other support payments; and miscellaneous sources of income for all members of the primary economic unit in the household.

4. Over the 2004–07 period, estimates of inflation-adjusted household income for the previous year from the Current Population Survey (CPS) of the Census Bureau show an increase in both the median (1.4 percent) and the mean (2.7 percent). Typically, the SCF shows a higher level of mean income than does the CPS; for 2007, the SCF yields an estimate of $84,300, while the CPS yields an estimate of $68,400. As discussed in more detail in the appendix, the two surveys differ in their definitions of the units of observation and in other aspects of their methodologies. Most relevant here is the fact that a CPS household can contain more people than a corresponding SCF family. If the SCF measure is expanded to include income of household members not included in the SCF definition of a family, the median rises 2.7 percent (to $49,400) over the three-year period, and the mean rises 11.0 percent (to $86,900). The substantial difference in mean levels is likely the result of the truncation of large values in the CPS data above a certain amount, which is done with the intent of minimizing the possibility that participants in that survey might be identifiable.

5. Tabular information from the survey beyond that presented in this article is available at www.federalreserve.gov/pubs/oss/oss2/2007/scf2007home.html. This information includes versions of all of the numbered tables in this article, for all of the surveys from 1989 to 2007 where the underlying information is available. Mean values for the demographic groups reported in this article are also provided. The estimates of the means, however, are more likely to be affected by sampling error than are the estimates of the medians. In addition, some alternative versions of the tables in this article are given. For those who wish to make further alternative calculations, this website provides a utility ("tabling wizard") that may be used to compute estimates of customized tables based on the variables analyzed in this article, as well as data files that may be used as inputs to more sophisticated statistical software.

6. See the appendix for a discussion of racial and ethnic identification in the SCF.

1. Before-tax family income, percentage of families that saved, and distribution of families, by selected characteristics of families, 1998–2007 surveys

Thousands of 2007 dollars except as noted

Family characteristic	1998 Income Median	1998 Income Mean	1998 Percentage of families that saved	1998 Percentage of families	2001 Income Median	2001 Income Mean	2001 Percentage of families that saved	2001 Percentage of families
All families	**42.6**	**67.7**	**55.9**	**100.0**	**46.7**	**79.5**	**59.2**	**100.0**
	(1.0)	(1.4)			(.9)	(2.3)		
Percentile of income								
Less than 20	10.5	10.1	32.1	20.0	12.0	11.7	30.0	20.0
20–39.9	25.8	25.7	45.5	20.0	28.5	28.2	53.4	20.0
40–59.9	42.6	43.3	56.1	20.0	46.7	47.1	61.3	20.0
60–79.9	67.8	69.1	67.9	20.0	75.8	76.2	72.0	20.0
80–89.9	100.6	101.3	73.7	10.0	115.4	114.7	74.9	10.0
90–100	166.3	279.5	82.0	10.0	198.3	354.1	84.3	10.0
Age of head (years)								
Less than 35	34.9	46.0	53.0	23.3	39.1	51.7	52.9	22.7
35–44	53.6	76.4	57.3	23.3	60.1	90.2	62.3	22.3
45–54	64.5	88.9	57.8	19.2	63.7	109.0	61.7	20.6
55–64	49.1	91.4	61.1	12.8	52.9	101.7	62.0	13.2
65–74	31.0	59.5	56.3	11.2	32.5	68.0	61.8	10.7
75 or more	21.3	37.2	48.6	10.2	26.2	43.0	55.5	10.4
Family structure								
Single with child(ren)	25.8	33.6	42.1	6.8	28.4	36.1	47.3	6.0
Single, no child, age less than 55	29.7	37.6	48.3	20.4	31.5	43.5	52.5	20.4
Single, no child, age 55 or more	21.0	33.0	47.8	14.3	19.7	37.9	49.4	13.3
Couple with child(ren)	64.5	85.6	62.1	12.3	66.1	98.6	63.3	11.8
Couple, no child	61.4	92.0	62.1	46.2	67.1	106.8	65.3	48.5
Education of head								
No high school diploma	19.8	27.6	39.5	16.5	19.8	29.4	38.7	16.0
High school diploma	37.2	47.1	53.7	31.9	39.7	52.4	56.7	31.7
Some college	45.2	64.7	56.7	18.5	47.9	64.9	61.7	18.3
College degree	70.0	109.0	65.6	33.2	79.4	136.4	70.0	34.0
Race or ethnicity of respondent								
White non-Hispanic	48.6	75.4	60.0	76.8	52.9	90.0	63.1	75.4
Nonwhite or Hispanic	29.7	42.3	42.3	23.2	30.1	47.6	47.4	24.6
Current work status of head								
Working for someone else	51.6	68.2	59.8	59.2	55.3	78.8	61.6	60.9
Self-employed	67.1	139.2	61.1	11.3	74.1	161.8	70.4	11.7
Retired	24.5	42.0	48.7	24.4	24.6	46.8	50.6	22.9
Other not working	14.8	27.7	33.3	5.1	19.3	42.6	42.3	4.5
Current occupation of head								
Managerial or professional	77.5	123.1	68.4	24.2	83.2	146.4	72.4	27.1
Technical, sales, or services	39.1	59.7	55.6	21.0	42.1	62.3	58.2	23.7
Other occupation	47.8	54.2	55.6	25.3	48.1	57.3	56.6	21.8
Retired or other not working	22.6	39.7	46.1	29.5	24.2	46.1	49.2	27.4
Region								
Northeast	45.2	77.6	53.5	19.3	48.3	90.9	58.1	19.0
Midwest	41.9	62.4	58.3	23.6	51.3	75.7	63.0	23.0
South	40.2	63.0	55.0	35.7	42.1	71.8	57.3	36.2
West	46.1	72.7	56.9	21.3	47.6	86.6	59.5	21.8
Urbanicity								
Metropolitan statistical area (MSA)	45.2	71.9	56.3	85.3	48.1	84.6	59.7	86.2
Non-MSA	35.6	43.2	53.6	14.7	35.4	47.9	56.3	13.8
Housing status								
Owner	55.7	84.9	62.2	66.2	60.9	99.5	66.7	67.7
Renter or other	25.8	34.0	43.4	33.8	28.9	37.7	43.6	32.3
Percentile of net worth								
Less than 25	20.3	25.9	36.3	25.0	23.0	28.1	34.5	25.0
25–49.9	38.7	43.1	50.3	25.0	40.9	46.2	54.2	25.0
50–74.9	51.6	59.6	61.8	25.0	59.8	68.9	68.2	25.0
75–89.9	72.3	86.0	72.0	15.0	81.4	91.9	77.4	15.0
90–100	112.5	226.6	80.0	10.0	147.9	299.5	84.1	10.0

NOTE: For questions on income, respondents were asked to base their answers on the calendar year preceding the interview. For questions on saving, respondents were asked to base their answers on the 12 months preceding the interview.

Percentage distributions may not sum to 100 because of rounding. Dollars have been converted to 2007 values with the current-methods consumer price index for all urban consumers (see box "The Data Used in This Article"). See the appendix for details on standard errors (shown in parentheses below the first row of data for the means and medians here and in table 4) and for definitions of family and family head.

1. Before-tax family income, percentage of families that saved, and distribution of families, by selected characteristics of families, 1998–2007 surveys—*Continued*

Thousands of 2007 dollars except as noted

Family characteristic	2004				2007			
	Income		Percentage of families that saved	Percentage of families	Income		Percentage of families that saved	Percentage of families
	Median	Mean			Median	Mean		
All families	**47.5** (.9)	**77.7** (1.3)	**56.1**	**100.0**	**47.3** (.8)	**84.3** (1.3)	**56.5**	**100.0**
Percentile of income								
Less than 20	12.2	11.9	34.0	20.0	12.3	12.3	33.7	20.0
20–39.9	28.2	28.6	43.3	20.0	28.8	28.3	45.1	20.0
40–59.9	47.5	47.7	54.5	20.0	47.3	47.3	57.8	20.0
60–79.9	74.9	76.0	69.3	20.0	75.1	76.6	66.8	20.0
80–89.9	115.1	117.0	77.8	10.0	114.0	116.0	72.9	10.0
90–100	203.0	331.9	80.6	10.0	206.9	397.7	84.8	10.0
Age of head (years)								
Less than 35	36.1	49.6	55.0	22.2	37.4	51.7	58.9	21.7
35–44	54.9	81.1	58.0	20.6	56.6	83.7	56.4	19.6
45–54	67.1	103.6	58.5	20.8	64.2	112.4	55.8	20.8
55–64	59.8	110.2	58.5	15.2	54.6	111.2	58.4	16.8
65–74	36.6	65.6	57.1	10.5	39.0	92.4	56.7	10.5
75 or more	26.0	44.9	45.7	10.7	22.8	45.7	49.4	10.6
Family structure								
Single with child(ren)	31.6	38.1	40.7	7.2	30.9	46.0	45.8	6.4
Single, no child, age less than 55	30.5	40.8	49.2	20.0	30.9	44.9	50.1	19.3
Single, no child, age 55 or more	23.4	37.4	46.0	14.8	24.6	36.3	48.0	15.4
Couple with child(ren)	71.1	99.8	61.6	12.6	67.9	105.4	61.8	12.3
Couple, no child	67.7	107.4	63.3	45.4	66.5	116.2	62.0	46.5
Education of head								
No high school diploma	21.3	28.5	35.9	14.4	22.2	31.3	41.6	13.5
High school diploma	39.3	49.2	54.0	30.6	36.7	51.1	51.1	32.9
Some college	45.1	61.6	51.0	18.4	45.6	68.1	53.6	18.4
College degree	80.5	129.1	68.3	36.6	78.2	143.8	68.6	35.3
Race or ethnicity of respondent								
White non-Hispanic	54.3	88.6	60.1	72.2	51.8	96.9	58.8	70.7
Nonwhite or Hispanic	32.7	49.4	45.6	27.8	36.8	53.7	50.8	29.3
Current work status of head								
Working for someone else	54.1	77.0	59.2	60.1	56.6	83.1	60.3	59.9
Self-employed	73.3	155.5	68.7	11.8	75.7	191.8	62.8	10.5
Retired	26.8	47.5	44.0	23.7	24.7	51.1	46.6	25.0
Other not working	22.6	41.0	44.9	4.4	20.4	35.4	45.4	4.6
Current occupation of head								
Managerial or professional	84.8	140.9	67.7	28.3	85.4	156.1	70.2	27.5
Technical, sales, or services	41.1	58.3	55.4	22.1	44.2	67.6	55.6	21.8
Other occupation	49.6	55.6	57.3	21.6	49.4	57.9	53.6	21.1
Retired or other not working	26.2	46.5	44.1	28.1	23.8	48.7	46.4	29.6
Region								
Northeast	55.9	96.1	59.5	18.8	51.4	100.4	53.5	18.3
Midwest	49.6	74.1	59.9	22.9	44.2	74.9	58.2	22.8
South	40.6	68.0	52.5	36.3	42.9	79.3	56.9	36.7
West	50.7	81.9	55.2	22.0	51.9	88.7	56.3	22.1
Urbanicity								
Metropolitan statistical area (MSA)	50.8	84.5	56.9	82.9	50.4	91.3	57.0	82.9
Non-MSA	32.8	45.0	52.3	17.1	36.0	50.2	54.0	17.1
Housing status								
Owner	60.6	96.0	62.3	69.1	61.7	105.6	60.9	68.6
Renter or other	27.1	37.0	42.3	30.9	27.8	37.5	46.7	31.4
Percentile of net worth								
Less than 25	22.6	27.5	34.8	25.0	23.6	29.2	40.4	25.0
25–49.9	40.6	46.4	53.6	25.0	41.0	46.5	52.9	25.0
50–74.9	57.5	66.5	62.2	25.0	56.7	66.6	59.0	25.0
75–89.9	84.6	96.5	72.4	15.0	82.3	92.9	69.0	15.0
90–100	157.9	281.4	76.0	10.0	158.4	347.5	80.2	10.0

The Data Used in This Article

Data from the Survey of Consumer Finances (SCF) are the basis of the analysis presented in this article. The SCF is a triennial interview survey of U.S. families sponsored by the Board of Governors of the Federal Reserve System with the cooperation of the U.S. Department of the Treasury. Since 1992, data for the SCF have been collected by NORC, a research organization at the University of Chicago, roughly between May and December of each survey year.

The majority of statistics included in this article are related to characteristics of "families." As used here, this term is more comparable with the U.S. Census Bureau definition of "households" than with its use of "families," which excludes the possibility of one-person families. The appendix provides full definitions of "family" for the SCF and the associated family "head." The survey collects information on families' total income before taxes for the calendar year preceding the survey. But the bulk of the data cover the status of families as of the time of the interview, including detailed information on their balance sheets and use of financial services as well as on their pensions, labor force participation, and demographic characteristics. Except in a small number of instances (see the appendix and the text for details), the survey questionnaire has changed in only minor ways relevant to this article since 1989, and every effort has been made to ensure the maximum degree of comparability of the data over time.

The need to measure financial characteristics imposes special requirements on the sample design for the survey. The SCF is expected to provide reliable information both on attributes that are broadly distributed in the population (such as homeownership) and on those that are highly concentrated in a relatively small part of the population (such as closely held businesses). To address this requirement, the SCF employs a sample design, essentially unchanged since 1989, consisting of two parts: a standard, geographically based random sample and a special oversample of relatively wealthy families. Weights are used to combine information from the two samples to make estimates for the full population. In the 2007 survey, 4,422 families were interviewed, and in the 2004 survey, 4,522 were interviewed.

This article draws principally upon the final data from the 2007 and 2004 surveys. To provide a larger context, some information is also included from the final versions of earlier surveys.[1] Differences between estimates from earlier surveys as reported here and as reported in earlier *Federal Reserve Bulletin* articles are attributable to additional statistical processing, correction of minor data errors, revisions to the survey weights, conceptual changes in the definitions of variables used in the articles, and adjustments for inflation. In this article, all dollar amounts from the SCF are adjusted to 2007 dollars using the "current methods" version of the consumer price index for all urban consumers (CPI-U-RS). The appendix provides additional detail on the adjustments.

The principal detailed tables describing asset and debt holdings focus on the percentage of various groups that have such items and the median holding for those that have them.[2] This conditional median is chosen to give a sense of the "typical" holding. Generally, when one deals with data that exhibit very large values for a relatively small part of the population—as is the case for many of the items considered in this article—estimates of the median are often statistically less sensitive to such outliers than are estimates of the mean.

One liability of using the median as a descriptive device is that medians are not additive; that is, the sum of the medians of two items for the same population is not generally equal to the median of the sum (for example, median assets less median liabilities does not equal median net worth). In contrast, means for a common population are additive. Where a comparable median and mean are given, the gain of the mean relative to the median may usually be taken as indicative of relatively greater change at the top of the distribution; for example, when the mean increases more rapidly than the median, it is typically taken to indicate that the values in the top of the distribution rose more rapidly than those in the lower part of the distribution.

To provide a measure of the significance of the developments discussed in this article, standard errors due to sampling and imputation for missing data are given for selected estimates. Space limits prevent the inclusion of the standard errors for all estimates. Although we do not directly address the statistical significance of the results, the article highlights findings that are significant or are interesting in a broader context.

1. Additional information about the survey is available at www.federalreserve.gov/pubs/oss/oss2/2007/scf2007home.html.

2. The median of a distribution is defined as the value at which equal parts of the population considered have values larger or smaller.

2. Amount of before-tax family income, distributed by income sources, by percentile of net worth, 2004 and 2007 surveys

Percent

Income source	Percentile of net worth					All families
	Less than 25	25–49.9	50–74.9	75–89.9	90–100	
2004 Survey of Consumer Finances						
Wages	82.1	85.4	79.3	72.4	53.0	69.7
Interest or dividends	†	.3	.7	1.8	8.2	3.5
Business, farm, self-employment	1.1	2.7	5.0	8.5	21.5	10.9
Capital gains	†	†	†	1.2	8.3	3.2
Social Security or retirement	9.6	9.2	13.2	15.4	8.2	10.9
Transfers or other	7.2	2.5	1.7	.7	.8	1.8
Total	**100**	**100**	**100**	**100**	**100**	**100**
2007 Survey of Consumer Finances						
Wages	79.9	79.9	77.8	72.4	46.2	64.5
Interest or dividends	.1	.3	.7	1.9	7.8	3.7
Business, farm, self-employment	1.8	5.3	6.9	7.9	24.7	13.6
Capital gains	.1	.4	1.3	2.9	14.4	6.7
Social Security or retirement	9.5	10.9	11.8	14.1	6.2	9.6
Transfers or other	8.6	3.2	1.6	.8	.7	1.9
Total	**100**	**100**	**100**	**100**	**100**	**100**

† Less than 0.05 percent.

occupation have higher incomes than families in the three remaining occupation categories. Income is also higher for homeowners than for other families, and it is progressively higher for groups with greater net worth.[7] Across the four regions of the country as defined by the Census Bureau, the ordering of median incomes over time has varied, but the means generally show higher values for the Northeast and the West than for the Midwest and the South. Finally, families living in metropolitan statistical areas (MSAs), which are relatively urban areas, have higher median and mean incomes than those living in rural areas.[8]

Income by Demographic Category

Across the income distribution between 2004 and 2007, only the second quintile and the top decile experienced substantial percentage changes in median income; the medians for both groups rose approximately 2 percent, though the dollar amount of the increase for the second quintile was only about $600.[9] For other groups, changes in the median varied in direction, and in all instances they were less than 1 percent in absolute value. Similarly, the direction of changes in mean income was mixed, and the only substantial increase in dollar terms occurred for the top decile of the income distribution; the mean for that group rose almost 20 percent, more than twice the rate of change in the overall mean. Median income measured in the survey had been relatively flat for all income groups since 2001 after an earlier period of growth before 1998. Over this longer period, the rise in the mean was greatest for the top decile of the income distribution despite a dip for this group between 2001 and 2004. For the rest of the distribution, the increase of the mean more closely resembled that of the median.

Substantial proportional gains or losses in median income occurred across all age groups in the recent three-year period. The median declined for the age groups between 45 and 64 and for the 75-or-more age group, while it rose for the rest. For the 75-or-more age group, the decline was 12.3 percent. Since 1998, the age groups between 55 and 74 experienced the largest proportional rises in the median. In contrast to the recent changes in the median, the mean rose for all groups but especially for the 45-to-54 age group (8.5 percent) and the 65-to-74 age group (40.9 percent); these groups had experienced a decline in the mean between 2001 and 2004.

By family structure, median incomes declined over the 2004–07 period for all groups except childless single families (those headed by a person who was neither married nor living with a partner); median income rose the most (5.1 percent) for childless families headed by a person aged 55 or older. The largest decline (4.5 percent) was for couples (families in which the family head was either married or living with a partner) with children. In contrast, mean income rose for all types of families except childless single families headed by a person aged 55 or older, for whom it fell 2.9 percent. Mean income rose the most (20.7 percent) for single families with children.

Across education groups, median incomes rose only for families headed by a person with less than a high school diploma and for families headed by a

7. In this article, a family is treated as a homeowner if at least one person in the family owns at least some part of the family's primary residence.

8. For the Office of Management and Budget's definition of MSAs, see www.whitehouse.gov/omb/bulletins/fy2008/b08-01.pdf.

9. Selected percentiles of the income distribution for the past four surveys are provided in the appendix, along with definitions of selected subgroups of the distribution.

person with only some college education (who attended college but did not receive a degree); the increase of median income was relatively strong for the former group—4.2 percent—but that group still had the lowest median income of all education groups. Mean incomes rose substantially for all education groups after declines in the preceding three-year period. The increases were particularly pronounced for the groups with families headed by a person with only some college education (10.6 percent) or by a person with a college degree (11.4 percent).

In the 2004–07 period, the median income for white non-Hispanic families fell 4.6 percent, and the mean rose 9.4 percent. In contrast, the median for nonwhite or Hispanic families rose 12.5 percent, and the mean rose 8.7 percent. However, both the median and the mean values for nonwhites or Hispanics were substantially lower than the corresponding figures for non-Hispanic whites. Since 1998, the total gain in median income for nonwhite or Hispanic families was 23.9 percent, whereas it was 6.6 percent for other families; the gain in the mean over this period was larger and more similar for the two groups—27.0 percent for nonwhite or Hispanic families and 28.5 percent for other families.[10]

Median income rose from 2004 to 2007 for families headed by a person who was working for someone else (a rise of 4.6 percent) or was self-employed (a rise of 3.3 percent); the median fell for the retired group (7.8 percent) and the other-not-working group (9.7 percent).[11] In contrast, the mean over this period rose for all groups except the other-not-working group, for which it fell 13.7 percent. Of the increases in the mean, the largest proportional change was the 23.3 percent rise for the self-employed group—the group with the highest levels of median and mean income by far. Over the previous three years, median incomes had risen only for the retired and other-not-working groups, and the mean had risen only for the retired group.

Across occupation groups, median income rose moderately for families headed by a person working in a technical, sales, or service job (an increase of 7.5 percent), and it fell strongly for families headed by a person who was not working (a decline of 9.2 percent). For the other-occupation group, a group that predominantly comprises workers in traditional blue-collar occupations, the median was barely changed. In contrast, mean income rose for all groups, particularly for families headed by a person in a managerial or professional position (an increase of 10.8 percent) and for those headed by a person in a technical, sales, or service position (an increase of 16.0 percent), the groups with the highest mean incomes in 2007. Since 1998, the only substantial changes in the median were the increases for the managerial or professional group and for the technical, sales, or service group. The means for the groups showed a general pattern of increase over the period since 1998.

By region, median family incomes in the Northeast and the West converged from different directions to about the same value in 2007, and the medians in the Midwest and the South similarly converged. The median increased between 2004 and 2007 for families living in the South and the West, and it fell for others. The 8.1 percent decline for families in the Northeast offset only about one-half of a steep increase between 2001 and 2004. The rise for the West continued the only uninterrupted trend in the median across regions for the period shown. Declines in the median income in the Midwest since 2001 erased most of the substantial gains between 1998 and 2001. In 2007, mean income was highest in the Northeast, followed by the West. In 2001, the two had been closer, but growth flattened out for the West, while it continued for the Northeast. The mean incomes in the Midwest and the South have been comparable with one another since 1998, though the mean for the South increased strongly over the recent period while the mean for the Midwest fell back slightly since 2001.

In the recent three-year period, families in MSAs saw a 0.8 percent decline in median income, while those living in other areas saw a rise of 9.8 percent. Mean income has shown a general rise for both groups since 1998.

By housing status, median and mean incomes rose both for homeowners and for other families from 2004 to 2007. All the increases were modest except

10. As noted in the appendix, the questions underlying the definition of race or ethnicity changed in earlier surveys. When restrictions are placed on the definition of the variable for racial and ethnic classification used in the tables in the article to make the series more comparable over time, the estimates change only slightly.

11. To be included in the retired group, the family head must report being retired and not currently working at any job or report being out of the labor force and over the age of 65. The other-not-working group comprises family heads who are unemployed and those who are out of the labor force but are neither retired nor over age 65; the composition of this group shifted from 2004 to 2007 to include fewer families with a head who had a college degree, thereby reversing a change seen between 2001 and 2004. In 2007, 66.9 percent of the other-not-working group was unemployed, and the remainder was out of the labor force; in 2004, 62.2 percent of the group was unemployed (data not shown in the tables).

the 10.0 percent increase in the mean for homeowners. As noted later in this article, homeownership declined slightly in the recent three-year period after rising for a number of years. Thus, changes in the composition of the group are likely to be smaller than in earlier years. Nonetheless, such changes were sufficient to cause the change in the median for both groups to be positive at the same time that the change in the overall median was negative.

By percentile of net worth, median income rose more than 1 percent over the recent three-year period only for the lowest quartile, for which the median increased 4.4 percent; the median declined somewhat for the third quartile and for the group between the 75th and 90th percentiles.[12] The mean increased over the period for the lowest quartile (an increase of 6.2 percent), but it rose much more strongly (23.5 percent) for the top decile. Over the earlier years shown in the table, the most dramatic cumulative gains in the median were clearly for the top two groups. The mean rose at least somewhat for all groups, but the change was largest by far for the wealthiest 10 percent.

Income Variability

For a given family, income at a particular time may not be indicative of its "usual" income. Unemployment, a bonus, a capital loss or gain, or other factors may cause income to deviate temporarily from the usual amount. Although the SCF is a cross-sectional survey, it does provide some information on income variability. In 2007, 23.7 percent of families reported that their income for the preceding year was unusual—9.2 percent reported it was unusually high, and 14.5 percent reported it was unusually low (data not shown in the tables). For those reporting unusual income, the median deviation of actual income from the usual amount was negative 17.3 percent of the normal level. A larger fraction of families in 2004 reported that their income was unusual—8.7 percent reported it was unusually high, and 19.8 percent reported it was unusually low.

Although a family's income may vary, such variability may be a well-recognized part of its financial planning. In 2007, 31.4 percent of families reported that they did not have a good idea of what their income would be for the next year, and 27.2 percent reported that they do not even usually have a good idea of their next year's income. The figures for 2004 were similar.

12. Selected percentiles of the distribution of net worth for the past four surveys are provided in the appendix.

Saving

Because saving out of current income is an important determinant of family net worth, the SCF asks respondents whether, over the preceding year, the family's spending was less than, more than, or about equal to its income. Though only qualitative, the answers are a useful indicator of whether families are saving. Asking instead for a specific dollar amount would require much more time from respondents and would likely lower the rate of response to the survey.

Overall, from 2004 to 2007, the proportion of families that reported that they had saved in the preceding year was about unchanged at 56.5 percent, a bit higher than the level in 1998 but still lower than the 2001 level. The general pattern of changes across demographic groups in the recent three-year period is one of small shifts. The previous survey had shown a broad pattern of declines.

Estimates of the personal saving rate from the national income and product accounts (NIPA) show an annual saving rate of less than 1 percent over the 2004–07 period. However, the SCF and NIPA concepts of saving differ in some important ways. First, the underlying SCF question asks only whether the family's spending has been less than, more than, or about the same as its income over the past year. Thus, families may be saving, but those that are doing so may be saving a relatively small amount; those that are spending more than their incomes may be spending a relatively large amount. Second, the NIPA measure of saving relies on definitions of income and consumption that may not be the same as those that respondents had in mind when answering the survey questions. For example, the NIPA measure of personal income includes payments employers make to their employees' defined-benefit pension plans but not the payments made from such plans to families, whereas the SCF measure includes only the latter. The SCF measure also includes realized capital gains, whereas the NIPA measure excludes capital gains of all forms, realized and unrealized.

A separate question in the survey asks about families' more typical saving habits. In 2007, 6.0 percent of families reported that their spending usually exceeds their income; 16.1 percent reported that the two are usually about the same; 35.7 percent reported that they typically save income "left over" at the end of the year, income of one family member, or unusual additional income; and 42.2 percent reported that they save regularly (data not shown in the tables). The fact that these figures are not much changed over the last three surveys suggests that variations in economic

3. Reasons respondents gave as most important for their families' saving, distributed by type of reason, 1998–2007 surveys

Percent

Type of reason	1998	2001	2004	2007
Education	11.0	10.9	11.6	8.4
For the family	4.1	5.1	4.7	5.5
Buying own home	4.4	4.2	5.0	4.2
Purchases	9.7	9.5	7.7	10.0
Retirement	33.0	32.1	34.7	33.9
Liquidity	29.8	31.2	30.0	32.0
Investments	2.0	1.0	1.5	1.6
No particular reason	1.3	1.1	.7	1.1
When asked for a reason, reported do not save	4.9	4.9	4.0	3.3
Total	**100**	**100**	**100**	**100**

NOTE: See note to table 1 and text note 13.

conditions over this period have had little effect on the longer-run saving plans of families.

The SCF also collects information on families' most important motivations for saving (table 3).[13] In 2007, the most frequently reported motive was retirement related (33.9 percent of families), and the next most frequently reported was liquidity related (32.0 percent of families), a response that is generally taken to be indicative of saving for precautionary reasons.[14] At least since 1998, these have been the dominant reported reasons, but saving for retirement has increased in importance. The education-related motive also appears to be important but less so in the latest survey; in 2007, 8.4 percent of families reported it as their primary motive, down 3.2 percentage points from 2004. The importance of saving for purchases rose 2.3 percentage points in 2007 after falling since before the 1998 survey in its prevalence as a reported motive for saving.

The survey asks families to estimate the amount of savings they need for emergencies and other unexpected contingencies, a measure of desired savings for precautionary purposes.[15] The desired amount increases with income, but the amount is a lower percentage of usual income for higher levels of such income than for lower levels (table 3.1).

3.1.

Family characteristic	Median of desired precautionary saving (2007 dollars)	Median of ratio of desired amount to usual income (percent)
All families	**5,000**	**9.2**
Percentile of usual income		
0–19.9	2,000	14.0
20–39.9	3,000	9.7
40–59.9	5,000	9.4
60–79.9	5,000	7.6
80–89.9	10,000	8.1
90–100	20,000	8.8

NET WORTH

From 2004 to 2007, inflation-adjusted net worth (wealth)—the difference between families' gross assets and their liabilities—rose strongly, both in terms of the median and the mean (table 4). The median rose 17.7 percent, and the mean rose 13.0 percent; the corresponding values for the period from 2001 to 2004 were 1.0 percent and 6.0 percent. Both the median and the mean have risen consistently over the period since 1998, but overall the mean has gained more—54.7 percent, compared with a 31.8 percent increase in the median.

Movements in the dollar value of families' net worth are, by definition, a result of changes in investment, valuation, and patterns of ownership of financial assets (tables 5, 6, and 7) and nonfinancial assets (tables 8, 9, and 10), as well as decisions about acquiring or paying down debt (tables 11 through 18). A variety of financial decisions underlie these changes. The box "Shopping for Financial Services" provides a discussion of the intensity of families' decisionmaking efforts and their sources of financial information.

After the end of 2007, house prices continued to decline, and equity prices fell sharply. Although the survey cannot provide direct results about the overall effects of these and other such changes, it can provide some indication of the implications for families' finances. For this purpose, the value of assets invested directly or indirectly in publicly traded equity, the value of privately held businesses, and the net value of nonresidential real estate are assumed to have fallen at the overall rate of the Wilshire 5000 index from the time of the interview until October 2008. In addition, the value of residential properties—both primary residences and other residential real estate—are assumed to have fallen in line with LoanPerformance Home Price Indexes from the time of the interview until October 2008.[16] Changes are assumed to have affected all holders proportionately, and families are assumed to have made no changes in their holdings of these assets or any other assets or liabili-

13. Although families were asked to report their motives for saving regardless of whether they were currently saving, some families reported only that they do not save. The analysis here is confined to the first reason reported by families.

14. Liquidity-related reasons include "emergencies," the possibilities of unemployment and illness, and the need for ready money.

15. For an extended analysis of precautionary saving as measured in the SCF, see Arthur B. Kennickell and Annamaria Lusardi (2004), "Disentangling the Importance of the Precautionary Saving Motive," NBER Working Paper Series 10888 (Cambridge, Mass.: National Bureau of Economic Research, November).

16. Values of primary residences are adjusted by the state-level index. For other residential real estate, the geographic location is not reported in the SCF; thus, the national-level index is used to adjust values of these properties. The LoanPerformance Home Price Indexes are not seasonally adjusted.

4. Family net worth, by selected characteristics of families, 1998–2007 surveys

Thousands of 2007 dollars

Family characteristic	1998		2001		2004		2007	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
All families	**91.3** (3.5)	**359.7** (11.7)	**101.2** (3.6)	**464.4** (7.9)	**102.2** (4.7)	**492.3** (10.6)	**120.3** (5.6)	**556.3** (9.2)
Percentile of income								
Less than 20	7.4	60.8	9.2	61.8	8.2	79.8	8.1	105.2
20–39.9	42.2	122.4	43.8	134.8	37.1	133.4	37.9	134.9
40–59.9	68.0	161.0	74.5	190.3	79.0	213.7	88.1	209.9
60–79.9	143.0	261.7	167.5	344.0	175.7	374.3	204.9	375.1
80–89.9	240.0	414.1	307.8	534.8	344.1	535.3	356.2	606.3
90–100	575.9	1,970.1	975.0	2,647.5	1,015.0	2,783.7	1,119.0	3,306.0
Age of head (years)								
Less than 35	11.6	81.3	13.7	106.1	15.6	80.7	11.8	106.0
35–44	80.8	249.9	90.7	303.7	76.2	328.6	86.6	325.6
45–54	134.5	461.5	155.4	568.4	158.9	596.1	182.5	661.2
55–64	162.8	677.6	216.8	856.0	273.1	926.7	253.7	935.8
65–74	186.5	594.2	207.9	793.5	208.8	758.8	239.4	1,015.2
75 or more	159.9	395.7	181.6	548.6	179.1	580.0	213.5	638.2
Family structure								
Single with child(ren)	36.0	132.9	27.4	135.0	36.0	159.8	41.0	232.2
Single, no child, age less than 55	15.5	120.3	17.5	153.1	19.3	152.7	18.0	181.3
Single, no child, age 55 or more	104.3	304.9	105.7	336.9	126.3	390.9	140.8	382.7
Couple with child(ren)	119.6	410.5	131.2	504.9	134.2	496.0	141.1	594.5
Couple, no child	143.9	502.0	172.8	660.9	186.9	727.0	191.0	804.5
Education of head								
No high school diploma	26.9	100.4	29.8	121.7	22.6	149.9	33.2	142.9
High school diploma	68.8	200.9	67.9	211.9	75.5	216.2	80.3	251.6
Some college	94.0	302.6	85.1	335.7	76.1	338.9	84.7	365.9
College degree	186.4	672.4	249.5	931.2	248.4	935.0	280.8	1,097.8
Race or ethnicity of respondent								
White non-Hispanic	121.9	429.5	143.0	571.2	154.5	617.0	170.4	692.2
Nonwhite or Hispanic	21.2	128.0	21.0	137.4	27.2	168.2	27.8	228.5
Current work status of head								
Working for someone else	67.2	213.9	76.1	263.9	73.8	294.9	93.2	350.1
Self-employed	316.3	1,176.5	412.0	1,474.7	368.6	1,563.1	388.7	1,961.3
Retired	143.9	391.6	135.2	531.1	153.6	515.1	161.3	543.1
Other not working	4.5	94.2	10.4	211.1	13.0	178.2	5.7	124.1
Current occupation of head								
Managerial or professional	168.5	688.2	231.1	898.3	216.2	947.2	245.8	1,116.4
Technical, sales, or services	51.9	245.7	54.7	233.4	49.4	270.2	73.5	310.4
Other occupation	63.7	161.0	56.1	159.2	62.0	162.0	64.3	191.7
Retired or other not working	104.3	341.6	112.9	478.5	122.1	462.8	128.8	477.6
Region								
Northeast	120.1	385.7	109.1	530.6	177.6	625.0	159.4	652.7
Midwest	102.3	316.8	124.4	399.0	126.3	479.0	107.5	467.5
South	78.0	340.0	86.3	440.0	70.1	382.2	96.0	499.3
West	78.0	416.3	102.6	516.6	104.1	575.1	156.2	662.7
Urbanicity								
Metropolitan statistical area (MSA)	92.3	389.8	102.7	500.6	114.5	554.1	132.4	621.2
Non-MSA	87.9	184.3	93.6	238.7	65.1	193.2	77.2	241.4
Housing status								
Owner	168.2	514.7	201.8	655.5	202.6	686.3	234.2	778.2
Renter or other	5.4	55.3	5.6	64.4	4.4	59.4	5.1	70.6
Percentile of net worth								
Less than 25	.6	−2.4	1.3	†	1.9	−1.6	1.2	−2.3
25–49.9	41.6	45.7	47.8	51.8	47.9	51.7	54.2	57.9
50–74.9	153.4	163.7	184.7	195.4	187.4	203.6	219.8	227.0
75–89.9	392.8	409.3	503.8	527.9	556.6	578.5	571.4	586.1
90–100	1,141.2	2,464.6	1,524.7	3,233.2	1,570.6	3,420.3	1,890.7	3,975.7

NOTE: See note to table 1.

† Less than 0.05 ($50).

Shopping for Financial Services

As a normal part of their financial lives, families must make a variety of decisions to select particular investments for any savings they may have, as well as to select the forms and terms of credit they may use. To the extent that families devote more or less attention to such activities or that they are better or worse informed, the wealth of otherwise comparable families may differ substantially over time.

The Survey of Consumer Finances (SCF) contains a self-assessment of families' intensity of shopping for borrowing or investing services. In 2007, about 55 percent of families reported that they undertake a moderate amount of shopping for either of these types of financial services (table A).[1] Only about one-fourth of families reported shopping a great deal for loan terms, and only about one-fifth reported shopping a great deal for the best terms on investments. Even though the survey question is intended to elicit a description of behavior in general, the behavior reported could still be more reflective of the short-term needs for such services and consequently the immediate need for shopping. When broken out by categories of net worth, the patterns are very similar for all families for loan shopping (data not shown in the tables). For investment shopping, the data show a more pronounced gradient toward more intensive shopping by families with higher levels of wealth.

More families turn to friends, family members, or associates for financial information than to any other source of information on borrowing or investing (table B). This result suggests that there may be important feedback effects in financial outcomes; that is, families

A. Intensity of shopping for borrowing or investing, 2007

Percent

Intensity of shopping	Type of service	
	Borrowing	Investing
Almost none	20.6	25.4
Moderate amount	54.8	54.6
A great deal	24.6	20.1

1. The underlying question allows the survey respondent to shade the intermediate response toward a greater or lesser amount of shopping. About one-third of the respondents choose to do so, and of those, somewhat more than one-half shaded their response toward a greater degree of shopping.

B. Information used for decisions about borrowing or investing, 2007

Percent

Source	Type of service	
	Borrowing	Investing
Calling around	33.4	18.0
Magazines, newspapers, and other media	19.7	17.5
Material in the mail	35.9	21.5
Internet	38.4	28.3
Friends, relatives, associates	46.0	42.3
Bankers, brokers, and other sellers of financial services	38.6	38.3
Lawyers, accountants, and other financial advisors	19.5	29.3
Does not borrow or invest	9.5	9.9

NOTE: Figures sum to more than 100 because of reporting of multiple sources.

ties. Taken together, these assumptions imply large drops in median and mean net worth since the 2007 survey—17.8 percent and 22.7 percent, respectively. Relative to the values in the 2004 SCF, adjusted median net worth is 3.2 percent lower, and the adjusted mean is 12.7 percent lower.[17]

By age group, median and mean net worth show a "hump" pattern that generally peaks in the 55-to-64 age group. This pattern reflects both life-cycle saving behavior and a historical pattern of long-run growth in inflation-adjusted wages. The median and mean values of wealth rise in tandem with income, a relationship reflecting both income earned from assets and a higher likelihood of saving among higher-income families. Wealth shows strong differentials across groups defined in terms of family structure, education, racial or ethnic background, work status, occupation, housing status, and the urbanicity and region of residence; these differentials generally mirror those for income, but the wealth differences are larger.

Net Worth by Demographic Category

Analysis by demographic group for the 2004–07 period shows a pattern of gains of varying sizes in

17. Most of the projected decline in the median is a result of the adjustments to primary residences and publicly traded equity; if only the values of primary residences and of directly or indirectly held equity are adjusted, median net worth as of October 2008 declines 15.0 percent relative to the level observed in the 2007 survey. In contrast, the corresponding mean of the data under the more limited adjustment is only 12.0 percent lower than the unadjusted value, or just more than one-half of the decline implied by the broader set of adjustments; this result reflects the fact that the value of businesses and real estate other than primary residences is relatively concentrated among wealthier families.

who know relatively well-informed people may obtain better services. Sellers of financial services—bankers, brokers, and so on—are the second most frequently cited source of information for borrowing or investing. The Internet was reported by 38.4 percent of families as a source for information on borrowing and by 28.3 percent for information on investing. Although the Internet, in principle, makes an enormous amount of information available to a family, interpretation of the information may still be an important consideration. However, the proliferation of financial planning tools may mitigate this concern. When viewed across categories of net worth, the data show similar patterns of use of sources of information by all groups (data not shown in the tables).

In addition to serving as a source of information, the Internet can also be a medium for obtaining financial services. In 2007, 49.4 percent of families reported using the Internet to access at least some type of service at one of the financial institutions they used (data not shown in the tables). If accessing information and using services are combined, the Internet played a part in the financial life of 59.7 percent of all families (table C). This figure is up sharply from 46.5 percent in 2004 and 32.5 percent in 2001. The proportion of such users rises strongly over net worth groups: Among the least wealthy 25 percent of families, 50.3 percent made such use of the Internet, whereas the figure was 75.6 percent for the wealthiest 10 percent (data not shown in the tables). More striking is the variation over age groups. Among families headed by a person younger than 35, 71.9 percent reported using the

C. Use of the Internet for financial information or financial services, by age of head, 2007

Percent

Family characteristic	Percentages of families
All families	**59.7**
Age of head (years)	
Less than 35	71.9
35–44	70.8
45–54	69.1
55–64	59.1
65–74	40.3
75 or more	16.5
MEMO	
All families, 2004	46.5
All families, 2001	32.5

Internet for financial information or services, whereas the figure for families with a head aged 75 or older was only 16.5 percent. If the relatively greater expression of such behavior by younger families persists as they age, and if succeeding cohorts follow their example, Internet-based financial services may become even more important in the future.[2]

2. For a discussion of the definition of local banking markets, see Dean F. Amel, Arthur B. Kennickell, and Kevin B. Moore (2008), "Banking Market Definition: Evidence from the Survey of Consumer Finances," Finance and Economics Discussion Series 2008-35 (Washington: Board of Governors of the Federal Reserve System, October), www.federalreserve.gov/pubs/feds/2008/200835/200835pap.pdf.

median and mean net worth for most groups. But a small number of groups experienced losses, and some had noticeably different shifts in their median and mean net worth.

Median net worth rose for all percentile groups of the distribution of net worth except for families in the lowest quartile. In that group, the median fell from $1,900 to $1,200; the mean fell from negative $1,600 in 2004 to negative $2,300 in 2007. For the rest of the distribution of net worth, the median and mean over the recent three-year period rose substantially for all other groups except the 75th-to-90th percentile group, which had seen relatively large gains over the preceding three years. Gains for the top wealth group were unbroken back to at least 1998.

Over the recent period, median net worth increased for all income groups above the 20th percentile and especially for families in the fourth quintile, for which the median rose 16.6 percent; the mean for this group was little changed. Families in the lowest income quintile had the largest proportional increase in the mean—31.8 percent—a rise due, in part, to an increase in the fraction of the group consisting of relatively wealthy families with incomes that are likely to have been temporarily low (data not shown in the tables). The mean rose for the other income groups, and it rose most for the highest decile group—an 18.8 percent gain. Over the preceding years shown, median net worth had increased for all groups except the second income quintile; the mean had risen for all income groups.

The survey shows some substantial movements of net worth by age group between 2004 and 2007. Median net worth rose most strongly—19.2 percent—for the 75-or-more age group, which had seen relatively modest change over the previous three-year period. The less-than-35 age group saw a large decline in the median—24.4 percent—over the more recent period; at the same time, median wealth fell 7.1 percent for the 55-to-64 age group. Mean wealth rose just more than 10 percent for families in the 45-to-54 and 75-or-more age groups, and it increased more than 30 percent for families in the less-than-35 and 65-to-74 age groups; mean wealth declined, however, for the 35-to-44 group and was about unchanged for the 55-to-64 group. Many of the changes observed contrast in size or direction with the changes in the preceding three-year period.

By family structure, single families with children had the largest increases from 2004 to 2007 in both median and mean net worth—13.9 percent and 45.3 percent, respectively—but these families had the second-lowest level of net worth (after younger single families without children). Median net worth increased for all family-structure groups except younger single families without children, and the mean increased for all except older single families without children.

From 2004 to 2007, median net worth increased for all education groups. The change was particularly large—46.9 percent—for the no-high-school-diploma group. At the same time, this group was the only one that did not see a rise in mean net worth; its mean declined 4.7 percent. The shifts for this group were the opposite of the pattern in the preceding three-year period, during which the median fell and the mean rose.

The data show gains from 2004 to 2007 in median and mean wealth for both categories of race or ethnicity. Gains in the median and the mean were roughly the same for white non-Hispanic families—10.3 percent and 12.2 percent, respectively. But for nonwhite or Hispanic families, the change in the median—2.2 percent—was far smaller than that in the mean—35.9 percent.[18] In the preceding three-year period, both the median and the mean for nonwhites or Hispanics had risen more strongly than those for other families. Despite some continuing signs of convergence, in 2007, the median and mean of net worth for white non-Hispanic families remained much higher than those for nonwhite or Hispanic families. In contrast to the whole group of nonwhite or Hispanic families, the subgroup of African American families saw a 24.1 percent decline in their median net worth from 2004 ($22,400) to 2007 ($17,000), but their mean net worth rose 9.3 percent, from $121,500 to $132,800; over the 2001–04 period, the median for the group had shown virtually no change, while the mean had risen 36.4 percent (data not shown in the tables).

Among work-status groups, median and mean net worth rose from 2004 to 2007 for all families except those headed by persons who were not working for reasons other than retirement (the other-not-working group), which showed substantial declines in both measures. The group had the lowest levels of both median and mean net worth of all work-status groups. Although the dollar amounts of the changes in median and mean net worth for the self-employed group were far larger than those for the other groups over the period from 1998 to 2007, the percentage increase in the median for the self-employed group was below the rates for all other work-status categories except the retired group. The percentage increase in the mean for the self-employed group was just slightly higher than that for the working-for-someone-else group.

Median and mean net worth increased for all occupation groups in the recent three-year period, but they did so most markedly for families headed by a worker in a technical, sales, or service occupation or by a worker in a managerial or professional occupation. Over the period since 1998, the median for families in the residual other-occupation category barely rose, and the increase in the mean was the smallest of any occupation group. All other groups had greater than a 20 percent increase in their median and mean net worth over this period.

Between 2004 and 2007, median net worth fell for families living in the Northeast or the Midwest, while it rose strongly for those in the South or the West. Mean net worth for families in the Northeast or the Midwest also lagged behind that for families in the other regions. Over the longer period from 1998 to 2007, median and mean net worth moved up most strongly in the Northeast and the West; these regions ended the period with quite similar medians and means. The Midwest and the South also ended the period with fairly similar values, at levels considerably below those for the Northeast and the West.

By urbanicity of the place of residence, in the recent three-year period, median net worth increased by about the same proportion in MSA and non-MSA areas, but the mean advanced by a much larger proportion in non-MSA areas. However, over the longer period since 1998, median and mean wealth rose more rapidly for MSAs, and in 2007 both the

18. If the additional information on Hispanic or Latino ethnic identification available in the SCF is used in the classification of the 2007 results, the median net worth of nonwhites or Hispanics was $31,000, and the mean was $237,900; for other families, the median was $174,100, and the mean was $701,800. These figures are all slightly higher than the corresponding values reported in table 4.

median and mean net worth for families in MSAs remained substantially above that for families in non-MSAs.

By housing status, the percentage increases in median net worth between 2004 and 2007 were very similar for both groups, and the increase in the mean for non-homeowners (hereafter, renters) was somewhat higher. From 1998 to 2007—a time of rising house prices, on balance—the increase in median and mean net worth for homeowners far outstripped that for renters.

ASSETS

At 97.7 percent in 2007, the overall proportion of families with any asset was barely changed from 2004 (first half of tables 9.A and 9.B, last column). Overall, this figure has risen 0.9 percentage point since 1998 (data not shown in the tables). Across demographic groups, the pattern of changes in the recent three-year period is mostly one of small increases or decreases. Noticeable exceptions are declines for the following groups: the lowest quintile of the income distribution (2.4 percentage points); single families with children (1.2 percentage points); younger single families without children (1.7 percentage points); families headed by a person whose work status was retired (1.6 percentage points) or who was in the related retired-or-other-not-working category (1.2 percentage points); families headed by a person aged 75 or older (1.5 percent); and families living in the Northeast (3.3 percentage points).[19] For many groups, the figure remained at or near 100 percent.

From 2004 to 2007, median assets for families having any assets rose 16.6 percent, from $189,900 to $221,500 (second half of tables 9.A and 9.B, last column), and the mean rose 13.1 percent, from $591,300 to $668,500 (memo line). These percentage changes closely resemble those for overall net worth, but examination of changes in median assets by demographic groups reveals differences. Because changes in ownership were generally small, these differences must largely represent variations in the amount of borrowing. Across net worth groups, the percentage changes in median assets and net worth were most similar for families in the top quartile of the distribution of net worth; for all except the lowest quartile of that distribution, the changes were more roughly similar; and for the lowest quartile of the distribution, the percentage decline in assets was much larger than that for net worth. For white non-

19. The retired-or-other-not-working occupation category encompasses the retired and the other-not-working work-status categories.

5. Value of financial assets of all families, distributed by type of asset, 1998–2007 surveys

Percent

Type of financial asset	1998	2001	2004	2007
Transaction accounts	11.4	11.4	13.2	11.0
Certificates of deposit	4.3	3.1	3.7	4.1
Savings bonds	.7	.7	.5	.4
Bonds	4.3	4.5	5.3	4.2
Stocks	22.7	21.5	17.6	17.9
Pooled investment funds (excluding money market funds)	12.4	12.1	14.7	15.9
Retirement accounts	27.6	28.9	32.0	34.6
Cash value life insurance	6.4	5.3	3.0	3.2
Other managed assets	8.6	10.5	8.0	6.5
Other	1.7	1.9	2.1	2.1
Total	**100**	**100**	**100**	**100**
MEMO				
Financial assets as a share of total assets	40.7	42.2	35.7	33.9

NOTE: For this and following tables, see text for definition of asset categories. Also see note to table 1.

Hispanic families, median assets rose 9.9 percent, while median net worth rose 10.3 percent; but for nonwhites or Hispanics, median assets rose 36.4 percent, and median net worth rose only 2.2 percent. For homeowners, median assets increased 8.1 percent, but median net worth increased 15.6 percent; for renters, median assets barely changed, but median net worth rose 15.9 percent. Percentage changes in the medians of assets and net worth were similar across region and urbanicity of the place of residence. Over the preceding three-year period, median assets had risen 9.8 percent and mean assets had risen 8.3 percent, compared with corresponding figures for net worth of 1.0 percent and 6.0 percent.

Financial Assets

Although the level of financial assets rose from 2004 to 2007, financial assets as a share of total assets fell 1.8 percentage points, to 33.9 percent (table 5, memo line); this movement continues a decline in this share from a level in 2001 (42.2 percent) that marked the high point observed in the survey since at least 1989. The relative shares of various financial assets also shifted. Declines in the percentage shares of transaction accounts, bonds, and "other managed assets" were mostly offset by increases in the shares of retirement accounts and pooled investment funds.[20] After declines in the previous two surveys, the share of assets attributable to publicly traded stocks held directly by families edged up.

Overall, the rate of ownership of any financial asset was virtually unchanged over the recent survey

20. The definitions of asset categories in table 5 are given later in the article, in the sections of text devoted to those categories.

6. Family holdings of financial assets, by selected characteristics of families and type of asset, 2004 and 2007 surveys

A. 2004 Survey of Consumer Finances

Family characteristic	Transaction accounts	Certificates of deposit	Savings bonds	Bonds	Stocks	Pooled investment funds	Retirement accounts	Cash value life insurance	Other managed assets	Other	Any financial asset
	Percentage of families holding asset										
All families	**91.3**	**12.7**	**17.6**	**1.8**	**20.7**	**15.0**	**49.7**	**24.2**	**7.3**	**10.0**	**93.8**
Percentile of income											
Less than 20	75.5	5.0	6.2	*	5.1	3.6	10.1	14.0	3.1	7.1	80.1
20–39.9	87.3	12.7	8.8	*	8.2	7.6	29.8	19.0	4.9	9.9	91.5
40–59.9	95.9	11.8	15.4	*	16.4	12.7	53.5	24.4	7.9	9.3	98.5
60–79.9	98.4	15.0	26.5	2.1	28.1	18.6	69.7	29.7	7.8	11.2	99.1
80–89.9	99.1	16.3	32.3	2.9	35.9	26.2	81.9	29.6	12.2	11.4	99.8
90–100	100.0	21.5	29.9	8.9	55.0	39.1	88.5	38.1	13.0	13.4	100.0
Age of head (years)											
Less than 35	86.4	5.6	15.3	*	13.3	8.3	40.2	11.0	2.9	11.6	90.1
35–44	90.8	6.7	23.3	.6	18.5	12.3	55.9	20.1	3.7	10.0	93.6
45–54	91.8	11.9	21.0	1.8	23.2	18.2	57.7	26.0	6.2	12.1	93.6
55–64	93.2	18.1	15.2	3.3	29.1	20.6	62.9	32.1	9.4	7.2	95.2
65–74	93.9	19.9	14.9	4.3	25.4	18.6	43.2	34.8	12.8	8.1	96.5
75 or more	96.4	25.7	11.0	3.0	18.4	16.6	29.2	34.0	16.7	8.1	97.6
Family structure											
Single with child(ren)	87.2	8.8	9.4	*	9.6	7.4	34.1	19.9	3.7	13.7	91.1
Single, no child, age less than 55	85.1	5.9	11.9	.3	12.4	10.2	37.5	14.0	2.8	13.8	88.9
Single, no child, age 55 or more	91.8	18.8	9.1	2.6	18.0	16.0	32.8	28.8	14.0	7.8	94.4
Couple with child(ren)	93.5	14.9	25.1	.9	23.3	11.7	61.4	24.7	6.1	7.4	96.4
Couple, no child	94.0	13.6	22.1	2.7	26.2	19.0	59.8	27.7	7.9	9.1	95.5
Education of head											
No high school diploma	72.4	5.6	4.2	*	4.7	2.3	16.2	13.7	3.0	5.2	77.4
High school diploma	89.1	12.9	14.2	.4	12.4	9.2	43.6	23.0	5.4	8.4	92.9
Some college	94.3	9.4	19.3	.6	17.7	12.6	47.7	23.8	6.2	14.4	96.6
College degree	99.1	17.0	24.9	4.1	35.3	26.1	68.9	29.5	10.9	10.9	99.6
Race or ethnicity of respondent											
White non-Hispanic	95.5	15.3	21.1	2.5	25.5	18.9	56.1	26.8	9.2	10.2	97.2
Nonwhite or Hispanic	80.6	6.0	8.5	*	8.0	5.0	32.9	17.4	2.1	9.4	85.0
Current work status of head											
Working for someone else	92.2	9.8	20.1	.8	19.6	13.5	57.1	21.8	5.4	9.5	94.5
Self-employed	94.4	14.2	18.7	4.3	31.6	22.3	54.6	29.8	7.6	15.1	96.1
Retired	90.4	20.2	11.4	3.5	19.0	16.2	32.9	29.7	12.8	8.4	93.6
Other not working	76.2	7.9	14.5	*	14.3	10.2	24.9	10.7	*	11.5	79.6
Current occupation of head											
Managerial or professional	98.5	14.8	25.5	3.1	32.9	24.3	68.5	27.5	8.2	13.2	99.5
Technical, sales, or services	90.1	8.9	18.5	.3	15.6	9.7	48.5	21.9	4.9	8.6	92.9
Other occupation	87.2	6.4	13.8	*	13.0	8.1	49.7	18.7	3.3	8.5	90.4
Retired or other not working	88.2	18.3	11.8	3.0	18.2	15.3	31.6	26.8	11.1	8.9	91.4
Region											
Northeast	94.6	15.3	21.5	1.9	27.8	18.8	57.0	24.6	7.7	8.6	96.4
Midwest	94.4	14.9	23.6	1.6	23.4	15.2	57.3	30.3	11.5	10.7	96.5
South	86.9	11.7	12.7	2.0	15.4	12.6	41.6	24.1	4.7	9.5	90.7
West	92.6	9.7	16.1	1.7	20.4	15.6	48.9	17.5	6.7	11.0	94.0
Urbanicity											
Metropolitan statisical area (MSA)	91.6	12.3	18.4	2.0	22.6	16.4	51.8	24.6	7.8	10.4	93.9
Non-MSA	90.0	14.6	14.0	*	11.0	8.5	39.5	22.3	4.8	7.9	93.2
Housing status											
Owner	96.0	15.9	21.2	2.6	25.8	19.2	60.2	30.1	9.6	9.6	97.5
Renter or other	80.9	5.6	9.5	.2	9.1	5.7	26.2	11.0	2.0	10.9	85.5
Percentile of net worth											
Less than 25	75.4	2.2	6.2	*	3.6	2.0	14.3	7.7	*	6.9	79.8
25–49.9	92.0	6.5	13.2	*	9.3	7.2	43.1	19.3	2.3	9.5	96.1
50–74.9	98.0	16.0	22.7	*	21.0	12.5	61.8	30.1	8.8	10.2	99.4
75–89.9	99.7	24.2	28.5	3.2	39.1	32.4	77.6	36.7	15.6	11.2	100.0
90–100	100.0	28.8	28.1	12.7	62.9	47.3	82.5	43.8	21.0	16.4	100.0

6. Family holdings of financial assets, by selected characteristics of families and type of asset, 2004 and 2007 surveys—*Continued*

A. 2004 Survey of Consumer Finances—*continued*

Family characteristic	Trans-action accounts	Certifi-cates of deposit	Savings bonds	Bonds	Stocks	Pooled invest-ment funds	Retire-ment accounts	Cash value life insurance	Other managed assets	Other	Any financial asset
	Median value of holdings for families holding asset (thousands of 2007 dollars)										
All families	**4.1**	**16.5**	**1.1**	**71.4**	**16.5**	**44.4**	**38.7**	**6.6**	**49.4**	**4.4**	**25.3**
Percentile of income											
Less than 20	.7	11.0	.4	*	6.6	16.8	5.5	3.1	24.1	2.7	1.5
20–39.9	1.6	15.4	.7	*	8.8	27.5	11.0	4.1	54.9	2.2	5.3
40–59.9	3.3	11.0	.9	*	13.2	25.3	19.0	5.5	39.5	2.7	17.0
60–79.9	7.1	19.8	1.1	87.9	11.0	28.0	35.1	7.7	38.4	4.4	53.2
80–89.9	12.1	22.0	.9	38.4	16.5	36.8	76.9	11.0	54.9	5.5	119.1
90–100	30.8	36.2	2.2	175.7	64.5	137.3	201.4	22.0	109.8	22.0	401.2
Age of head (years)											
Less than 35	2.0	4.4	.5	*	4.8	8.8	12.1	3.3	5.5	1.1	5.7
35–44	3.3	11.0	.5	11.0	11.0	17.5	30.6	5.5	20.1	3.8	20.9
45–54	5.3	12.1	1.1	32.9	15.9	54.9	61.0	8.8	47.2	5.5	42.4
55–64	7.4	31.9	2.7	87.9	27.5	82.4	91.2	11.0	71.4	7.7	85.7
65–74	6.0	22.0	3.3	43.9	46.1	65.9	87.9	8.8	65.9	11.0	39.6
75 or more	7.1	24.2	5.5	324.0	54.9	65.9	32.9	5.5	54.9	24.2	42.6
Family structure											
Single with child(ren)	1.4	11.0	.4	*	6.6	23.1	15.4	2.2	6.6	3.3	5.5
Single, no child, age less than 55	1.6	11.0	1.1	32.9	8.8	16.5	15.4	5.5	32.9	2.2	6.0
Single, no child, age 55 or more	3.3	20.0	2.2	68.1	30.4	68.6	40.6	3.5	71.4	11.0	27.0
Couple with child(ren)	5.3	11.0	.9	109.8	6.7	24.2	39.0	5.5	32.9	5.5	32.4
Couple, no child	6.7	22.0	1.1	87.9	22.0	54.9	58.4	11.0	49.4	6.6	48.3
Education of head											
No high school diploma	1.2	16.5	.5	*	8.2	7.9	13.7	3.5	16.5	2.2	2.4
High school diploma	2.8	19.2	.7	22.0	8.2	27.3	22.5	5.5	54.9	3.3	13.2
Some college	2.9	11.0	.9	168.6	13.2	43.9	23.1	5.9	31.9	4.4	17.6
College degree	10.1	20.9	1.1	87.9	22.0	58.2	70.6	11.0	54.9	7.7	85.9
Race or ethnicity of respondent											
White non-Hispanic	5.5	17.6	1.1	87.9	19.8	49.4	45.0	7.7	49.4	5.5	39.5
Nonwhite or Hispanic	1.6	13.2	.7	*	5.8	19.8	17.6	5.5	43.9	2.7	5.5
Current work status of head											
Working for someone else	3.5	11.0	.8	27.5	11.0	27.5	32.9	5.9	54.9	3.3	22.5
Self-employed	11.0	22.0	2.1	142.8	27.5	65.9	65.9	11.5	46.1	6.6	58.4
Retired	4.6	27.5	3.3	98.8	49.4	82.4	51.6	5.5	49.4	11.0	29.1
Other not working	2.2	8.8	2.2	*	5.5	17.5	34.0	9.2	*	3.3	5.5
Current occupation of head											
Managerial or professional	8.9	16.5	1.1	54.9	22.0	44.4	65.9	11.0	49.4	6.6	73.2
Technical, sales, or services	2.6	13.2	.9	38.4	8.8	27.3	23.8	5.5	65.9	3.3	13.4
Other occupation	2.7	6.4	.5	*	5.5	22.0	22.0	5.5	39.5	2.2	12.5
Retired or other not working	3.9	24.2	2.3	87.9	38.4	72.2	46.1	5.5	49.4	7.7	21.4
Region											
Northeast	6.6	19.8	1.6	164.7	16.5	54.9	57.9	6.6	54.9	4.4	47.4
Midwest	4.5	11.4	.9	71.4	13.2	49.4	41.7	7.7	46.1	4.4	33.9
South	3.3	15.4	1.1	43.9	17.6	49.4	29.7	5.5	49.4	4.1	13.4
West	3.7	24.2	.7	109.8	19.8	28.6	32.9	6.6	49.4	5.5	25.3
Urbanicity											
Metropolitan statistical area (MSA)	4.6	16.5	1.1	87.9	18.7	54.9	43.9	6.9	49.4	5.3	30.3
Non-MSA	2.4	16.5	1.1	*	8.8	27.5	22.0	5.5	35.5	2.2	10.3
Housing status											
Owner	6.6	22.0	1.1	71.4	22.0	54.9	50.5	7.7	49.4	6.6	52.6
Renter or other	1.2	7.7	.8	142.8	4.9	11.0	12.1	3.3	46.1	2.2	3.3
Percentile of net worth											
Less than 25	.6	2.2	.3	*	2.1	2.2	3.2	.9	*	.8	1.1
25–49.9	2.2	6.4	.5	*	3.8	8.1	12.9	4.4	10.3	2.2	10.9
50–74.9	6.4	11.4	1.1	*	8.8	17.6	36.8	5.5	24.1	5.5	51.8
75–89.9	17.4	34.0	2.2	27.5	22.0	54.9	105.1	11.0	54.9	7.7	223.0
90–100	47.2	50.5	2.7	122.0	120.8	175.7	289.9	22.0	148.3	43.9	800.4
MEMO											
Mean value of holdings for families holding asset	29.8	60.2	6.3	600.8	176.1	202.0	133.2	25.3	227.4	43.4	220.4

NOTE: See note to table 1.

* Ten or fewer observations.

6. Family holdings of financial assets, by selected characteristics of families and type of asset, 2004 and 2007 surveys—*Continued*

B. 2007 Survey of Consumer Finances

Family characteristic	Trans-action accounts	Certifi-cates of deposit	Savings bonds	Bonds	Stocks	Pooled invest-ment funds	Retire-ment accounts	Cash value life insurance	Other managed assets	Other	Any financial asset
	Percentage of families holding asset										
All families	**92.1**	**16.1**	**14.9**	**1.6**	**17.9**	**11.4**	**52.6**	**23.0**	**5.8**	**9.3**	**93.9**
Percentile of income											
Less than 20	74.9	9.4	3.6	*	5.5	3.4	10.7	12.8	2.7	6.6	79.1
20–39.9	90.1	12.7	8.5	*	7.8	4.6	35.6	16.4	4.7	8.8	93.2
40–59.9	96.4	15.4	15.2	*	14.0	7.1	55.2	21.6	5.3	10.2	97.2
60–79.9	99.3	19.3	20.9	1.4	23.2	14.6	73.3	29.4	5.7	8.4	99.7
80–89.9	100.0	19.9	26.2	1.8	30.5	18.9	86.7	30.6	7.6	9.8	100.0
90–100	100.0	27.7	26.1	8.9	47.5	35.5	89.6	38.9	13.6	15.3	100.0
Age of head (years)											
Less than 35	87.3	6.7	13.7	*	13.7	5.3	41.6	11.4	*	10.0	89.2
35–44	91.2	9.0	16.8	.7	17.0	11.6	57.5	17.5	2.2	9.6	93.1
45–54	91.7	14.3	19.0	1.1	18.6	12.6	64.7	22.3	5.1	10.5	93.3
55–64	96.4	20.5	16.2	2.1	21.3	14.3	60.9	35.2	7.7	9.2	97.8
65–74	94.6	24.2	10.3	4.2	19.1	14.6	51.7	34.4	13.2	9.4	96.1
75 or more	95.3	37.0	7.9	3.5	20.2	13.2	30.0	27.6	14.0	5.3	97.4
Family structure											
Single with child(ren)	84.8	9.6	10.1	*	8.4	9.0	36.1	24.8	*	13.2	88.2
Single, no child, age less than 55	84.3	9.6	9.9	*	14.7	7.7	42.8	11.4	1.6	11.1	86.9
Single, no child, age 55 or more	94.3	23.3	9.9	2.1	13.1	10.4	36.2	23.1	10.8	7.6	96.3
Couple with child(ren)	95.5	15.1	22.8	1.2	20.2	13.6	62.5	27.5	5.3	7.5	96.2
Couple, no child	94.8	17.6	17.1	2.2	21.5	12.9	61.8	26.3	6.3	9.0	96.1
Education of head											
No high school diploma	75.7	9.5	3.4	*	3.9	2.2	21.6	12.6	1.7	7.1	79.7
High school diploma	90.9	14.1	11.5	.6	9.3	5.8	43.2	22.6	4.2	8.2	93.3
Some college	93.9	14.1	16.4	1.2	17.4	8.9	52.5	23.4	6.6	9.8	95.5
College degree	98.7	21.6	21.6	3.3	31.5	21.4	73.3	27.1	8.5	10.9	98.9
Race or ethnicity of respondent											
White non-Hispanic	95.5	19.4	17.8	2.1	21.4	13.7	58.2	25.3	7.3	9.7	96.8
Nonwhite or Hispanic	83.9	8.2	7.8	.4	9.4	5.8	39.1	17.6	2.3	8.3	86.7
Current work status of head											
Working for someone else	92.6	13.2	17.0	.9	17.8	10.4	62.1	20.3	3.7	9.2	94.1
Self-employed	96.9	15.0	15.9	4.2	24.3	21.4	55.3	32.1	6.9	14.8	98.0
Retired	91.6	25.7	10.2	2.3	16.4	11.3	34.2	27.3	11.2	7.0	93.7
Other not working	78.6	5.6	10.7	*	12.8	2.4	22.6	14.5	*	10.6	81.4
Current occupation of head											
Managerial or professional	98.3	18.2	21.1	3.1	28.7	19.7	74.1	24.9	6.7	11.1	98.7
Technical, sales, or services	91.9	11.5	15.0	.4	14.9	8.8	54.5	21.3	4.0	9.1	94.0
Other occupation	87.9	9.2	13.1	*	9.9	5.4	51.0	19.0	1.1	9.6	90.2
Retired or other not working	89.5	22.5	10.3	2.0	15.8	9.9	32.4	25.3	9.8	7.6	91.8
Region											
Northeast	91.3	18.1	18.9	2.0	21.4	15.5	53.3	23.5	6.4	5.4	92.5
Midwest	93.6	16.8	16.0	1.2	17.9	10.6	57.8	26.6	6.7	9.2	95.4
South	91.3	15.1	12.0	1.7	15.4	9.7	48.8	23.3	5.2	8.6	93.5
West	92.7	15.5	15.0	1.6	19.2	11.5	52.9	18.3	5.5	13.9	93.9
Urbanicity											
Metropolitan statistical area (MSA)	92.8	16.2	15.1	1.8	19.4	12.1	54.8	22.2	5.9	9.5	94.3
Non-MSA	88.7	15.9	13.8	.8	10.9	7.7	42.0	26.7	5.5	8.6	91.8
Housing status											
Owner	97.3	20.0	18.2	2.2	22.4	15.0	63.3	28.9	7.5	9.4	98.4
Renter or other	80.8	7.7	7.5	.4	8.1	3.5	29.2	10.1	2.1	9.1	84.0
Percentile of net worth											
Less than 25	76.4	2.5	4.7	*	4.3	*	19.1	7.8	*	7.4	79.6
25–49.9	93.6	9.9	12.3	*	10.2	3.6	48.1	19.7	1.9	8.8	96.4
50–74.9	98.6	19.3	17.5	*	17.3	10.5	62.9	28.5	6.2	8.8	99.5
75–89.9	100.0	32.6	25.9	*	31.6	22.5	77.4	32.1	11.2	9.4	100.0
90–100	100.0	33.0	23.3	11.8	52.3	42.5	84.6	41.9	20.3	16.6	100.0

6. Family holdings of financial assets, by selected characteristics of families and type of asset, 2004 and 2007 surveys—*Continued*

B. 2007 Survey of Consumer Finances—*continued*

Family characteristic	Transaction accounts	Certificates of deposit	Savings bonds	Bonds	Stocks	Pooled investment funds	Retirement accounts	Cash value life insurance	Other managed assets	Other	Any financial asset
	Median value of holdings for families holding asset (thousands of 2007 dollars)										
All families	**4.0**	**20.0**	**1.0**	**80.0**	**17.0**	**56.0**	**45.0**	**8.0**	**70.0**	**6.0**	**28.8**
Percentile of income											
Less than 20	.8	18.0	.5	*	3.8	30.0	6.5	2.5	100.0	1.5	1.7
20–39.9	1.6	18.0	1.0	*	10.0	30.0	12.0	5.0	86.0	3.0	7.0
40–59.9	2.7	17.0	.7	*	5.5	37.5	23.9	5.2	59.0	4.0	18.6
60–79.9	6.0	11.0	1.0	19.0	14.0	35.0	48.0	10.0	52.0	10.0	58.3
80–89.9	12.9	20.0	2.0	81.0	15.0	46.0	85.0	9.0	30.0	10.0	129.9
90–100	36.7	42.0	2.5	250.0	75.0	180.0	200.0	28.1	90.0	45.0	404.5
Age of head (years)											
Less than 35	2.4	5.0	.7	*	3.0	18.0	10.0	2.8	*	1.5	6.8
35–44	3.4	5.0	1.0	9.7	15.0	22.5	36.0	8.3	24.0	8.0	25.8
45–54	5.0	15.0	1.0	200.0	18.5	50.0	67.0	10.0	45.0	6.0	54.0
55–64	5.2	23.0	1.9	90.8	24.0	112.0	98.0	10.0	59.0	20.0	72.4
65–74	7.7	23.2	1.0	50.0	38.0	86.0	77.0	10.0	70.0	10.0	68.1
75 or more	6.1	30.0	20.0	100.0	40.0	75.0	35.0	5.0	100.0	15.0	41.5
Family structure											
Single with child(ren)	2.4	7.5	1.0	*	13.0	46.0	30.0	5.0	*	5.5	10.3
Single, no child, age less than 55	2.0	5.5	1.5	*	3.8	18.0	20.0	5.2	50.0	3.0	8.9
Single, no child, age 55 or more	2.5	28.0	3.0	50.0	25.0	77.0	45.0	5.0	100.0	3.6	24.4
Couple with child(ren)	5.0	10.0	.8	530.0	15.0	45.0	52.0	9.0	30.0	10.0	36.3
Couple, no child	6.0	20.0	1.0	80.0	24.0	60.0	55.1	10.0	52.0	10.0	46.1
Education of head											
No high school diploma	1.2	14.0	1.0	*	2.7	64.0	15.0	2.5	30.0	1.5	3.0
High school diploma	2.5	16.0	1.0	46.5	10.0	30.0	28.5	5.2	80.0	5.0	14.2
Some college	2.8	18.0	1.0	50.0	6.0	25.0	32.0	8.0	52.0	4.0	20.0
College degree	10.0	25.0	1.1	100.0	25.0	75.0	75.0	13.0	75.0	10.0	95.7
Race or ethnicity of respondent											
White non-Hispanic	5.1	20.0	1.0	95.9	19.0	64.0	52.7	9.0	70.0	10.0	44.3
Nonwhite or Hispanic	2.0	10.0	1.0	23.1	8.0	30.0	25.4	5.0	30.0	3.0	9.0
Current work status of head											
Working for someone else	3.8	10.0	1.0	46.8	10.5	42.0	40.0	7.5	27.2	5.0	28.5
Self-employed	9.9	25.0	1.0	150.0	60.0	80.0	91.0	24.0	80.0	16.0	54.1
Retired	4.0	30.0	2.5	79.5	28.7	78.2	48.0	5.5	100.0	10.0	29.7
Other not working	1.0	15.0	2.0	*	6.3	50.0	20.8	2.2	*	3.0	3.7
Current occupation of head											
Managerial or professional	8.8	15.0	1.0	80.0	20.0	75.0	72.0	13.0	59.0	10.0	77.0
Technical, sales, or services	3.0	15.0	1.0	123.2	12.0	40.0	30.0	9.0	10.0	5.0	17.6
Other occupation	2.5	10.0	.7	*	4.0	18.0	24.3	5.0	20.0	5.0	13.8
Retired or other not working	3.3	30.0	2.0	95.9	25.0	78.2	45.0	5.0	100.0	5.5	23.7
Region											
Northeast	5.1	20.0	1.0	114.7	17.9	50.0	57.5	9.0	73.0	10.0	43.8
Midwest	3.8	12.0	1.0	49.3	14.0	37.5	36.0	7.0	67.0	6.0	31.0
South	3.5	20.0	1.2	100.0	17.9	70.0	40.0	8.0	80.0	4.0	20.8
West	4.3	23.0	1.0	60.0	18.0	58.8	45.6	10.0	60.0	6.0	29.1
Urbanicity											
Metropolitan statistical area (MSA)	4.5	20.0	1.0	100.0	19.0	60.0	48.0	9.0	70.0	8.0	32.6
Non-MSA	2.5	10.0	1.2	50.0	11.0	34.0	31.3	5.0	45.0	2.4	15.8
Housing status											
Owner	6.2	20.0	1.0	100.0	20.0	60.0	57.0	10.0	70.0	10.0	54.3
Renter or other	1.2	10.0	.7	15.0	5.5	40.0	10.0	2.0	54.0	1.8	3.8
Percentile of net worth											
Less than 25	.7	2.0	.5	*	1.1	*	3.2	1.2	*	1.2	1.4
25–49.9	2.0	7.0	.7	*	3.0	9.0	15.0	3.0	13.8	3.0	13.2
50–74.9	6.1	15.0	1.2	*	6.0	25.0	48.6	6.5	50.0	10.0	59.6
75–89.9	15.5	25.0	2.0	*	20.0	50.0	117.0	15.0	80.0	20.0	215.0
90–100	46.5	50.0	3.5	150.0	125.0	264.0	314.0	30.0	180.0	50.0	773.0
MEMO											
Mean value of holdings for families holding asset	26.4	55.6	6.6	574.3	221.1	309.7	145.8	31.3	248.8	50.3	235.8

NOTE: See note to table 1.
* Ten or fewer observations.

period, at 93.9 percent (first half of tables 6.A and 6.B, last column). However, the recent data show changes for some demographic groups. By income percentile groups, ownership fell for the first and third quintiles and rose or stayed the same for other income groups; by age, an increase appeared only for the 55-to-64 age group; by family structure, ownership increased for childless couples and childless single families headed by a person older than age 55 but declined for other single families; and by work status, ownership rose substantially for families headed by a person who was self-employed or neither working nor retired. Ownership increased for nonwhite or Hispanic families and decreased for white non-Hispanic families. The share of homeowners with financial assets rose, but the ownership rate fell for renters.

In contrast to the drop in the overall ratio of financial assets to total assets over the recent period, the median holding of financial assets for families having such assets rose 13.8 percent (second half of tables 6.A and 6.B, last column), while the mean rose 7.0 percent (memo line). The recent change in the median did not completely offset the decrease over the previous three-year period. The more detailed picture is one of increases in the medians over the recent period for most demographic groups, including substantial increases for the lowest two income quintiles and all age groups except the 55-to-64 and 75-or-more categories. Median holdings increased most markedly for single families with children and younger childless single families; for families in the 65-to-75 age group; for families living in the South or outside of MSAs; and for nonwhite or Hispanic families. Mean holdings of those with financial assets generally rose; among the scattered declines, the largest was a 52.0 percent drop for families in the other-not-working work-status group (means by groups are not shown in the tables).

Transaction Accounts and Certificates of Deposit

In 2007, 92.1 percent of families had some type of transaction account—a category comprising checking, savings, and money market deposit accounts; money market mutual funds; and call or cash accounts at brokerages. The increase of 0.8 percentage point in ownership since 2004 resumed the upward trend seen in earlier surveys after the ownership rate had remained essentially unchanged over the previous three-year period. Families that did not have any type of transaction account in 2007 were disproportionately likely to be in the bottom income quintile group, to be headed by a person younger than 35, to be nonwhite or Hispanic, to be headed by a person who was neither working nor retired, to be renters, or to have net worth in the bottom quartile. See box "Decisions about Checking Accounts" for a discussion of the reasons families do or do not have a checking account. Over the 2004–07 period, transaction account ownership rose noticeably—by 3 to 4 percentage points—for families in South, nonwhite or Hispanic families, and families headed by a person who did not graduate from high school or who was aged 55 to 64.

The slight overall expansion in ownership of transaction accounts in the recent three-year period is reflected in the small changes in the types of transaction accounts held by families. Ownership of checking and savings accounts inched up, while ownership of money market and call accounts slightly declined (table 6.1).

6.1.

Type of transaction account	All families	
	2007 (percent)	Change, 2004–07 (percentage points)
Checking	89.7	.3
Savings	47.2	.1
Money market	20.9	−.2
Call	2.1	−.4

The savings account category includes a relatively small number of tax-preferred accounts such as medical or health savings accounts and Coverdell or 529 education accounts.[21] For families with a savings account, ownership of any of these types of tax-preferred accounts increased, from 2.5 percent in 2004 to 3.8 percent in 2007. In both of these survey years, 529 plans accounted for about 80 percent of the number of tax-preferred savings accounts.

Median holdings in transaction accounts for those who had such accounts fell 2.4 percent from 2004 to 2007, while the mean fell 11.4 percent. Across demographic groups, the patterns of changes in the median are mainly a mixture of substantial increases and decreases. Median balances rose for the lowest and highest income groups and the lowest net worth quartile and fell or was unchanged for the middle income groups and all the other wealth groups; across age groups, the median increased substantially for the less-than-35 and the 65-to-74 age groups and fell or rose slightly for other families. By family structure, median balances increased sharply for single families with children and rose for childless single families headed by a person aged less than 55, but they fell for other families. Across work-status groups, median

21. Coverdell savings accounts, formerly known as education individual retirement accounts, and 529 saving plans are tax-deferred plans that parents or others may use to save for educational expenses.

Decisions about Checking Accounts

Between 2004 and 2007, the proportion of families with any type of transaction account edged up slightly (table 6 in the main text), while the share without a checking account fell 0.3 percentage point, from 10.6 percent to 10.3 percent (data not shown in the tables). The decline in the fraction of families without a checking account follows a longer trend; in 1989, the share was 18.7 percent.[1]

Among families without a checking account in 2007, 52.7 percent had held such an account in the past, 63.2 percent had incomes in the lowest quintile of that distribution, 56.3 percent were headed by a person younger than 45, and 58.3 percent were nonwhite or Hispanic. The SCF asked all families that did not have a checking account to give a reason for not having an account (table A). The most commonly reported reason—given by 25.2 percent of such families—was that the family did not like dealing with banks. Another 18.7 percent did not write enough checks to make account ownership worthwhile; this reason had been the most frequently reported one in each of the earlier years shown. The proportion reporting they did not have enough money to make an account worthwhile also declined notably—from 14.4 percent in 2004 to 10.4 percent in 2007. Another 12.3 percent of families said that service charges were too high. The SCF showed a sizable increase in the fraction of families reporting credit problems as a reason—from 2.4 percent in 2004 to 6.6 percent in 2007; the fraction of families that cited they did not need or want an account as a reason also increased substantially, from 5.2 percent in 2004 to 8.9 percent in 2007.

A. Distribution of reasons cited by respondents for their families' not having a checking account, by reason, 1998–2007 surveys

Percent

Reason	1998	2001	2004	2007
Do not write enough checks to make it worthwhile	28.4	28.5	27.9	18.7
Minimum balance is too high	8.6	6.5	5.6	7.6
Do not like dealing with banks	18.5	22.6	22.6	25.2
Service charges are too high	11.0	10.2	11.6	12.3
Cannot manage or balance a checking account	7.2	6.6	6.8	3.9
No bank has convenient hours or location	1.2	.4	1.1	.8
Do not have enough money	12.9	14.0	14.4	10.4
Credit problems	2.7	3.6	2.4	6.6
Do not need or want account	6.3	5.1	5.2	8.9
Other	3.1	2.3	2.4	5.6
Total	**100**	**100**	**100**	**100**

When attention is further restricted to families that once had a checking account (data not shown in the tables), the general pattern of responses is similar to that for all families without a checking account, but some differences are evident. For families that once had a checking account, the proportion reporting that they did not like banks, found service charges too high, or had credit problems all rose from 2004. These increases were offset by decreases in the proportion reporting that they did not write enough checks, could not manage or balance a checking account, or did not have enough money for an account to be worthwhile.

The SCF asked all families with a checking account to give the most important reason they chose the financial institution for their main checking account (table B). In 2007, 45.9 percent of families chose the institution for their main checking account for reasons related to the location of the offices of the institution.[2] Another 16.2 percent placed the most importance on the ability to obtain many services at one place, and 13.7 percent singled out the importance of obtaining the lowest fees or minimum balance requirements. Absence of risk was of primary importance for only a relatively small fraction of families. Over the 2004–07 period, the most noticeable changes in these responses were a decrease in the fraction of families citing reasons related to the lowest fees or minimum balance requirements and the increase in the fraction citing reasons related to the safety and absence of risk offered by the institution.

B. Distribution of reasons cited by respondents as the most important reason for choosing institution for their main checking account, 1998–2007 surveys

Percent

Reason	1998	2001	2004	2007
Location of their offices	43.6	42.8	45.4	45.9
Had the lowest fees/minimum balance requirement	18.4	16.6	16.3	13.7
Able to obtain many services at one place	16.0	16.4	15.3	16.2
Recommended: friend/family has account there	3.6	4.7	3.9	4.2
Personal relationship: they know me; family member works there	3.9	4.0	3.5	4.2
Connection through work or school	1.4	2.0	3.5	3.3
Always done business there; banked there a long time; other business there	2.7	2.4	2.9	3.0
Offered safety and absence of risk	2.1	2.2	1.9	2.9
Other convenience; payroll deduction/direct deposit	1.2	1.3	1.2	1.0
Other	7.1	7.5	6.1	6.1
Total	**100**	**100**	**100**	**100**

1. For the definition of "transaction account," see the main text. For a more extensive discussion of the ways that families obtain checking and credit services, see Jeanne M. Hogarth, Christoslav E. Anguelov, and Jinkook Lee (2005), "Who Has a Bank Account? Exploring Changes over Time, 1989–2001," *Journal of Family & Economic Issues*, vol. 26 (1), pp. 7–30.

2. For a discussion of the definition of local banking markets, see Dean F. Amel, Arthur B. Kennickell, and Kevin B. Moore (2008), "Banking Market Definition: Evidence from the Survey of Consumer Finances," Finance and Economics Discussion Series 2008-35 (Washington: Board of Governors of the Federal Reserve System, October), www.federalreserve.gov/pubs/feds/2008/200835/200835pap.pdf.

balances fell for all groups except the working-for-someone-else category. Holdings increased for households headed by a person in a technical, sales, or service occupation but decreased for the remaining three occupation groups. Median balances increased strongly for nonwhite or Hispanic families and fell somewhat for other families. By region, median holdings declined substantially for families in the Northeast and Midwest.

Certificates of deposit (CDs)—interest-bearing deposits with a set term—are traditionally viewed as a low-risk saving vehicle, and they are often used by persons who desire a safe haven from the volatility of financial markets. Over the 2004–07 period, the attractiveness of CDs increased as the interest rates on them rose. The resulting increase of 3.4 percentage points in ownership was the largest increase observed in the SCF since 1989. Over the recent period, ownership increased among almost all demographic groups. Increases in ownership were particularly strong for the top income group, the oldest age group, retired families, and the next-to-highest net worth group. The overall median value of holdings of CDs increased 21.2 percent over the three-year period, while the mean value decreased 7.6 percent. Consideration of changes in the median across demographic groups reveals substantial increases for the first and third income quintiles, the some-college education group, the other-not-working group, and the other occupation group. The overall decline in the mean suggests that balances on most new accounts tended to be moderate.

Savings Bonds and Other Bonds

Savings bonds are owned disproportionately by families in the highest 40 percent of the income distribution and by families in the top half of the distribution of net worth. Over the 2004–07 period, the ownership of savings bonds declined 2.7 percentage points, to 14.9 percent overall, and it fell for virtually all demographic groups. Median holdings fell 9.1 percent, but the mean rose 4.8 percent.

Other bond types tend to be very narrowly held, and the ownership rate fell to 1.6 percent in 2007, a drop of 0.2 percentage point from 2004.[22] Although the ownership rate for such bonds fell only slightly, changes in the types of bonds held by families were somewhat larger and were driven mainly by a decline in the fraction of families owning bonds of multiple types. The proportion of families that owned government bills and bonds, mortgage-backed bonds, and corporate or foreign bonds fell in the recent period, while ownership of tax-exempt bonds was unchanged (table 6.2).

6.2.

Type of bond	All families	
	2007 (percent)	Change, 2004–07 (percentage points)
Government	.4	−.1
Tax exempt	1.0	*
Mortgage backed	.3	−.1
Corporate or foreign	.4	−.4

* Less than 0.05 percent.

Ownership of any type of bond is concentrated among the highest tiers of the income and wealth distributions, and these groups saw little change in ownership from 2004 to 2007. The median value of bonds for families that had them rose 12.0 percent, while the mean fell 4.4 percent.

Publicly Traded Stock

The direct ownership of publicly traded stocks is more widespread than the direct ownership of bonds, but, as with bonds, it is also concentrated among high-income and high-wealth families. The share of families with any such stock holdings declined 2.8 percentage points from 2004 to 2007, to 17.9 percent, thereby continuing a decline observed over the previous three-year period. Across demographic groups, the recent decline was most marked for the highest decile of the income distribution, families headed by a person who was aged 55 to 74 or who was self-employed, families in the Northeast or the Midwest, and families in the top quartile of the net worth distribution.

The major stock price indexes increased about 30 percent over the 2004–07 period; at the same time, the median amount of directly held stock for families with such assets rose 3.0 percent, and the mean climbed 25.6 percent. The median value declined for many demographic groups but rose substantially for the two family-structure groups with children and for the self-employed. The mean amount of directly held stock increased across most demographic groups (data not shown in the tables).

The great majority of families with directly held stock owned stock in only a small number of companies. Over the three-year period, the share of families owning stock in only one company increased (table 6.3).

22. "Other bonds" as reported in the survey are held directly and include corporate and mortgage-backed bonds; federal, state, and local government bonds; and foreign bonds. In this article, financial assets held indirectly are those held in retirement accounts or in other managed assets.

6.3.

Number of directly held stocks	Families with directly held stocks	
	2007 (percent)	Change, 2004–07 (percentage points)
1	36.4	1.8
2 to 9	47.6	-.1
10 or more	16.0	-1.7

For 36.1 percent of stockowners in 2007, at least one of the companies in which they owned stock was one that employed, or had employed, the family head or that person's spouse or partner. Ownership of stock in a foreign company was less common; only 15.8 percent of stockholders had this type of stock (data not shown in the tables). The 2004 data show a similar pattern.

Pooled Investment Funds

Pooled investment funds are among the least commonly held of the specific financial assets shown in table 6.[23] As was the case for directly held bonds and stocks from 2004 to 2007, direct ownership of pooled investment funds fell—a decline of 3.6 percentage points, to 11.4 percent of families in 2007. Ownership of pooled investment funds declined for almost every demographic group over the three-year period. Both the overall change and the changes for demographic groups continue the pattern observed in the previous three-year period.

The survey also collects information on the different types of pooled investment funds owned by families. Ownership shifted over the recent period to stock funds from most other types of funds; the residual "other" category, which consists almost entirely of hedge funds and exchange-traded funds, decreased slightly (table 6.4).

Among families owning pooled investment funds, the value of holdings has continued an increase seen over the preceding decade; in the recent three-year period, the median holding rose 26.1 percent, and the mean rose 53.3 percent. Median and mean values increased across almost every demographic group, evidence that the decrease in ownership was concentrated among families with small account balances (data not shown in the tables).

23. In this article, pooled investment funds exclude money market mutual funds and indirectly held mutual funds and include all other types of directly held pooled investment funds, such as traditional open-end and closed-end mutual funds, real estate investment trusts, and hedge funds.

6.4.

Type of pooled investment fund	All families	
	2007 (percent)	Change, 2004–07 (percentage points)
Stock	10.2	3.2
Tax-free bond	2.1	-.8
Government bond	1.2	.1
Other bond	1.0	-.5
Combination	1.4	-1.3
Other	.5	-.2

Retirement Accounts

Ownership of tax-deferred retirement assets such as personally established individual retirement accounts (IRAs) or job-based 401(k) accounts tends to increase with families' income and net worth.[24] For several reasons, ownership is also more likely among families headed by a person less than 65 years of age than among the older groups. First, even though retirement accounts have been in existence for more than 25 years, they may not have become common until relatively late in the careers of many persons in the older groups. Second, beginning in the year that a person reaches age 59½, funds held by that person in retirement accounts may be withdrawn without penalty, and some in the two oldest age groups may have already done so. Third, families may have used funds from retirement accounts accumulated from previous employment to purchase an annuity at retirement; annuities are treated in the SCF as a separate type of managed asset.

From 2004 to 2007, the fraction of families with retirement accounts rose 2.9 percentage points, to 52.6 percent; the increase offset most of the 3.0 percentage point decrease over the preceding three years. In the recent period, the fraction of families that had some type of account plan associated with a current or past job or that held an IRA or Keogh account

24. Tax-deferred retirement accounts consist of IRAs, Keogh accounts, and certain employer-sponsored accounts. Employer-sponsored accounts consist of 401(k), 403(b), and thrift savings accounts from current or past jobs; other current job plans from which loans or withdrawals can be made; and accounts from past jobs from which the family expects to receive the account balance in the future. This definition of employer-sponsored plans is intended to confine the analysis to accounts that are portable across jobs and for which families will ultimately have the option to withdraw the balance.

IRAs and Keoghs may be invested in virtually any asset, including stocks, bonds, pooled investment funds, options, and real estate. In principle, employer-sponsored plans may be invested in a similarly broad way, but, in practice, a person's choices for investment are sometimes limited to a narrower set of assets.

increased, and the fraction that had at least one account of each type rose as well (table 6.5).

6.5.

Type of retirement account	All families	
	2007 (percent)	Change, 2004–07 (percentage points)
Account plan from current or past job	38.0	2.0
Individual retirement account or Keogh	30.6	1.6
Memo		
Both types	14.3	1.8

Over the 2004–07 period, ownership increased for nearly all groups. Substantial increases were reported for families in the 45-to-54 and 65-to-74 age groups, nonwhite or Hispanic families, families living in the South, and families in the technical, sales, or services occupation group.

In a continuation of the trend over the preceding decade, holdings in retirement accounts increased markedly in the 2004–07 period; for families having retirement accounts, the median rose 16.3 percent, and the mean rose 9.5 percent. Gains also appeared in the median holdings of most demographic groups over the recent period; some of the largest increases were for families in the middle of the income and wealth distributions, families in the high-school-diploma and some-college education groups, single families with children, nonwhite or Hispanic families, the self-employed work-status group, families in the South and West, and families residing in non-MSA areas.

Although tax-deferred retirement assets are clearly an important element in retirement planning, families may hold a variety of other assets that are intended, at least in part, to finance retirement. Such other assets might also be used for contingencies as necessary. Similarly, a need for liquidity might drive a family to liquidate or borrow against a tax-deferred retirement asset, even if it will be assessed a penalty for doing so.

Two common and often particularly important types of retirement plans are not included in the assets described in this section: Social Security (the federally funded Old-Age and Survivors' Insurance program, or OASI) and employer-sponsored defined-benefit plans. OASI is well described elsewhere, and it covers the great majority of the population.[25] The retirement income provided by defined-benefit plans is typically based on workers' salaries and years of work with an employer, a group of employers, or a union. Unfortunately, future income streams from OASI and defined-benefit plans cannot be translated directly into a current value because valuation depends critically on assumptions about future events and conditions—work decisions, earnings, inflation rates, discount rates, mortality, and so on—and no widely agreed-upon standards exist for making these assumptions.[26]

However, the SCF does contain substantial information for family heads and their spouse or partner regarding any defined-benefit plans or other types of plans with some kind of account feature to which they have rights from a current or past job.[27] In 2007, 57.7 percent of families had rights to some type of plan other than OASI through the current or past work of either the family head or that person's spouse or partner, a level nearly the same as in 2004. For this group of families, the fraction with a standard defined-benefit plan with an annuity payout scheme declined over the recent period, while the fraction with a plan with at least some account feature and the fraction that had both types of plans increased (table 6.6).

6.6.

Type of pension plan	Families with any pension plan	
	2007 (percent)	Change, 2004–07 (percentage points)
Defined benefit	55.8	-1.6
Account plan	65.8	3.3
Memo		
Both types	21.6	1.8

In many pension plans with account features, contributions may be made by the employer, the worker, or both. In some cases, these contributions represent a substantial amount of saving, though workers may offset this saving by reducing their saving in other forms. An employer's contributions also represent additional income for the worker. In 2007, 87.1 percent of families with an account plan on a current job

25. For a detailed description of OASI, see Social Security Administration, "Online Social Security Handbook," Publication 65-008, www.ssa.gov/OP_Home/handbook/ssa-hbk.htm.

26. For one possible calculation of net worth that includes the annuity value of payments from defined-benefit pensions and OASI, see Arthur B. Kennickell and Annika E. Sundén (1997), "Pensions, Social Security, and the Distribution of Wealth," Finance and Economics Discussion Series 1997-55 (Washington: Board of Governors of the Federal Reserve System, October), www.federalreserve.gov/pubs/feds/1997/index.html.

27. The definition of account plan used here differs slightly from that used in computing the survey wealth measure, which includes account balances only if the family has the ability to make withdrawals from, or borrow against, the account. Here the only criterion used in classification is whether any account balance exists. For example, a defined-benefit plan with a portable cash option, which would allow the covered worker to receive a lump sum in lieu of regular payments in retirement, would be treated as an account plan here.

of either the family head or that person's spouse or partner had an employer that made contributions to the plan, a decline of 1.6 percentage points from 2004. In 2007, 91.4 percent of families with such plans made contributions themselves, an increase of 2.1 percentage points from 2004. The median annual contribution by employers who contributed to such accounts was $2,200 in 2007, and the median contribution by families that contributed was $2,500; both amounts fell slightly from 2004 levels (data not shown in the tables).

The eligibility of working heads of families to participate in any type of job-related pension rose from 54.8 percent in 2004 to 55.9 percent in 2007; it had declined 2.4 percentage points over the preceding three years (data not shown in the tables). Participation by eligible workers is usually voluntary. In 2007, 83.8 percent of family heads who were eligible to participate elected to do so, down slightly from 84.1 percent in 2004.[28] The choice to participate appears to be related strongly to income. In 2007, the fraction of eligible family heads declining to participate fell as income rose, and this general pattern was not substantially altered from 2004 (table 6.7).

6.7.

Percentile of income	Families headed by a person who was eligible for a work-related retirement plan on a current job and who declined to participate	
	2007 (percent)	Change, 2004–07 (percentage points)
Less than 20	54.3	3.7
20–39.9	28.1	-1.6
40–59.9	18.5	.3
60–79.9	10.5	-1.5
80–89.9	10.9	2.0
90–100	6.5	1.5

Cash Value Life Insurance

Cash value life insurance combines an investment vehicle with insurance coverage in the form of a death benefit.[29] Some cash value life insurance policies offer a high degree of choice in the way the policy payments are invested. Investment returns on such policies are typically shielded from taxation until the money is withdrawn; if the funds remain untapped until the policyholder dies, the beneficiary of the policy may receive, tax-free, the death benefit or the cash value, whichever is greater. In contrast, term insurance, the other popular type of life insurance, offers only a death benefit. One attraction of cash value policies for some people is that they promote regular saving funded through the required policy premium.

Ownership of cash value life insurance is broadly spread across demographic groups, with a tendency toward increasing rates among families with higher levels of income and net worth and those with older family heads. Ownership of cash value policies over the 2004–07 period continued a declining trend, decreasing 1.2 percentage points, to 23.0 percent of families in 2007. The decline was shared by most demographic groups. Over the three-year period, ownership of any type of life insurance, cash value or term, also fell slightly—from 65.4 percent in 2004 to 64.9 percent in 2007 (data not shown in the tables). Of those families with some type of life insurance, the proportion with term policies was about unchanged, while the proportion with cash value policies fell; these changes are similar to trends in the earlier surveys.

After declining over the previous three-year period, the median value of cash value life insurance for families that had any such insurance rose 21.2 percent between 2004 and 2007, and the mean rose 23.7 percent. The median showed increases across most demographic groups, although it declined considerably for families in the other-not-working work-status category, renter families, and families in the second quartile of the wealth distribution.

Other Managed Assets

Ownership of other managed assets—personal annuities and trusts with an equity interest and managed investment accounts—is concentrated among families with higher levels of income and wealth and among families headed by a person who is aged 55 or older or who is retired.[30] Ownership of these assets

28. An analysis of the March Current Population Survey (CPS) with a definition of family head that is closest to that in this article shows an opposite trend in pension eligibility for employed family heads, but that trend is at a similar level as in the SCF. The CPS eligibility estimate for family heads with a job in the past year was 57.8 percent in 2004 and 53.9 percent in 2007. Differences in the definition of the relevant employment may explain some of the difference in the levels in the two surveys. Unlike the SCF, the CPS shows a small increase in the uptake rate for such eligible workers—from 83.0 percent in 2004 to 83.3 percent in 2007.

29. The survey measures the value of such policies according to their current cash value, not their death benefit. The cash value is included as an asset in this article only when the cash value at the time of the interview was nonzero.

30. Annuities may be those in which the family has an equity interest in the asset or in which the family possesses an entitlement only to a stream of income. The wealth figures in this article include only the annuities in which the family has an equity interest. In 2007, 5.5 percent of families reported having any type of annuity, and of these families, 81.0 percent reported having an equity interest. The trusts or managed investment accounts included in other managed assets are those in which families have an equity interest and for which component parts were not separately reported. Typically, such accounts

declined 1.5 percentage points between 2004 and 2007 after a small increase over the previous three years. Ownership fell in the recent three-year period for almost every demographic group, with the largest declines for families in the Midwest and for the next-to-highest income and net worth groups. Across all families, the fraction with an annuity declined over the period, and the fraction with a trust or managed investment account inched up, while the fraction with both categories of managed assets was essentially unchanged (table 6.8).

6.8.

Type of other managed asset	All families	
	2007 (percent)	Change, 2004–07 (percentage points)
Annuity	4.5	−1.4
Trust or managed investment account	1.7	.1
MEMO		
Both types	.3	†

† Less than 0.05 percent.

Between 2004 and 2007, the median value of other managed assets for families that had such assets increased 41.7 percent, an increase that offset the decline in the preceding three-year period. Over the more recent period, the corresponding mean value increased 9.4 percent. Median holdings rose for many demographic groups; noticeable exceptions were families in the top two income deciles and families headed by a person who was working for someone else or who was working in a technical, sales, or service job or a job in the other-occupation category. The rise in the median value reflects substantial increases in annuities and modest increases in trusts or managed investment accounts. For families with an equity interest in an annuity, the median holding rose 23.1 percent, to $50,000 in 2007; for families with a trust or managed investment account as defined in this article, the median holding rose 9.1 percent, to $120,000 (data not shown in the tables).

As noted in the discussion of retirement accounts, some families use settlements from retirement accounts to purchase an annuity. In 2007, 30.4 percent of families with annuities had done so (data not shown in the tables). Of these families, 71.7 percent had an equity interest in their annuities.

Other Financial Assets

Ownership of other financial assets—a heterogeneous category including oil and gas leases, futures contracts, royalties, proceeds from lawsuits or estates in settlement, and loans made to others—fell 0.7 percentage point between 2004 and 2007, to 9.3 percent. Ownership of such assets tends to be more common among higher income and wealth groups, younger age groups, and families headed by a person who is self-employed. Ownership across demographic groups generally declined over this period, while the median holding for those who had such assets increased 36.4 percent, to $6,000.

Holdings may be grouped into four categories: cash, which includes money owed to families by other persons; future proceeds, which include amounts to be received from a lawsuit, estate, or other type of settlement; business items, which include deferred compensation, royalties, futures contracts, and derivatives; and other. The proportion of families holding various types of other financial assets remained fairly constant over the three-year period, with cash being by far the most frequently held component (table 6.9).

6.9.

Type of other financial asset	All families	
	2007 (percent)	Change, 2004–07 (percentage points)
Cash	8.1	−.8
Future proceeds	.9	.1
Business items	.5	.1
Other	†	†

† Less than 0.05 percent.

Some publicly traded companies offer stock options to their employees as a form of compensation.[31] Although stock options, when executed, may represent an appreciable part of a family's net worth, the survey does not specifically ask for the value of these options.[32] Instead, the survey asks whether the family

are those in which the ownership is complicated or the management is undertaken by a professional. In 2007, 84.8 percent of families with trusts or managed investment accounts had an equity interest in such an account.

The survey encourages respondents who have trusts or managed investment accounts that are held in relatively common investments to report the components. Of the 3.8 percent of families that reported having any kind of trust or managed investment account in 2007, 47.1 percent of them reported at least one of the component assets separately. Of families that detailed the components in 2007, 84.8 percent reported some type of financial asset, 19.0 percent reported a primary residence, 15.3 percent reported other real estate, 15.3 percent reported a business, and 2.9 percent reported another type of asset (data not shown in the tables). The fraction of these families reporting the primary residence as a trust component increased 8.0 percentage points between 2004 and 2007, and the fraction reporting a business increased 11.7 percentage points; the fraction reporting other real estate or another type of asset was little changed.

31. See Jeffrey L. Schildkraut (2004), "Stock Options: National Compensation Survey Update" (Washington: Bureau of Labor Statistics, September), www.bls.gov/opub/cwc/cm20040628yb01p1.htm.

32. Because such options are typically not publicly traded or their execution is otherwise constrained, their value is uncertain until the

7. Direct and indirect family holdings of stock, by selected characteristics of families, 1998–2007 surveys

Percent except as noted

Family characteristic	Families having stock holdings, direct or indirect				Median value among families with holdings (thousands of 2007 dollars)				Stock holdings as share of group's financial assets			
	1998	2001	2004	2007	1998	2001	2004	2007	1998	2001	2004	2007
All families	**48.9**	**52.2**	**50.2**	**51.1**	**31.8**	**40.4**	**35.7**	**35.0**	**54.0**	**56.1**	**51.3**	**53.3**
Percentile of income												
Less than 20	10.0	12.9	11.7	13.6	6.4	8.8	8.2	6.5	20.4	37.4	32.0	39.0
20–39.9	30.8	34.1	29.6	34.0	12.7	9.1	11.0	8.8	29.8	35.6	30.9	34.3
40–59.9	50.2	52.5	51.7	49.5	15.3	17.5	16.5	17.7	38.1	46.8	43.4	38.3
60–79.9	69.3	75.7	69.9	70.5	24.2	33.5	28.7	34.1	45.8	52.0	41.7	52.5
80–89.9	77.9	82.0	83.8	84.4	57.3	75.6	60.9	62.0	50.4	57.3	48.8	49.3
90–100	90.4	89.7	92.7	91.0	171.9	289.7	225.2	219.0	62.5	60.5	57.5	57.6
Age of head (years)												
Less than 35	40.8	49.0	40.8	38.6	8.9	8.2	8.8	7.0	44.9	52.5	40.3	44.3
35–44	56.7	59.5	54.5	53.5	25.5	32.2	22.0	26.0	55.0	57.2	53.5	53.7
45–54	58.6	59.3	56.5	60.4	48.4	58.5	54.9	45.0	55.7	59.1	53.8	53.0
55–64	55.9	57.4	62.8	58.9	59.8	94.2	78.0	78.0	58.4	56.2	55.0	55.0
65–74	42.7	40.0	46.9	52.1	71.3	175.8	76.9	57.0	51.3	55.4	51.5	55.3
75 or more	29.4	35.7	34.8	40.1	76.4	128.7	94.3	41.0	48.7	51.8	39.3	48.1
Housing status												
Owner	59.8	62.4	60.9	62.5	43.3	58.5	49.4	41.2	55.1	56.8	51.9	53.8
Renter or other	27.5	30.9	26.4	26.0	9.5	8.2	9.6	8.6	40.5	46.2	39.2	45.0

NOTE: Indirect holdings are those in pooled investment trusts, retirement accounts, and other managed assets. See also note to table 1.

head or that person's spouse or partner had been given stock options by an employer during the preceding year. In 2007, 8.3 percent of families reported having received stock options, a decline of 1.0 percentage point below the level in 2004; this decrease continues a downward trend since the peak of 11.4 percent recorded in the SCF in 2001 (data not shown in the tables).[33]

Direct and Indirect Holdings of Publicly Traded Stocks

Families may hold stocks in publicly traded companies directly or indirectly, and information about each of these forms of ownership is collected separately in the SCF. When direct and indirect forms are combined, the 2007 data show a resumption of a trend of increasing stock ownership (table 7). Between 2004 and 2007, the fraction of families holding any such stock rose 0.9 percentage point, to 51.1 percent, a level still below the 2001 peak of 52.2 percent. Much like ownership of directly held stock, ownership of direct and indirect equity holdings is more common among higher-income groups and among families headed by a person aged 35 to 64. Over the recent three-year period, ownership increased for all income groups except the third quintile and top decile. Across age groups, ownership fell for families headed by a person younger than 45 or aged 55 to 64; ownership rose substantially for families headed by a person aged 45 to 54 or older than 65.

At the same time, the overall median value of direct and indirect stock holdings dropped 2.0 percent. Changes in the median value across demographic groups were mixed, with declines more common for groups that experienced increases in ownership, an indication that most new owners had small amounts. As a proportion of financial assets, holdings rose 2.0 percentage points overall, with substantial increases for the first and fourth income quintiles and the oldest age group.

As noted earlier in the discussion on net worth, the stock markets have undergone sizable declines since the data collection for the 2007 SCF was completed. To gauge the potential effect of these changes on the median amount of equity held by families, the equity values in the survey were deflated by the ratio of the average of the Wilshire 5000 index in October 2008 to the value of the index on the day of the interview, assuming a homogeneous rate of return for all equity holders and no changes in the portfolios of families since the time of the survey. Under this scenario, the median value of equity falls 35.7 percent, from the 2007 value of $35,000 to $22,500 (data not shown in the tables).

Among families that held equity, either directly or indirectly, in 2007, ownership through a tax-deferred retirement account was most common, followed by direct holdings of stocks, direct holdings of pooled investment funds, and managed investment accounts

exercise date; until then, meaningful valuation would require complex assumptions about the future behavior of stock prices.

33. Data on the awarding of options have been collected in the SCF since 1995.

or an equity interest in a trust or annuity. Over the 2004–07 period, ownership of tax-deferred accounts rose, while ownership of all other types of equities fell; the fraction of equity owners with multiple types also declined (table 7.1).

7.1.

Type of direct or indirect equity	Families with equity	
	2007 (percent)	Change, 2004–07 (percentage points)
Tax-deferred account	83.9	3.3
Directly held stock	35.1	–6.0
Directly held pooled investment fund	21.1	–7.3
Managed investment account, or equity interest in a trust or annuity	8.1	–1.3
MEMO		
Multiple types	37.3	–6.7

The distribution of amounts of holdings over these types of equities shows a different pattern. Of the total amount of equity, 37.8 percent was held in tax-deferred retirement accounts, 33.6 percent as directly held stocks, 22.1 percent as directly held pooled investment funds, and 6.5 percent as other managed assets (data not shown in the tables).

Nonfinancial Assets

By definition, a rise in nonfinancial assets as a share of total assets must exactly offset the 1.8 percentage point drop in the share of financial assets from 2004 to 2007, which was discussed earlier in this article (table 5). The changes in these shares may have been driven by changes in portfolio choices, portfolio valuation, or both. The 2001 estimate of the value of nonfinancial assets as a share of total assets, at 57.8 percent, appears to be the low point since 1998 (table 8); the 2007 level of 66.1 percent is near the middle of the range over the past seven surveys (data not shown in the tables). Over the recent three-year period, the value of primary residences as a share of nonfinancial assets fell 2.2 percentage points, to 48.1 percent, still above its share before 2004. The share of equity in nonresidential property also declined. The largest offsetting increase was in the share of business equity, which rose 3.8 percentage points over the period to its highest recorded share of 29.7 percent in 2007.

8. Value of nonfinancial assets of all families, distributed by type of asset, 1998–2007 surveys

Percent

Type of nonfinancial asset	1998	2001	2004	2007
Vehicles[1]	6.5	5.9	5.1	4.4
Primary residence	47.0	46.9	50.3	48.1
Other residential property	8.5	8.1	9.9	10.7
Equity in nonresidential property	7.7	8.2	7.3	5.8
Business equity	28.5	29.3	25.9	29.7
Other	1.7	1.6	1.5	1.3
Total	**100**	**100**	**100**	**100**
MEMO				
Nonfinancial assets as a share of total assets	59.3	57.8	64.3	66.1

NOTE: See note to table 1.

1. For definition, see text note 34.

In 2007, the level of ownership of nonfinancial assets was 92.0 percent of families, 0.5 percentage point lower than in 2004 (first half of tables 9.A and 9.B, next-to-last column). Across most of the demographic groups shown, the 2007 rate was 85 percent or more; exceptions were the lowest income and wealth groups, younger childless single families, families headed by a person who was neither working nor retired, renters, families headed by a person without a high school diploma, and families living in the Northeast. Over the 2004–07 period, ownership rose most for the 55-to-64 age group, families with children, nonwhite or Hispanic families, and families living in the South. Substantial declines in ownership were seen by the oldest age group, the lowest quintile of the income distribution, families without children, families headed by a retiree, and families living in the Northeast.

Over the recent period, the median holding of nonfinancial assets for families having any such assets rose 9.3 percent, and the mean increased 16.7 percent. Across demographic groups, substantial gains in the medians far outnumbered declines. The largest gains in the median value occurred for the lowest quintile of the income distribution, and smaller gains were observed in the top four deciles, with small declines for the middle groups. Median holdings also climbed substantially among families headed by a person who was not a high school graduate, the education group with the lowest ownership of such assets.

Vehicles

Vehicles continue to be the most commonly held nonfinancial asset.[34] From 2004 to 2007, the share of families that owned some type of vehicle rose 0.7 percentage point, to 87.0 percent. Trends in ownership rates over the recent three years were mixed across most demographic groups. Across age groups, ownership increased for all groups except the 35-to-44 and 75-or-more age categories. Vehicle ownership de-

34. The definition of vehicles in this article is a broad one that includes cars, vans, sport utility vehicles, trucks, motor homes, recreational vehicles, motorcycles, boats, airplanes, and helicopters. Of families owning any type of vehicle in 2007, 99.8 percent had a car, van, sport utility vehicle, motorcycle, or truck. The remaining types of vehicles were held by 15.4 percent of families.

9. Family holdings of nonfinancial assets and of any asset, by selected characteristics of families and type of asset, 2004 and 2007 surveys

A. 2004 Survey of Consumer Finances

Family characteristic	Vehicles	Primary residence	Other residential property	Equity in nonresidential property	Business equity	Other	Any nonfinancial asset	Any asset
	Percentage of families holding asset							
All families	**86.3**	**69.1**	**12.5**	**8.3**	**11.5**	**7.8**	**92.5**	**97.9**
Percentile of income								
Less than 20	65.0	40.3	3.6	2.7	3.7	3.9	76.4	92.2
20–39.9	85.3	56.9	6.9	3.8	6.7	4.3	92.0	97.8
40–59.9	91.6	71.6	10.0	7.6	9.5	7.6	96.7	99.8
60–79.9	95.3	83.1	14.0	10.5	12.1	10.4	98.4	100.0
80–89.9	95.9	91.9	19.4	12.9	15.9	8.4	99.1	99.8
90–100	93.1	94.7	37.2	20.8	34.7	16.7	99.3	100.0
Age of head (years)								
Less than 35	82.9	41.6	5.1	3.3	6.9	5.5	88.6	96.5
35–44	89.4	68.3	9.4	6.4	13.9	6.0	93.0	97.7
45–54	88.8	77.3	16.3	11.4	15.7	9.7	94.7	98.3
55–64	88.6	79.1	19.5	12.8	15.8	9.2	92.6	97.5
65–74	89.1	81.3	19.9	10.6	8.0	9.0	95.6	99.5
75 or more	76.9	85.2	9.7	7.7	5.3	8.5	92.5	99.6
Family structure								
Single with child(ren)	80.0	60.6	6.4	5.0	4.9	5.9	88.4	96.9
Single, no child, age less than 55	77.3	42.0	7.1	3.9	7.0	6.7	84.1	95.4
Single, no child, age 55 or more	75.2	70.0	11.4	6.8	5.3	7.9	88.2	97.8
Couple with child(ren)	91.3	75.8	14.4	7.7	12.2	6.4	95.7	99.1
Couple, no child	93.6	80.1	15.8	11.4	16.3	8.8	97.4	98.9
Education of head								
No high school diploma	70.1	56.3	5.6	4.0	4.2	1.9	81.9	91.1
High school diploma	87.6	65.8	8.3	6.1	10.4	5.3	92.4	98.1
Some college	88.2	64.5	12.2	8.1	10.7	9.4	93.3	99.1
College degree	90.7	79.1	19.0	11.9	15.6	11.3	96.5	99.9
Race or ethnicity of respondent								
White non-Hispanic	90.3	76.1	14.0	9.2	13.6	9.3	95.8	99.3
Nonwhite or Hispanic	76.1	50.8	8.9	5.8	5.9	3.8	84.0	94.4
Current work status of head								
Working for someone else	89.7	66.5	10.4	6.8	5.8	7.1	93.8	98.4
Self-employed	91.2	79.1	25.8	18.7	58.1	12.9	97.5	99.1
Retired	79.0	75.8	12.8	7.9	3.5	7.1	89.8	97.7
Other not working	66.9	40.0	5.4	*	6.9	6.4	76.3	89.6
Current occupation of head								
Managerial or professional	92.0	78.1	19.6	11.3	21.2	10.4	97.0	99.9
Technical, sales, or services	85.1	58.2	8.2	6.9	9.7	7.2	90.9	97.4
Other occupation	92.1	66.6	9.0	7.4	10.2	5.9	94.7	97.8
Retired or other not working	77.2	70.3	11.6	7.1	4.0	7.0	87.7	96.4
Region								
Northeast	80.4	69.8	12.6	6.0	11.1	6.4	90.3	97.9
Midwest	89.4	73.5	12.6	8.2	12.6	8.8	94.2	99.2
South	84.9	68.9	10.2	8.8	10.1	7.1	92.1	97.3
West	90.6	64.0	16.3	9.6	13.0	8.9	93.4	97.7
Urbanicity								
Metropolitan statistical area (MSA)	85.9	68.0	13.3	8.0	11.6	8.3	92.1	97.8
Non-MSA	88.3	74.0	8.7	9.8	11.0	5.1	94.6	98.4
Housing status								
Owner	92.3	100.0	15.7	11.0	14.7	9.2	100.0	100.0
Renter or other	73.0	*	5.4	2.4	4.3	4.6	75.9	93.3
Percentile of net worth								
Less than 25	69.8	15.2	*	*	*	2.9	73.7	91.7
25–49.9	89.2	71.2	4.9	4.1	5.6	5.4	97.5	100.0
50–74.9	92.0	93.4	12.7	8.3	11.2	7.8	99.0	100.0
75–89.9	95.2	96.2	23.1	15.1	19.9	12.3	99.8	100.0
90–100	93.1	96.9	45.6	28.8	40.8	18.8	99.9	100.0

9. Family holdings of nonfinancial assets and of any asset, by selected characteristics of families and type of asset, 2004 and 2007 surveys—*Continued*

A. 2004 Survey of Consumer Finances—*continued*

Family characteristic	Vehicles	Primary residence	Other residential property	Equity in nonresidential property	Business equity	Other	Any nonfinancial asset	Any asset
	Median value of holdings for families holding asset (thousands of 2007 dollars)							
All families	**15.6**	**175.7**	**109.8**	**65.9**	**109.8**	**16.5**	**162.3**	**189.9**
Percentile of income								
Less than 20	5.0	76.9	36.2	12.1	32.9	4.9	24.6	18.7
20–39.9	8.5	109.8	71.4	32.9	32.9	7.7	78.0	85.9
40–59.9	14.4	148.3	60.4	39.5	68.6	11.0	145.3	169.7
60–79.9	21.8	192.2	109.8	47.2	164.7	11.0	216.5	317.6
80–89.9	28.3	247.1	107.6	65.9	109.8	19.2	309.5	503.6
90–100	36.2	494.2	286.9	207.6	384.4	54.9	715.2	1,271.5
Age of head (years)								
Less than 35	12.4	148.3	90.6	60.4	54.9	5.5	35.5	43.0
35–44	17.2	175.7	87.9	46.3	109.8	11.0	166.2	190.4
45–54	20.6	186.7	98.8	47.2	158.2	22.0	202.6	258.0
55–64	20.5	219.7	148.3	82.4	209.7	27.5	248.6	385.7
65–74	13.6	164.7	87.9	85.7	109.8	32.9	177.0	256.1
75 or more	9.2	137.3	164.7	94.3	88.2	12.1	150.6	203.4
Family structure								
Single with child(ren)	8.7	131.8	27.5	15.5	55.9	11.0	98.9	95.9
Single, no child, age less than 55	9.4	137.3	87.9	61.5	63.9	11.0	43.9	47.5
Single, no child, age 55 or more	7.2	130.9	93.4	90.1	115.3	11.0	117.5	154.2
Couple with child(ren)	20.9	175.7	98.8	71.7	109.8	22.0	195.4	250.4
Couple, no child	21.6	214.2	126.3	68.9	154.6	22.0	224.6	314.2
Education of head								
No high school diploma	8.2	82.4	94.5	17.6	60.4	5.5	59.9	54.8
High school diploma	13.6	137.3	76.9	27.5	88.5	11.0	119.9	146.5
Some college	14.5	169.1	87.9	101.0	164.7	11.0	150.9	165.3
College degree	20.7	263.6	159.3	87.9	164.7	22.0	264.9	392.1
Race or ethnicity of respondent								
White non-Hispanic	17.3	181.2	115.3	72.5	148.3	18.1	181.0	246.6
Nonwhite or Hispanic	10.7	142.8	87.9	32.9	73.2	11.0	70.4	65.4
Current work status of head								
Working for someone else	16.3	175.7	96.6	43.9	54.9	11.0	155.8	177.0
Self-employed	24.1	272.4	155.4	137.3	191.1	32.9	368.3	514.3
Retired	11.1	142.8	109.8	65.9	131.8	27.5	144.7	181.9
Other not working	11.8	142.8	94.5	*	27.5	22.0	65.9	33.3
Current occupation of head								
Managerial or professional	21.2	263.2	131.8	98.6	175.7	19.2	266.2	383.9
Technical, sales, or services	14.0	164.7	115.3	65.9	82.4	11.0	121.9	125.6
Other occupation	16.0	142.8	92.3	24.2	82.4	11.0	126.6	145.9
Retired or other not working	11.1	142.8	103.2	65.9	109.8	27.5	139.6	162.9
Region								
Northeast	17.2	274.6	115.3	65.9	109.8	16.5	228.1	297.1
Midwest	15.3	159.3	109.8	64.5	148.3	16.5	165.0	214.3
South	15.1	142.8	98.8	38.4	94.9	16.5	131.4	145.2
West	15.6	247.1	120.8	137.3	164.7	16.5	191.6	218.7
Urbanicity								
Metropolitan statistical area (MSA)	15.8	197.7	120.8	76.9	118.1	16.5	178.4	218.3
Non-MSA	14.3	98.8	74.1	27.5	86.5	11.0	104.0	122.2
Housing status								
Owner	19.2	175.7	109.8	68.1	134.8	19.2	221.4	318.4
Renter or other	7.9	*	87.9	61.5	54.9	8.8	9.2	13.4
Percentile of net worth								
Less than 25	6.1	71.4	*	*	*	3.3	8.1	8.4
25–49.9	13.0	93.4	28.1	16.3	19.2	6.6	79.5	92.8
50–74.9	19.1	175.0	71.4	27.5	60.4	11.0	206.5	282.5
75–89.9	24.8	274.6	109.8	81.1	164.7	27.5	396.2	659.2
90–100	33.6	494.2	356.9	274.6	579.3	87.9	996.9	1,727.1
Memo								
Mean value of holdings for families holding asset	22.1	271.1	293.6	327.4	840.7	73.1	402.3	591.3

Note: See note to table 8.

* Ten or fewer observations.

9. Family holdings of nonfinancial assets and of any asset, by selected characteristics of families and type of asset, 2004 and 2007 surveys—*Continued*

B. 2007 Survey of Consumer Finances

Family characteristic	Vehicles	Primary residence	Other residential property	Equity in nonresidential property	Business equity	Other	Any nonfinancial asset	Any asset
	Percentage of families holding asset							
All families	**87.0**	**68.6**	**13.7**	**8.1**	**12.0**	**7.2**	**92.0**	**97.7**
Percentile of income								
Less than 20	64.4	41.4	5.4	2.5	3.0	3.9	73.4	89.8
20–39.9	85.9	55.2	6.5	3.9	4.5	5.7	91.2	98.9
40–59.9	94.3	69.3	9.9	7.4	9.2	7.4	97.2	100.0
60–79.9	95.4	83.9	15.4	9.4	15.9	7.2	98.5	100.0
80–89.9	95.6	92.6	21.0	13.6	17.0	9.0	99.6	100.0
90–100	94.8	94.3	42.2	21.0	37.5	14.1	99.7	100.0
Age of head (years)								
Less than 35	85.4	40.7	5.6	3.2	6.8	5.9	88.2	97.1
35–44	87.5	66.1	12.0	7.5	16.0	5.5	91.3	96.9
45–54	90.3	77.3	15.7	9.5	15.2	8.7	95.0	97.6
55–64	92.2	81.0	20.9	11.5	16.3	8.5	95.6	99.1
65–74	90.6	85.5	18.9	12.3	10.1	9.1	94.5	98.4
75 or more	71.5	77.0	13.4	6.8	3.8	5.8	87.3	98.1
Family structure								
Single with child(ren)	80.5	53.4	8.9	5.6	5.6	5.8	89.5	95.7
Single, no child, age less than 55	77.0	42.6	6.2	2.9	7.5	7.0	82.5	93.7
Single, no child, age 55 or more	73.9	68.1	11.8	7.3	3.3	5.7	85.1	97.7
Couple with child(ren)	94.0	78.3	14.8	8.4	15.6	8.9	96.9	98.8
Couple, no child	94.6	79.2	18.0	10.8	16.6	7.4	97.3	99.4
Education of head								
No high school diploma	73.7	52.8	5.8	2.6	5.3	2.2	80.9	91.7
High school diploma	87.5	68.9	10.0	7.3	8.7	5.1	92.2	97.7
Some college	86.7	62.3	13.2	6.5	10.7	7.0	91.0	98.5
College degree	91.9	77.8	20.6	11.8	18.2	11.0	96.6	99.6
Race or ethnicity of respondent								
White non-Hispanic	89.6	75.6	15.3	9.0	13.9	8.4	94.6	98.9
Nonwhite or Hispanic	80.9	51.9	10.0	5.9	7.4	4.3	85.8	94.9
Current work status of head								
Working for someone else	91.3	67.2	11.9	7.0	6.3	7.1	94.4	98.6
Self-employed	90.6	82.4	26.5	17.3	68.4	11.0	97.6	99.7
Retired	78.6	72.9	14.6	7.7	3.6	5.4	87.2	96.1
Other not working	69.3	33.3	3.8	4.7	3.6	8.5	74.8	90.0
Current occupation of head								
Managerial or professional	93.1	78.2	20.7	10.8	22.0	9.9	97.2	99.8
Technical, sales, or services	87.4	61.5	10.2	7.3	9.2	7.7	91.6	97.8
Other occupation	92.6	66.3	9.6	6.7	13.6	4.9	95.2	98.5
Retired or other not working	77.1	66.7	12.9	7.2	3.6	5.9	85.2	95.2
Region								
Northeast	75.4	66.1	13.3	5.6	7.8	5.5	84.2	94.6
Midwest	89.5	71.3	13.7	8.4	13.1	6.4	93.4	98.4
South	89.2	70.2	11.3	8.8	11.4	7.2	93.8	98.5
West	90.5	65.4	18.3	8.7	15.3	9.3	94.1	98.4
Urbanicity								
Metropolitan statistical area (MSA)	86.2	68.1	14.2	7.6	12.3	7.6	91.5	97.7
Non-MSA	90.9	71.1	11.7	10.7	10.6	5.1	94.3	97.9
Housing status								
Owner	93.8	100.0	17.5	10.8	15.4	8.0	100.0	100.0
Renter or other	72.3	*	5.6	2.1	4.5	5.3	74.5	92.8
Percentile of net worth								
Less than 25	69.5	13.8	1.2	*	1.3	2.4	71.6	90.9
25–49.9	91.2	72.1	7.1	3.7	6.2	6.5	97.7	100.0
50–74.9	93.3	92.8	11.9	7.7	11.6	7.8	99.5	100.0
75–89.9	94.5	95.3	26.2	16.4	17.9	7.5	99.0	100.0
90–100	93.6	96.9	47.7	27.3	45.1	18.5	99.6	100.0

9. Family holdings of nonfinancial assets and of any asset, by selected characteristics of families and type of asset, 2004 and 2007 surveys—*Continued*

B. 2007 Survey of Consumer Finances—*continued*

Family characteristic	Vehicles	Primary residence	Other residential property	Equity in nonresidential property	Business equity	Other	Any nonfinancial asset	Any asset
	Median value of holdings for families holding asset (thousands of 2007 dollars)							
All families	**15.5**	**200.0**	**146.0**	**75.0**	**100.5**	**14.0**	**177.4**	**221.5**
Percentile of income								
Less than 20	5.6	100.0	60.0	65.0	100.0	3.0	40.0	23.5
20–39.9	9.2	120.0	57.5	60.0	25.0	6.0	77.2	84.9
40–59.9	14.6	150.0	100.0	40.0	53.7	10.0	139.0	183.5
60–79.9	20.4	215.0	120.0	71.0	81.0	15.0	246.3	342.8
80–89.9	25.4	300.0	175.0	72.0	100.0	20.0	360.1	558.1
90–100	33.9	500.0	324.0	175.0	500.0	75.0	799.9	1,358.4
Age of head (years)								
Less than 35	13.3	175.0	85.0	50.0	59.9	8.0	30.9	38.8
35–44	17.4	205.0	150.0	50.0	86.0	10.0	182.6	222.3
45–54	18.7	230.0	150.0	80.0	100.0	15.0	224.9	306.0
55–64	17.4	210.0	157.0	90.0	116.3	20.0	233.1	347.0
65–74	14.6	200.0	150.0	75.0	415.0	20.0	212.2	303.3
75 or more	9.4	150.0	100.0	110.0	250.0	25.0	157.1	219.3
Family structure								
Single with child(ren)	8.3	165.0	90.0	71.0	100.0	9.0	106.9	116.4
Single, no child, age less than 55	9.8	155.0	120.0	48.8	50.0	9.0	52.0	52.6
Single, no child, age 55 or more	7.4	140.0	80.0	75.0	300.0	10.0	133.0	177.1
Couple with child(ren)	20.8	225.0	133.0	50.0	81.8	12.5	218.0	292.8
Couple, no child	20.6	230.0	165.0	85.0	130.0	20.0	235.6	312.1
Education of head								
No high school diploma	10.4	122.5	65.0	125.0	66.0	13.2	84.4	64.6
High school diploma	13.3	150.0	76.0	50.0	100.0	7.3	137.7	161.8
Some college	14.6	192.0	100.0	52.8	81.2	13.0	157.3	186.3
College degree	19.9	280.0	200.0	90.0	125.4	20.0	289.4	435.4
Race or ethnicity of respondent								
White non-Hispanic	17.1	200.0	136.5	75.0	112.5	15.0	203.8	271.0
Nonwhite or Hispanic	12.0	180.0	175.0	62.7	60.0	8.0	102.0	89.2
Current work status of head								
Working for someone else	17.0	200.0	120.0	52.8	50.0	10.0	167.1	213.3
Self-employed	22.1	300.0	293.0	152.5	150.0	50.0	455.0	543.9
Retired	11.4	155.0	100.0	75.0	212.6	13.2	156.0	203.5
Other not working	6.9	160.0	130.5	48.8	103.1	2.5	29.3	28.9
Current occupation of head								
Managerial or professional	20.2	270.0	200.0	105.0	200.0	20.0	278.9	411.2
Technical, sales, or services	14.4	200.0	125.0	85.0	40.0	15.0	155.0	187.0
Other occupation	16.7	157.9	90.0	37.0	68.6	10.8	135.6	157.6
Retired or other not working	10.4	155.0	100.0	75.0	196.9	12.5	146.7	177.1
Region								
Northeast	14.5	275.0	190.0	112.0	150.0	20.0	250.0	290.4
Midwest	14.6	155.0	110.0	52.8	112.4	10.0	157.5	204.7
South	15.6	160.0	120.0	71.5	93.8	15.0	145.8	180.9
West	17.1	300.0	210.0	90.0	101.4	14.0	251.6	293.2
Urbanicity								
Metropolitan statistical area (MSA)	15.8	220.0	150.0	82.5	105.0	13.5	194.0	243.9
Non-MSA	14.5	115.0	80.0	50.0	100.0	22.0	118.6	149.2
Housing status								
Owner	18.4	200.0	150.0	80.0	113.4	20.0	253.5	344.2
Renter or other	8.6	*	85.0	38.0	50.0	5.4	10.1	13.6
Percentile of net worth								
Less than 25	6.9	81.0	12.0	*	4.0	1.3	8.6	8.1
25–49.9	13.1	100.0	30.0	25.0	20.0	7.5	95.8	107.8
50–74.9	17.5	200.0	60.0	38.4	67.6	13.0	229.1	304.3
75–89.9	22.0	317.2	146.0	82.5	125.0	30.0	443.7	687.1
90–100	31.1	550.0	400.0	266.7	690.0	75.0	1,160.0	2,104.0
MEMO								
Mean value of holdings for families holding asset	22.0	302.4	335.6	309.4	1071.1	80.7	469.5	668.5

NOTE: See note to table 8.

* Ten or fewer observations.

creased for families headed by a person who was retired, self-employed, or otherwise not working; for single families without children; and for families living in the Northeast or the West.

The median market value of vehicles for those who owned at least one vehicle declined 0.6 percent from 2004 to 2007, and the mean declined 0.5 percent.[35] The median value of vehicle holdings fell most substantially for families in the other-not-working work-status group, families in the Northeast, and the 55-to-64 age group. Other relatively large declines in the median included those for the highest three income and wealth groups. For most other families, the median rose or held about steady. These trends are essentially the opposite of those observed between 2001 and 2004, when median values fell for the lowest two income and wealth groups, the two oldest and the youngest age groups, nonwhite or Hispanic families, renters, and families headed by a person who was retired. However, continuing a trend, the share of the total value of owned vehicles attributable to sport utility vehicles rose over the recent period, from 19.1 percent to 20.9 percent (data not shown in the tables).

Some families have vehicles that they lease or that are provided to them by an employer for personal use. The share of families having a vehicle from any source rose 0.3 percentage point over the recent period, to 89.6 percent. The small difference between this rate and the ownership rate for personally owned vehicles belies a larger change in the rates of holding for leased and employer-provided vehicles. The proportion of families with a leased vehicle rose, from 4.0 percent to 5.2 percent, while that of families with an employer-provided vehicle fell, from 7.7 percent to 6.8 percent.

Primary Residence and Other Residential Real Estate

The homeownership rate turned down slightly over the 2004–07 period, falling 0.5 percentage point, to 68.6 percent.[36] In 2007, groups that had an ownership rate less than the overall rate included nonwhite or Hispanic families, families with relatively low income or wealth, families living in the Northeast or the West, single families, and families headed by a person who was neither working nor retired, who was aged less than 45, or who had less than a high school diploma or only some college education. Over the three-year period, homeownership rose most for the lowest quintile of the income distribution; families headed by a person aged 65 to 74; families headed by a person who was self-employed or working in a technical, sales, or service job; or families headed by a high school graduate. The largest declines in the homeownership rate were for single families with children and families in the 75-or-more age group or the other-not-working work-status group.

Housing wealth represents a large component of total family wealth; in 2007, the primary residence accounted for 31.8 percent of total family assets. Over the 2004–07 period, this percentage declined slightly overall. The relative importance of housing in the total asset portfolio varies substantially over the income distribution, with housing generally constituting a smaller share of the portfolio with increasing levels of income (table 9.1).

9.1.

Family characteristic	House value as a percentage of all assets of group	
	2007 (percent)	Change, 2004–07 (percentage points)
All families	**31.8**	**–0.5**
Percentile of income		
Less than 20	47.1	–1.5
20–39.9	51.8	2.2
40–59.9	48.4	–1.5
60–79.9	45.3	2.5
80–89.9	44.5	2.7
90–100	19.8	–1.1

The median and mean values of the primary residences of homeowners rose from 2004 to 2007; overall, the median increased 13.8 percent, and the mean rose 11.5 percent. These percentage gains in the median and mean translated into large dollar gains: $24,300 for the median and $31,300 for the mean. Homeowners in all demographic groups saw gains in the median, most of them substantial. The only breaks in the pattern of gains in median values across groups were a decline of 4.4 percent for families headed by a person aged 55 to 64 and a decline of 2.7 percent for homeowners in the Midwest. One of the largest increases was the 26.1 percent rise in the median value of primary residences for nonwhite or Hispanic families; in contrast, the median for other families rose 10.4 percent. Other sizable increases included those for families headed by a person without a high

35. Survey respondents are asked to provide the year, make, and model of each of their cars, vans, sport utility vehicles, and trucks. This information is used to obtain market prices from data collected by the National Automobile Dealers Association and a variety of other sources. For other types of vehicles, the respondent is asked to provide a best estimate of the current value.

36. This measure of primary residences comprises mobile homes and their sites, the parts of farms and ranches not used for a farming or ranching business, condominiums, cooperatives, townhouses, other single-family homes, and other permanent dwellings. The 2004 and 2007 SCF estimates of homeownership differ only marginally from those of the CPS for a comparable specification of household; the CPS shows an identical decline in the homeownership rate.

school diploma (48.7 percent) and for families in the bottom income quintile (30.0 percent).

As discussed earlier, the national housing market continued to decline after data collection for the 2007 SCF had been completed. Assuming that homeownership did not change and that changes in house prices occurred uniformly across all homeowners in a given state, then the state-level purchase-only LoanPerformance Home Price Index can be used to approximate the effects of declines in house prices from the time of the interview until October 2008. Under these assumptions, the median value falls from $200,000 for 2007 to $181,600, still a gain of 3.4 percent from 2004; the mean falls from $302,400 for 2007 to $265,600 in October 2008, a decline of 2.0 percent from 2004.

In 2007, 13.7 percent of families owned some form of residential real estate other than a primary residence (second homes, time-shares, one- to four-family rental properties, and other types of residential properties), a level that is up 1.2 percentage points from the figure in 2004.[37] Although the survey does not ask directly about ownership of second homes, such homes should largely be captured as residential properties that are owned 100 percent by the family and for which no rent was collected; in 2007, 6.1 percent of families had at least one such property, up 1.5 percentage points from 2004 (data not shown in the tables).

Ownership of other residential real estate is much more common among the highest income and wealth groups, the age groups between 45 and 74, and families headed by a self-employed person, a person working in a managerial or professional occupation, or a person who was a college graduate. The median and mean values of other residential real estate increased proportionately more than the median and mean values of primary residences over the recent period; the median rose 33.0 percent, and the mean rose 14.3 percent. Most of the demographic groups saw substantial gains in the median. Declines in median values were observed for several groups, including the youngest and oldest age groups, families whose head had not attended college, and families headed by a person who was retired.

Net Equity in Nonresidential Real Estate

The ownership of nonresidential real estate fell slightly, to 8.1 percent of families in 2007.[38] Ownership follows approximately the same relative distribution across demographic groups as does the ownership of other residential real estate. Changes in ownership during the recent period were mixed across demographic groups. Ownership increased modestly in the top two deciles of the income distribution, while it decreased modestly in most of the lower portion of the distribution. By educational attainment, ownership increased only among families headed by a person with a high school diploma. Overall, the median value of such property for owners rose 13.8 percent, and the mean fell 5.5 percent. Particularly large gains in the median value were seen for families in the lowest income group, single-parent families, and families headed by a person without a high school diploma—all groups with below-average ownership rates.

Net Equity in Privately Held Businesses

The share of families that owned a privately held business interest edged up 0.5 percentage point during the recent period, to 12.0 percent.[39] The propor-

37. This measure of residential real estate also includes outstanding balances on loans that the family may have made to finance the sale of properties they previously owned.

38. Nonresidential real estate comprises the following types of properties unless they are owned through a business: commercial property, rental property with five or more units, farm and ranch land, undeveloped land, and all other types of nonresidential real estate. Most often, nonresidential real estate properties are functionally more like a business than a residential property. They may have a number of owners, they are typically worth a considerable amount, and they often carry large mortgages, which appear to be paid from the revenues from the property, not the family's other income. As in the case of privately owned businesses, the value of the property in this analysis is taken to be the net value.

39. The forms of business in this category are sole proprietorships, limited partnerships, other types of partnerships, subchapter S corporations and other types of corporations that are not publicly traded, limited liability companies, and other types of private businesses. If the family surveyed lived on a farm or ranch that was used at least in part for agricultural business, the value of that part, net of the corresponding share of associated debts, is included with other business assets.

In the survey, self-employment status and business ownership are independently determined. Among the 12.0 percent of families with a business in 2007, 70.1 percent had a family head or the spouse or partner of the head who was self-employed; among the 12.5 percent of families in which either the head or the spouse or partner of the head was self-employed, 67.5 percent owned a business (data not shown in the tables).

The 2004 and 2007 surveys differ in the ways that business ownership was determined. In both surveys, respondents were asked directly about business ownership. In the 2004 and earlier surveys, it had been noticed at the stage of data editing that some respondents had reported themselves as self-employed and as having substantial associated business assets but had failed to report ownership of a business, perhaps as a result of some confusion about the intent of the business ownership question; where possible, the data were corrected for such misunderstandings. Beginning with the 2007 survey, a new follow-up question was asked of every person who was reported as being self-employed but who had not been noted as working for a business owned by the family. The question asked whether a business with some value was associated with the self-employment. If so, then several additional questions were asked about the business's value and tion has changed little over the past several surveys. Ownership of this type of asset tends to increase with income, wealth, and education and to be the highest for families headed by a person who is aged 35 to 64, who is married or living with a partner, or who has at least some college education. Business ownership is about three times as prevalent among homeowners as renters; it is generally lowest in the Northeast and highest in the West. Over the recent three-year period, increases in ownership were largely concentrated in the highest income and net worth deciles. By region, ownership declined in the Northeast, while increases were reported in the South and West. Breaking a pattern seen in the preceding three years, ownership also increased substantially among families headed by a person who was self-employed.

As noted earlier, equity in privately held businesses makes up a large portion of families' total nonfinancial assets. This pattern has strengthened over the recent period. Across the income distribution, the share of assets attributable to business equity has a U-shape, with the largest shares at the top and bottom of the income distribution (table 9.2).

9.2.

Family characteristic	Net equity in business as a percentage of all assets	
	2007 (percent)	Change, 2004–07 (percentage points)
All families	**19.6**	**3.0**
Percentile of income		
Less than 20	18.8	4.2
20–39.9	4.2	−5.0
40–59.9	9.1	3.2
60–79.9	6.8	−1.4
80–89.9	11.4	4.7
90–100	28.1	3.7

The median holding of business equity for those having any such equity declined 8.5 percent while the mean increased 27.4 percent. These changes follow a decline of 6.2 percent in the median and an increase of 11.4 percent in the mean between the 2001 and 2004 surveys. In 2007, median values were generally increasing in income, age, and net worth. Median net equity in businesses owned by white non-Hispanic families and homeowners are substantially higher than for the complementary groups. Over the recent three-year period, large increases in median net equity in businesses were observed in the lowest income quintile, in the oldest two age categories, in single families headed by a person aged 55 or older, and in families in the other-not-working work-status group. Changes in the medians for other categories included increases and decreases of smaller magnitudes.

The SCF classifies privately owned business interests into those in which the family has an active management role and those in which it does not. Of families having any business interests in 2007, 92.0 percent had an active role, and 12.0 percent had a non-active role; 3.9 percent had interests of both types (data not shown in the tables). In terms of assets, actively managed interests accounted for 89.1 percent of total privately owned business interests. The median number of actively managed businesses was 1. The businesses reported in the survey were a mixture of very small businesses with moderate values and businesses with substantially greater values.

The SCF attempts to collect information about items owned or owed by a family's business interests separately from items owned or owed directly by the family. But, in practice, the balance sheet of a business that is actively managed by a family is not always separate from that of the family itself. Families often use personal assets as collateral or guarantees for loans for the businesses, or they loan personal funds to their businesses. In 2007, 17.8 percent of families with actively managed businesses reported using personal assets as collateral, and 17.5 percent of families reported lending the business money; both percentages are down from their 2004 levels of 19.7 percent and 20.2 percent, respectively (data not shown in the tables).

Families with more than one actively managed business are asked to report which business is most important; that business is designated as the primary one.[40] In 2007, the vast majority of primary businesses operated in an industry other than manufacturing; the most common organizational form of those businesses was sole proprietorship, and the median number of employees was 2. However, primary actively managed businesses with more than two employees accounted for 80.4 percent of the value of all such businesses, and the largest shares of value were attributable to businesses organized as subchapter S corporations or limited liability companies, each of which accounted for just more than 30 percent. These patterns are also typical of those observed in the earlier surveys.

income, and that information was introduced into the appropriate places in the section of the survey covering businesses. It is possible that the systematic approach in 2007 discovered more private businesses than had previously been detected through editing.

40. For families with only one business, that business is, by default, considered the primary one. In 2007, primary actively managed businesses accounted for 78.0 percent of the value of all actively managed businesses.

10. Family holdings of unrealized capital gains on selected assets as a share of total assets, by selected characteristics of families, 1998–2007 surveys

Percent

Family characteristic	1998				2001				2004				2007			
	Real estate	Busi-ness	Finan-cial	All	Real estate	Busi-ness	Finan-cial	All	Real estate	Busi-ness	Finan-cial	All	Real estate	Busi-ness	Finan-cial	All
All families	**13.5**	**11.6**	**4.3**	**29.3**	**14.8**	**11.6**	**2.3**	**28.7**	**18.7**	**10.9**	**1.1**	**30.7**	**18.9**	**14.2**	**2.6**	**35.8**
Percentile of income																
Less than 20	27.6	4.9	.3	32.8	26.7	2.0	–.1	28.6	29.3	7.7	–.6	36.4	30.5	10.6	1.4	42.5
20–39.9	22.5	2.3	1.3	26.1	27.0	3.9	–.3	30.7	28.3	5.9	.3	34.5	31.4	3.2	.3	35.0
40–59.9	20.8	5.6	1.3	27.7	18.8	3.9	.2	22.9	25.9	3.0	.5	29.4	24.7	5.6	.8	31.1
60–79.9	16.0	6.3	2.4	24.6	17.0	5.2	1.7	24.0	23.1	4.0	.5	27.6	23.1	3.8	1.6	28.6
80–89.9	14.1	6.5	2.8	23.4	15.7	7.8	1.8	25.3	19.4	4.4	.8	24.7	23.8	8.8	.9	33.6
90–100	9.1	17.2	6.4	32.7	11.4	16.9	3.3	31.6	14.3	16.6	1.6	32.5	13.8	20.8	3.9	38.5
Age of head (years)																
Less than 35	7.1	7.4	.9	15.3	8.1	10.7	2.1	20.8	13.4	7.5	–.4	20.4	12.6	14.6	1.0	28.2
35–44	9.4	11.7	3.1	24.2	12.7	14.8	.2	27.7	16.2	12.0	1.4	29.6	16.2	12.3	.4	28.9
45–54	10.8	15.7	2.8	29.3	12.9	12.6	2.0	27.5	16.7	13.5	1.1	31.3	18.3	15.5	2.1	36.0
55–64	12.9	12.9	6.1	32.0	13.8	12.5	2.0	28.3	19.0	11.8	†	30.8	17.4	15.4	3.2	36.0
65–74	18.3	9.1	6.0	33.5	20.0	10.3	3.5	33.8	20.8	8.8	2.1	31.8	20.6	13.8	4.0	38.4
75 or more	25.5	5.0	5.3	35.8	21.1	5.1	5.2	31.4	26.5	5.5	2.4	34.4	28.4	11.0	4.0	43.5
MEMO																
Percent of families with any such gains	65.5	10.7	26.3	71.0	67.2	11.6	27.6	72.1	68.8	11.1	25.1	73.0	69.0	11.5	21.7	72.4
Median for those with any such gains	37.8	39.5	4.6	39.5	45.1	59.6	.6	46.8	61.0	49.4	.7	59.3	71.0	50.0	3.5	75.0
Mean for those with any such gains	86.2	453.7	67.8	172.9	116.6	530.4	43.9	210.4	157.6	567.6	24.3	243.1	179.2	805.1	79.3	322.9

NOTE: See note to table 1.
† Less than 0.05 ($50).

Other Nonfinancial Assets

In 2007, ownership of the remaining nonfinancial assets (tangible items including artwork, jewelry, precious metals, antiques, hobby equipment, and collectibles) was not very widespread and decreased marginally compared with the level in the previous survey period, to 7.2 percent. Among other nonfinancial assets, the most commonly held items are antiques and other collectibles, which were held by only 3.6 percent of families. The composition of other nonfinancial assets changed little from 2004 (table 9.3).

9.3.

Type of other nonfinancial asset	All families	
	2007 (percent)	Change, 2004–07 (percentage points)
Gold, silver, or jewelry	2.1	†
Antiques, collectibles	3.6	–.2
Art objects	1.8	–.2
Other	.9	–.3

† Less than 0.05 percent.

Groups most likely to hold other nonfinancial assets generally include families in the top two deciles of the income distribution, families headed by a college graduate, homeowners, and families in the top two quartiles of the net worth distribution. Minor changes in holdings were evident across all the demographic groups. For families having such assets, the median value fell 15.2 percent over the recent period, and the mean rose 16.7 percent. Across income groups, median holdings rose for families in the top three groups and declined for families in the second and third quintiles.

Unrealized Capital Gains

Changes in the values of assets such as stock, real estate, and businesses are a key determinant of changes in families' net worth. Unrealized gains are increases in the value of assets that are yet to be sold. To obtain information on this part of net worth, the survey asks about changes in value from the time of purchase for certain key assets—publicly traded stocks, pooled investment funds, the primary residence, other real estate, and the current tax basis of businesses.[41] Among families with any unrealized capital gain, the median value of that gain moved up 26.5 percent over the 2004–07 period, and the mean moved up 32.8 percent (table 10). These unrealized capital gains are a very important part of family assets; in 2007, they represented 35.8 percent of total family assets, a fraction larger than that observed in any other SCF since 1989. Unrealized capital gains

41. The survey does not collect information on capital gains on every asset for which such gains are possible. Most important, it does not collect such information for retirement accounts.

11. Amount of debt of all families, distributed by type of debt, 1998–2007 surveys

Percent

Type of debt	1998	2001	2004	2007
Secured by residential property				
Primary residence	71.4	75.2	75.2	74.7
Other	7.5	6.2	8.5	10.1
Lines of credit not secured by residential property	.3	.5	.7	.4
Installment loans	13.1	12.3	11.0	10.2
Credit card balances	3.9	3.4	3.0	3.5
Other	3.7	2.3	1.6	1.1
Total	**100**	**100**	**100**	**100**

Note: See note to table 1.

tend to increase with age as a fraction of total family assets. The fraction of total family assets attributable to unrealized capital gains decreases and then increases across income groups. In 2007, this fraction was lowest for families in the third income quintile. The largest component of unrealized capital gains in all years of the SCF shown was real estate; the next-most-important components were gains in businesses and financial assets. In 2007, total unrealized capital gains in real estate represented 18.9 percent of total family assets. In general, the relative importance of unrealized capital gains in real estate decreases with family income and increases with the age of the family head.

Liabilities

The composition of household debt shifted between 2004 and 2007. Debt secured by the primary residence remained the largest component of overall household debt, but its share fell back 0.5 percentage point between the most recent surveys (table 11).[42]

This decline was more than offset by a 1.6 percentage point increase in the fraction of debt secured by residential property other than the primary residence. The share of outstanding credit card balances increased 0.5 percentage point over the three-year period, while the fraction of nonmortgage installment debt declined 0.8 percentage point, in line with a longer-term trend evident since at least the 1998 survey.

The overall value of families' liabilities increased between 2004 and 2007 at a rate just short of the corresponding rate for families' assets. Accordingly, the ratio of the sum of the debt of all families to the sum of their assets—the leverage ratio—was little changed, ticking down 0.1 percentage point, to 14.9 percent. The leverage ratio for the subset of families that had any debt declined somewhat more, from 19.9 percent in 2004 to 19.4 percent in 2007 (data not shown in the tables).

42. The SCF measure of liabilities excludes debt owed by businesses owned by the family and debt owed on nonresidential real estate.

12. Leverage ratio of group by selected family characteristics, 1998–2007 surveys

Percent

Family characteristic	1998	2001	2004	2007
All families	**14.2**	**12.1**	**15.0**	**14.9**
Percentile of income				
Less than 20	12.7	13.5	15.1	13.5
20–39.9	14.4	14.5	19.4	18.5
40–59.9	20.6	19.2	23.2	24.3
60–79.9	23.1	18.0	21.7	25.3
80–89.9	20.1	18.1	22.8	23.4
90–100	8.9	7.4	9.2	8.4
Age of head (years)				
Less than 35	36.6	33.5	46.4	44.3
35–44	25.1	22.6	26.0	28.2
45–54	15.7	13.5	17.3	16.3
55–64	9.0	7.2	9.3	10.3
65–74	4.7	4.2	5.2	6.5
75 or more	2.2	1.8	4.0	2.2
Education of head				
No high school diploma	13.5	13.4	14.0	18.2
High school diploma	15.6	16.1	19.4	20.5
Some college	17.9	15.1	19.5	19.1
College degree	12.9	10.4	13.3	12.5
Race or ethnicity of respondent				
White non-Hispanic	13.3	11.0	13.5	12.9
Nonwhite or Hispanic	23.5	23.4	27.2	27.1
Region				
Northeast	13.2	10.2	12.8	12.7
Midwest	14.1	13.0	14.4	14.4
South	13.5	11.4	15.2	14.4
West	16.2	13.8	17.1	17.4
Urbanicity				
Metropolitan statistical area (MSA)	14.2	12.0	14.8	14.7
Non-MSA	15.1	13.2	17.8	17.3
Housing status				
Owner	14.1	12.0	14.9	14.7
Renter or other	16.4	14.2	16.7	17.9
Percentile of net worth				
Less than 25	112.3	99.8	107.4	108.6
25–49.9	51.0	47.9	54.2	56.5
50–74.9	27.1	26.2	33.3	31.7
75–89.9	16.1	14.4	16.3	17.6
90–100	5.9	4.8	6.4	6.1

The overall leverage ratio differs considerably across types of family groups. It rises and then falls across income groups. By comparison, the ratio declines with age, a result consistent with the expected life-cycle patterns of asset and debt accumulation. These general patterns in the leverage ratios among groups hold across survey years, but the variation among income groups was slightly more pronounced in 2007 than in 2004 (table 12).

Holdings of Debt

The share of families with any type of debt increased 0.6 percentage point, to 77.0 percent over the 2004–07 period (first half of tables 13.A and 13.B, last column), and has risen a total of 2.9 percentage points

13. Family holdings of debt, by selected characteristics of families and type of debt, 2004 and 2007 surveys

A. 2004 Survey of Consumer Finances

Family characteristic	Secured by residential property: Primary residence	Secured by residential property: Other	Installment loans	Credit card balances	Lines of credit not secured by residential property	Other	Any debt
	Percentage of families holding debt						
All families	**47.9**	**4.0**	**46.0**	**46.2**	**1.6**	**7.6**	**76.4**
Percentile of income							
Less than 20	15.9	*	26.9	28.8	*	4.6	52.6
20–39.9	29.6	1.5	39.8	42.9	1.5	5.8	69.8
40–59.9	51.6	2.6	52.5	55.1	1.8	8.0	84.0
60–79.9	65.8	4.1	57.9	56.1	1.8	8.3	86.6
80–89.9	76.8	7.6	60.0	57.6	2.6	12.2	91.9
90–100	76.2	15.4	45.7	38.5	2.5	10.6	86.3
Age of head (years)							
Less than 35	37.7	2.1	59.4	47.5	2.2	6.2	79.8
35–44	62.8	4.0	55.7	58.8	1.5	11.3	88.6
45–54	64.6	6.3	50.2	54.0	2.9	9.4	88.4
55–64	51.0	5.9	42.8	42.1	.7	8.4	76.3
65–74	32.1	3.2	27.5	31.9	.4	4.0	58.8
75 or more	18.7	1.5	13.9	23.5	*	2.5	40.3
Family structure							
Single with child(ren)	48.1	1.5	41.9	48.7	*	6.7	79.6
Single, no child, age less than 55	34.1	3.2	46.4	47.9	1.6	7.7	77.6
Single, no child, age 55 or more	22.1	2.5	20.5	27.9	*	5.0	47.7
Couple with child(ren)	64.1	5.2	61.2	58.5	2.2	8.1	87.8
Couple, no child	57.9	5.0	50.6	47.5	1.9	8.4	81.6
Education of head							
No high school diploma	24.8	*	28.0	29.5	*	5.7	53.4
High school diploma	42.2	2.2	44.3	48.2	1.8	5.9	73.2
Some college	48.7	4.7	55.3	54.4	1.8	10.3	84.2
College degree	61.3	6.7	49.9	47.0	1.7	8.5	84.3
Race or ethnicity of respondent							
White non-Hispanic	51.9	4.4	47.0	46.0	1.7	7.8	78.0
Nonwhite or Hispanic	37.4	3.0	43.2	46.7	1.1	7.3	72.5
Current work status of head							
Working for someone else	56.1	4.1	55.7	54.9	1.9	9.8	86.1
Self-employed	59.5	10.2	43.5	44.3	3.0	5.8	81.5
Retired	24.6	1.2	22.8	25.9	*	3.9	50.7
Other not working	30.3	*	45.6	41.0	*	*	70.4
Current occupation of head							
Managerial or professional	67.7	7.8	52.4	50.8	1.8	10.2	89.3
Technical, sales, or services	45.7	3.4	52.5	54.2	2.4	7.5	81.5
Other occupation	53.4	3.2	56.6	55.2	2.1	9.6	84.0
Retired or other not working	25.5	1.3	26.3	28.2	*	3.6	53.7
Region							
Northeast	47.4	3.5	42.4	46.6	1.1	7.8	76.3
Midwest	51.9	4.1	49.9	44.7	1.6	8.6	75.4
South	45.2	3.2	44.2	46.0	1.6	6.5	75.0
West	48.7	5.8	47.9	47.5	1.8	8.4	79.9
Urbanicity							
Metropolitan statistical area (MSA)	49.0	4.4	45.4	46.9	1.6	7.9	76.8
Non-MSA	42.5	2.0	48.6	42.8	1.6	6.4	74.7
Housing status							
Owner	69.4	5.1	46.6	48.8	1.3	7.7	82.3
Renter or other	*	1.7	44.6	40.4	2.1	7.3	63.4
Percentile of net worth							
Less than 25	12.4	*	47.5	40.3	1.3	6.2	64.9
25–49.9	52.8	1.4	52.4	57.9	1.7	9.4	83.8
50–74.9	66.1	4.5	49.1	52.8	1.9	7.0	83.2
75–89.9	61.6	5.7	40.2	40.5	1.3	7.1	74.6
90–100	58.4	16.6	27.2	23.4	1.4	9.1	72.7

13. Family holdings of debt, by selected characteristics of families and type of debt, 2004 and 2007 surveys—*Continued*

A. 2004 Survey of Consumer Finances—*continued*

Family characteristic	Secured by residential property: Primary residence	Secured by residential property: Other	Installment loans	Credit card balances	Lines of credit not secured by residential property	Other	Any debt
	Median value of holdings for families holding debt (thousands of 2007 dollars)						
All families	**104.3**	**95.6**	**12.7**	**2.4**	**3.3**	**4.4**	**60.7**
Percentile of income							
Less than 20	40.6	*	6.1	1.1	*	2.2	7.7
20–39.9	59.3	35.7	8.8	2.0	.3	2.9	17.6
40–59.9	84.8	72.5	11.8	2.4	1.1	2.5	48.8
60–79.9	106.5	68.1	15.2	3.3	7.7	3.8	102.6
80–89.9	146.1	85.7	16.6	3.0	15.4	5.5	149.4
90–100	203.2	174.6	19.8	4.4	43.9	10.4	229.5
Age of head (years)							
Less than 35	117.5	68.6	13.1	1.6	1.1	3.3	36.9
35–44	120.8	82.4	13.2	2.7	2.1	4.4	95.8
45–54	106.5	95.6	13.1	3.2	7.7	4.4	91.4
55–64	91.2	119.5	14.2	2.4	15.4	6.0	52.7
65–74	56.0	109.8	9.1	2.4	4.4	5.5	27.5
75 or more	34.0	42.8	7.4	1.1	*	2.2	16.9
Family structure							
Single with child(ren)	71.4	71.4	9.3	2.4	*	2.2	44.0
Single, no child, age less than 55	97.7	72.5	9.8	2.1	1.1	3.3	23.4
Single, no child, age 55 or more	52.7	87.9	8.8	2.0	*	2.2	18.1
Couple with child(ren)	104.3	153.8	14.6	3.3	4.4	4.9	97.0
Couple, no child	119.7	104.3	15.0	2.3	9.9	5.5	93.4
Education of head							
No high school diploma	48.3	*	7.7	1.3	*	4.4	13.2
High school diploma	76.9	51.6	9.9	2.1	1.6	3.3	34.0
Some college	94.5	82.4	13.0	2.4	3.3	3.7	49.4
College degree	137.3	115.3	16.9	3.0	4.4	5.5	117.7
Race or ethnicity of respondent							
White non-Hispanic	107.6	95.6	13.7	2.7	4.4	4.4	76.3
Nonwhite or Hispanic	91.2	72.5	10.5	1.7	.4	3.3	33.5
Current work status of head							
Working for someone else	109.8	91.2	13.2	2.5	4.4	3.8	78.9
Self-employed	131.6	109.8	16.9	3.0	2.4	7.7	102.6
Retired	46.1	86.8	8.0	1.6	*	3.3	16.9
Other not working	85.7	*	8.2	2.7	*	*	23.1
Current occupation of head							
Managerial or professional	141.7	101.0	16.5	3.3	8.8	5.5	127.3
Technical, sales, or services	97.7	115.3	12.2	2.2	1.6	3.3	47.6
Other occupation	90.8	85.7	11.3	2.5	1.6	3.3	56.4
Retired or other not working	54.9	106.5	8.2	1.6	*	4.4	17.7
Region							
Northeast	122.5	109.8	13.0	2.7	.4	5.5	60.1
Midwest	94.5	87.9	12.1	2.2	3.3	4.4	75.4
South	86.8	91.2	12.3	2.2	8.8	4.4	44.3
West	140.7	95.6	14.1	2.7	4.4	3.3	85.2
Urbanicity							
Metropolitan statistical area (MSA)	115.3	96.6	13.2	2.4	2.4	4.4	75.8
Non-MSA	54.9	69.2	10.9	2.2	22.0	4.4	28.9
Housing status							
Owner	104.3	98.8	14.2	2.7	8.8	4.4	105.2
Renter or other	*	91.2	9.6	1.6	.5	3.3	8.6
Percentile of net worth							
Less than 25	78.0	*	11.5	1.9	.3	4.4	12.5
25–49.9	82.4	28.9	10.2	2.2	1.1	2.2	48.6
50–74.9	106.5	51.6	14.6	2.7	8.8	4.4	98.9
75–89.9	126.3	108.7	14.2	3.3	24.2	5.5	121.6
90–100	204.4	162.5	19.2	3.3	54.9	22.0	209.5
MEMO							
Mean value of holdings for families holding asset	136.2	183.1	20.7	5.6	40.2	18.7	113.5

NOTE: See note to table 11.

* Ten or fewer observations.

13. Family holdings of debt, by selected characteristics of families and type of debt, 2004–2007 surveys—*Continued*

B. 2007 Survey of Consumer Finances

Family characteristic	Secured by residential property: Primary residence	Secured by residential property: Other	Installment loans	Credit card balances	Lines of credit not secured by residential property	Other	Any debt
	Percentage of families holding debt						
All families	**48.7**	**5.5**	**46.9**	**46.1**	**1.7**	**6.8**	**77.0**
Percentile of income							
Less than 20	14.9	1.1	27.8	25.7	*	3.9	51.7
20–39.9	29.5	1.9	42.3	39.4	1.8	6.8	70.2
40–59.9	50.5	2.6	54.0	54.9	*	6.4	83.8
60–79.9	69.7	6.8	59.2	62.1	2.1	8.7	90.9
80–89.9	80.8	8.5	57.4	55.8	*	9.6	89.6
90–100	76.4	21.9	45.0	40.6	2.1	7.0	87.6
Age of head (years)							
Less than 35	37.3	3.3	65.2	48.5	2.1	5.9	83.5
35–44	59.5	6.5	56.2	51.7	2.2	7.5	86.2
45–54	65.5	8.0	51.9	53.6	1.9	9.8	86.8
55–64	55.3	7.8	44.6	49.9	1.2	8.7	81.8
65–74	42.9	5.0	26.1	37.0	1.5	4.4	65.5
75 or more	13.9	.6	7.0	18.8	*	1.3	31.4
Family structure							
Single with child(ren)	38.0	3.5	48.3	45.6	*	11.1	81.6
Single, no child, age less than 55	35.6	3.0	46.7	43.5	2.0	7.4	76.1
Single, no child, age 55 or more	23.2	1.8	19.4	30.5	*	4.1	49.0
Couple with child(ren)	67.0	6.9	63.9	55.7	1.9	6.5	90.4
Couple, no child	59.1	7.7	51.4	49.8	1.7	7.0	82.5
Education of head							
No high school diploma	26.0	1.9	33.3	26.9	*	5.3	55.5
High school diploma	45.0	3.2	46.0	46.8	1.4	6.4	75.1
Some college	46.9	6.4	54.3	51.0	2.2	9.3	80.8
College degree	61.6	8.7	49.1	50.2	1.7	6.5	85.1
Race or ethnicity of respondent							
White non-Hispanic	52.1	5.8	46.1	45.1	1.6	6.7	76.8
Nonwhite or Hispanic	40.4	4.8	48.9	48.4	2.0	7.0	77.7
Current work status of head							
Working for someone else	56.7	5.4	57.5	53.7	1.9	8.7	86.2
Self-employed	64.8	15.1	43.9	48.9	3.6	4.7	86.8
Retired	27.0	2.6	23.6	28.2	.8	3.2	52.3
Other not working	25.4	*	42.8	36.8	*	7.5	69.7
Current occupation of head							
Managerial or professional	67.6	10.0	56.2	52.7	1.8	7.0	90.9
Technical, sales, or services	49.7	4.5	52.2	53.2	2.7	7.9	81.8
Other occupation	53.6	5.1	57.8	53.2	2.1	9.7	84.9
Retired or other not working	26.7	2.5	26.6	29.6	.7	3.9	55.0
Region							
Northeast	48.4	4.9	40.7	44.3	*	5.6	73.3
Midwest	51.0	5.2	47.9	45.5	1.9	7.0	78.3
South	46.6	4.6	48.5	43.4	1.7	6.9	75.3
West	49.9	8.1	48.4	52.4	2.7	7.5	81.6
Urbanicity							
Metropolitan statistical area (MSA)	49.7	6.1	46.0	46.3	1.8	6.6	77.4
Non-MSA	43.5	2.9	51.2	44.8	1.6	8.0	75.0
Housing status							
Owner	70.9	6.9	46.1	50.1	1.3	6.8	82.4
Renter or other	*	2.6	48.6	37.3	2.8	6.9	65.4
Percentile of net worth							
Less than 25	11.0	*	54.2	41.0	2.6	6.7	68.9
25–49.9	56.1	3.2	52.1	52.9	1.3	8.2	82.4
50–74.9	64.3	4.8	46.1	51.7	1.6	7.4	80.3
75–89.9	63.9	8.5	39.8	44.1	1.5	3.8	76.9
90–100	62.1	21.8	28.2	30.3	1.5	6.7	75.9

13. Family holdings of debt, by selected characteristics of families and type of debt, 2004–2007 surveys—*Continued*

B. 2007 Survey of Consumer Finances—*continued*

Family characteristic	Secured by residential property		Installment loans	Credit card balances	Lines of credit not secured by residential property	Other	Any debt
	Primary residence	Other					
	Median value of holdings for families holding debt (thousands of 2007 dollars)						
All families	**107.0**	**100.0**	**13.0**	**3.0**	**3.8**	**5.0**	**67.3**
Percentile of income							
Less than 20	40.0	70.0	6.5	1.0	*	3.0	9.0
20–39.9	51.0	42.0	9.8	1.8	1.3	4.0	18.0
40–59.9	88.7	68.9	12.8	2.4	*	4.0	54.5
60–79.9	115.0	83.0	16.3	4.0	5.1	5.3	111.3
80–89.9	164.0	125.0	17.3	5.5	*	5.0	182.2
90–100	201.0	147.5	18.3	7.5	17.3	7.5	235.0
Age of head (years)							
Less than 35	135.3	78.0	15.0	1.8	1.0	4.5	36.2
35–44	128.0	101.6	13.5	3.5	4.6	5.0	106.2
45–54	110.0	82.0	12.9	3.6	6.0	4.5	95.9
55–64	85.0	130.0	10.9	3.6	10.0	6.0	60.3
65–74	69.0	125.0	10.3	3.0	30.0	5.0	40.1
75 or more	40.0	50.0	8.0	.8	*	4.5	13.0
Family structure							
Single with child(ren)	97.0	92.5	10.0	2.0	*	7.0	27.9
Single, no child, age less than 55	93.9	80.0	10.0	1.5	.4	4.5	31.0
Single, no child, age 55 or more	50.0	135.0	6.0	2.3	*	3.8	15.9
Couple with child(ren)	119.0	114.8	13.0	4.1	3.5	6.0	103.0
Couple, no child	119.0	100.0	15.8	3.5	5.1	5.0	102.7
Education of head							
No high school diploma	50.0	53.3	8.8	1.5	*	4.0	19.5
High school diploma	84.0	82.0	10.2	2.3	1.4	4.5	40.0
Some college	97.0	80.0	12.1	2.9	3.8	5.0	54.4
College degree	142.7	125.0	17.4	4.0	6.0	6.0	124.3
Race or ethnicity of respondent							
White non-Hispanic	106.0	90.8	13.4	3.3	5.0	5.0	76.4
Nonwhite or Hispanic	113.0	114.8	12.0	2.0	.8	5.0	43.9
Current work status of head							
Working for someone else	117.0	89.0	13.5	3.0	2.9	5.0	82.1
Self-employed	135.0	151.6	15.5	4.3	5.0	10.0	122.7
Retired	47.1	100.0	8.6	1.5	6.4	4.5	20.0
Other not working	90.0	*	10.7	1.8	*	8.0	21.9
Current occupation of head							
Managerial or professional	148.0	130.0	16.3	4.5	9.0	7.0	137.6
Technical, sales, or services	100.9	105.0	12.2	3.0	3.5	4.0	65.8
Other occupation	94.0	60.0	12.0	2.5	4.0	4.8	64.1
Retired or other not working	53.0	100.0	9.7	1.5	6.4	5.0	20.0
Region							
Northeast	107.0	95.0	12.1	3.0	*	6.5	66.6
Midwest	93.9	82.5	11.0	3.0	5.0	5.0	61.2
South	99.0	80.0	13.2	2.8	3.2	4.5	60.9
West	150.8	160.0	14.2	3.0	3.8	6.0	95.5
Urbanicity							
Metropolitan statistical area (MSA)	118.2	101.0	13.3	3.0	3.5	5.0	78.1
Non-MSA	60.7	70.0	11.7	2.0	6.0	5.0	29.8
Housing status							
Owner	107.0	100.0	14.2	3.6	7.5	5.0	111.1
Renter or other	*	80.0	10.3	1.3	1.0	4.9	9.2
Percentile of net worth							
Less than 25	107.0	*	11.4	1.5	1.0	5.0	11.9
25–49.9	85.0	74.0	13.0	2.8	2.0	3.9	64.2
50–74.9	104.0	72.0	14.0	3.5	4.2	5.0	97.5
75–89.9	130.0	94.0	12.0	4.0	10.3	5.0	127.0
90–100	180.0	160.0	17.1	4.5	43.0	15.0	203.0
Memo							
Mean value of holdings for families holding asset	149.0	177.3	21.0	7.3	24.8	15.5	126.0

Note: See note to table 11.

* Ten or fewer observations.

since the 1998 survey (data not shown in the tables). In general, borrowing is less prevalent among childless single families headed by a person aged 55 or older and families headed by a person who is retired or is 75 or older. Families in the lowest income, wealth, and education groups—which tend to have fewer economic resources—are also less likely to have any debt. Across income groups, borrowing peaks among families above the median. In contrast, by net worth group, debt ownership peaks among families below the median, in the second quartile. Families in the highest three income groups, couples with children, and families headed by a person employed in a managerial or professional position have comparatively high rates of debt ownership.

Debt ownership did not rise uniformly across households between 2004 and 2007. The fraction of families with any debt fell for at least one group within most of the sets of demographic categories shown in table 13. By age group, debt ownership rose 5.5 percentage points for households in the 55-to-64 age group and 6.7 percentage points for those in the 65-to-74 age group, but it fell 8.9 percentage points for families in the oldest age category. Similarly, changes within income and wealth groups ranged from declines of 2 to 3 percentage points to gains of 4 percentage points or more. The percentage of families with debt increased just more than 5 percentage points for nonwhite or Hispanic families as well as for those headed by a self-employed person, whereas the fraction rose more modestly or declined among families in the complementary categories.

The overall median and mean values of outstanding debt for families that had any such debt rose about 11 percent from 2004 to 2007, a slower rate of increase than in the previous three-year period, when the median and mean both rose nearly 34 percent. Median debt tends to rise with income, education, and wealth; the median by age peaks among households headed by a person aged 35 to 44. The median amount of outstanding debt is also higher for couples, homeowners, and families headed by a person who was self-employed or who was working in a managerial or professional position. Over the recent three-year period, the median amount of outstanding debt rose for most demographic subgroups. The largest increases in the median amount of debt were for families headed by a person who lacked a high school diploma (47.7 percent) and families headed by a person aged 65 to 74 (45.8 percent); other relatively large increases in the median included those for families living in the South and for families headed by a person who worked in a technical, sales, or service job. The median decreased by the greatest proportion for families in the 75-or-more age group, single families with children, and families living in the Midwest.

Mortgages and Other Borrowing on the Primary Residence

The share of families with debt secured by a primary residence (hereafter, home-secured debt) continued to trend up, from 47.9 percent in 2004 to 48.7 percent in 2007.[43] The increase was driven by the rise in the fraction of homeowners with a mortgage, which rose 1.5 percentage points, to 70.9 percent in 2007.

Families with higher levels of income, education, and wealth are generally more likely to have mortgage debt, as are couples and families headed by a person who is employed in a managerial or professional job or who is self-employed. Across age groups, the rate of borrowing peaks among families in a middle age group and declines sharply among older age groups, a pattern also seen in earlier years.[44] White non-Hispanic families are more likely to have home-secured debt than are nonwhite or Hispanic families.[45] Between 2004 and 2007, the prevalence of home-secured debt tended to increase for families with higher levels of income or wealth, and it also rose for families headed by a person who was self-employed or employed in a technical, sales, or service occupation and for families headed by a person who was aged 55 to 74; the proportion of families with home-secured debt declined most for single-parent families, the oldest age group, and families in the other-not-working category. The measure shifted comparatively little for other demographic groups.

Overall, the median amount of home-secured debt rose 2.6 percent from 2004 to 2007, and the mean rose 9.4 percent; the median had increased 27.4 per-

---

43. Home-secured debt consists of first-lien and junior-lien mortgages and home equity lines of credit secured by the primary residence. For purposes of this article, first- and junior-lien mortgages consist only of closed-end loans—that is, loans typically with a one-time extension of credit, a set frequency of repayments, and a required repayment size that may be fixed or vary over time in accordance with a pre-specified agreement or with changes in a given market interest rate. As a type of open-ended credit, home equity lines typically allow credit extensions at the borrower's discretion subject to a prearranged limit and allow repayments at the borrower's discretion subject to a prearranged minimum size and frequency.

44. Of the families that owned a home, the fraction of homeowners with mortgage debt was highest among families in the youngest age group in 2007. For homeowners in the 2004 survey, ownership of home-secured debt peaked among families headed by a person aged 35 to 44.

45. This pattern reverses, however, when only homeowners are considered; for example, in 2007, 68.9 percent of white non-Hispanic homeowners had a mortgage, compared with 77.7 percent of nonwhite or Hispanic homeowners.

14. Type of home-secured debt held by homeowners, 1998–2007 surveys

Percent

Type of home-secured debt	Homeowners with home-secured debt			
	1998	2001	2004	2007
First-lien mortgage	62.2	62.6	65.2	66.1
For home purchase	36.8	35.8	28.2	30.4
Refinanced				
Extracted equity	9.8	9.7	12.9	14.3
No extracted equity	15.6	17.1	24.0	21.5
Junior-lien mortgage	9.4	8.5	6.1	8.5
For home purchase	1.0	1.3	1.5	2.1
Other purpose	8.5	7.2	4.7	6.4
Home equity line of credit	10.6	11.2	17.8	18.4
Currently borrowing	6.7	7.1	12.4	12.4

n.a. Not available (relevant data not collected).

cent over the preceding three years, and the mean had increased 26.9 percent. Changes in the median amount of home-secured debt were mixed across groups. The median fell more than 10 percent for families in the second-lowest income group, families in the top net worth group, and families living in the Northeast. The largest increases in the median value of home-secured debt were for single-parent families and families in the bottom net worth quartile. Both of these groups, but particularly the former, experienced declines in the prevalence of home-secured debt, which suggests that the proportion of smaller home-secured debts among these families fell over the recent period. Other increases in the median were concentrated among the youngest and oldest age groups and among nonwhite or Hispanic families.

The rising values of primary residences over the 2004–07 period outpaced the increases in home-secured debt and, thus, raised the typical amount of home equity held by families with home-secured debt. Median home equity among that group rose from $76,900 to $91,000 over the period, an 18.3 percent increase (data not shown in the tables).[46] Among those with such debt, the median ratio of home-secured debt to the value of the primary residence fell 2.7 percentage points, to 53.3 percent in 2007; the drop extended a trend in this measure since 1998, when the median ratio was 58.8 percent. Over the recent three-year period, an SCF-based estimate of the aggregate ratio of home-secured debt to home values for all homeowners held steady at 34.9 percent. Nonetheless, at the time of the 2007 SCF interview, 1.0 percent of homeowners had home-secured debt greater than the reported value of their primary residence.

As discussed earlier, home values generally declined after the data collection for the 2007 SCF was completed. Assuming that all else, including homeownership, stayed constant from the time of the interview until October 2008, the LoanPerformance Home Price Index can be used to approximate the effect of house price declines on home equity. This assumption, together with the house price adjustment, implies that as of October 2008, median home equity for those with mortgage debt was $71,600 (6.9 percent lower than the 2004 value), and the median ratio of home-secured debt to house values for families with mortgage debt was 58.5 percent. Under this scenario, the aggregate ratio of home-secured debt to house values for homeowners was 39.8 percent in October 2008.[47]

Mortgage interest rates rose slightly, on net, over the 2004–07 period, but they remained low relative to prevailing rates in the 1990s. Comparatively low interest rates, appreciation in house values, changes in mortgage-lending practices, and the deductibility of interest payments on mortgage debt may have provided an incentive for families to borrow against the equity in their home. Such borrowing against home equity may take the form of refinancing an existing first-lien mortgage for more than the outstanding balance, obtaining a junior-lien mortgage, or accessing a home equity line of credit. The survey provides detailed information on all these options for home equity borrowing. The share of homeowners that had a first lien increased 0.9 percentage point, to 66.1 percent in 2007 (table 14). The fraction of homeowners with junior-lien mortgage debt climbed more substantially—2.4 percentage points—to 8.5 percent in 2007. The proportion of homeowners that had a home equity line of credit increased 0.6 percentage

46. Among all homeowners in 2007, median home equity was $105,000; in 2004, it had been $94,500.

47. This scenario implies that the adjusted median home equity among all homeowners was $90,200 in October 2008.

point, to 18.4 percent in 2007, but the share of homeowners with an outstanding balance held steady at 12.4 percent; the median amount borrowed against such lines likewise changed little and inched down from $24,200 in 2004 to $24,000 in 2007 (data not shown in the tables).[48] Overall, the share of total home-secured debt that was attributable to outstanding balances on home equity lines of credit fell across the 2004 and 2007 surveys (table 14.1).

14.1.

Type of home-secured debt	Share of total home-secured debt	
	2007 (percent)	Change, 2004–07 (percentage points)
First lien	91.4	.6
Junior lien	4.0	1.0
Home equity line of credit	4.6	−1.6

In 2007, an increased share of the stock of first liens consisted of either loans for home purchase or loans that had been refinanced and on which the borrower had extracted additional equity at the time of the most recent refinancing (table 14). Among borrowers in the 2007 survey who extracted equity as a part of their most recent refinancing, the median amount extracted was $28,900, compared with $22,000 in 2004 (data not shown in the tables). The prevalence of both types of junior liens rose over the recent three-year period. In the 2007 survey, the most common use of extracted equity was for home improvement, which accounted for 39.8 percent of outstanding balances attributable to equity extraction on a first lien, a junior lien, or a home equity line of credit.

Families headed by a self-employed person were more likely than families overall to have a home equity line of credit—20.4 percent of self-employed families, compared with 12.6 percent overall in 2007—and to be borrowing against such a line—11.0 percent of self-employed families, compared with 8.5 percent for all families in 2007 (data not shown in the tables). These differences reflect, in part, the relatively higher rates of homeownership among families headed by a self-employed person.

Amid rising house prices between 2004 and 2007, much discussion focused on how families have managed to finance the purchase of a home. One important determinant of the size of the regular payment that families must make to service their mortgages is the length of time over which the loan must be repaid. Between 2004 and 2007, the share of fixed-term first-lien mortgages with a term of at least 30 years rose, and the share with a term of 15 years or less declined (table 14.2).

14.2.

Mortgage contract length	First-lien mortgage with a fixed term	
	2007 (percent)	Change, 2004–07 (percentage points)
15 years or shorter	25.6	−7.3
16–29 years	9.4	−.3
30 years or longer	65.1	7.6

Another factor that may affect a borrower's ability to service a loan is the extent to which the payment may change over the life of the loan. Recent declines in house prices and changes in benchmark interest rates have brought particular attention to mortgages with payments that may vary over the life of the loan, including mortgages that do not require the borrower to pay back the entire principal over the contract period of the loan; in such cases, a "balloon payment" of the remaining principal remains at the end of the loan term. From 2004, the fraction of first-lien mortgages on the primary residence that had a potentially variable rate fell 0.8 percentage point, to 14.2 percent in 2007 (data not shown in the tables); over the same period, the share of first-lien mortgages with a balloon payment increased 0.5 percentage point, to 4.6 percent. The level of interest rates is another key determinant of the size of the regular payment that a borrower must make to repay a loan. Between 2004 and 2007, the median interest rate on the stock of outstanding first-lien mortgages on primary residences rose 0.10 percentage point, to 6.00 percent, and the mean interest rate rose 0.13 percentage point, to 6.32 percent.

Borrowing on Other Residential Real Estate

The overall prevalence of debt owed on residential real estate other than a family's primary residence increased 1.5 percentage points between 2004 and 2007, the largest increase in prevalence of any of the types of debt considered in table 13. The increase reflected not only the rise in the share of families with other residential real estate (discussed earlier) but also a higher rate of borrowing against such properties among families that owned them. In 2004, 32.0 percent of families with other residential real estate owed money on a loan collateralized by the property, and in 2007 this proportion had risen to 40.3 percent. Borrowing on other residential real estate is more common among households with

48. Of all families, 45.4 percent had a first-lien mortgage in 2007 (45.0 percent in 2004), 5.8 percent had a junior-lien mortgage (4.2 percent in 2004), 12.6 percent had a home equity line of credit (12.3 percent in 2004), and 8.5 percent had a home equity line of credit with an outstanding balance (8.6 percent in 2004).

higher levels of income, education, or wealth; couples, as well as families headed by a person who was self-employed or who was employed in a managerial or professional position, are also relatively likely to have such debt. These same groups generally experienced the largest increases in the use of such debt.

The median amount of debt on other residential real estate for families having such debt moved up 4.6 percent in 2007, but the mean amount fell 3.2 percent. These changes are modest compared with the sharp rises between 2001 and 2004 in the median and mean amounts, each of which more than doubled. Changes over the recent three-year period in the median and mean amounts exhibited a mixed pattern of increases and decreases for subgroups of families; shifts in the medians and means for subgroups were generally in the same direction.

Installment Borrowing

Installment borrowing is about as common as home-secured borrowing.[49] In 2007, 46.9 percent of families had installment debt, an increase of 0.9 percentage point over the level for 2004. Although the use of installment borrowing has increased in each of the past three surveys, the overall rate of use is comparable with the levels seen in the four surveys from 1989 to 1995. The use of installment borrowing is broadly distributed across demographic groups, with notably lower use by families in the lowest income group, those in the highest wealth group, childless single families headed by a person aged 55 or older, families headed by a retired person, and families headed by a person aged 65 or older. By comparison, the median amount of outstanding installment debt varies more clearly across many groups: That amount tends to rise with income, education, and occupational status, and it falls with age. The median amount of installment debt is fairly comparable for families with net worth below the 90th percentile and is sharply higher for families in the top net worth group.

Installment borrowing is used for a wide variety of purposes. In 2007, 51.7 percent of such borrowing was related to the purchase of a vehicle, and 33.2 percent of outstanding installment debt was owed for educational purposes. In general, balances on vehicle loans account for a disproportionate share of installment debt for those families headed by a person with at most a high school degree; vehicle debt constitutes a relatively low proportion of total installment debt for younger families and families in the lowest wealth category shown (table 15); the shares of installment debt attributable to education loans decline with age and wealth, and—as might be expected—the share rises sharply with education.[50]

From 2004 to 2007, the median amount owed on installment loans rose 2.4 percent, and the mean rose 1.4 percent. Changes in the median within demographic categories include both increases and decreases. The largest gains occurred among families in the second net worth quartile and families headed by a person who was retired or otherwise not working, while the sharpest declines occurred among families headed by a person aged 55 to 64 and childless single families headed by a person aged 55 or older.

Credit Card Balances and Other Lines of Credit

As with installment borrowing, the carrying of credit card balances is widespread but considerably less common among the highest and lowest income groups, the highest wealth group, and families headed by a person who is aged 65 or older or who is retired.[51] The proportion of families carrying a balance, 46.1 percent in 2007, was barely changed from 2004. Underlying this stability in the share of all families carrying a balance were larger shifts for many demographic groups, with increases and decreases of 3 percentage points or more for many of the groups.

Overall, the median balance for those carrying a balance rose 25.0 percent, to $3,000; the mean rose 30.4 percent, to $7,300. These increases followed slower changes over the preceding three years, when the median increased 9.1 percent and the mean climbed 16.7 percent (data not shown in the tables). Over the recent period, the median balance rose strongly for most demographic groups, particularly for higher-income families, childless couples, and families headed by a person who was aged 55 to 64 or who was self-employed. However, the median balance fell roughly 30 percent for the oldest age group, younger childless single families, and families headed

49. The term "installment borrowing" in this article describes closed-end consumer loans—that is, loans that typically have fixed payments and a fixed term. Examples are automobile loans, student loans, and loans for furniture, appliances, and other durable goods.

50. For an expanded version of table 13, including the categories of installment loans given in table 15, see www.federalreserve.gov/pubs/oss/oss2/2007/scf2007home.html.

51. In this article, credit card balances consist of balances on bank-type cards (such as Visa, MasterCard, and Discover as well as Optima and other American Express cards that routinely allow carrying a balance), store cards or charge accounts, gasoline company cards, so-called travel and entertainment cards (such as American Express cards that do not routinely allow carrying a balance and Diners Club), other credit cards, and revolving store accounts that are not tied to a credit card. Balances exclude purchases made after the most recent bill was paid.

15. Value of installment debt distributed by type of installment debt by selected characteristics of families with installment debt, 2004 and 2007 surveys

Percent

Family characteristic	2004			2007		
	Education	Vehicle	Other	Education	Vehicle	Other
All families	**26.0**	**55.5**	**18.5**	**33.2**	**51.7**	**15.1**
Percentile of income						
Less than 20	55.8	33.9	10.4	47.0	24.4	28.6
20–39.9	30.6	40.5	28.9	29.9	43.9	26.3
40–59.9	29.2	56.7	14.0	33.6	54.7	11.7
60–79.9	23.8	61.1	15.1	32.7	59.4	7.9
80–89.9	17.3	64.6	18.2	38.3	56.2	5.6
90–100	19.0	56.9	24.2	25.5	50.9	23.6
Age of head (years)						
Less than 35	42.6	45.9	11.5	53.1	41.2	5.6
35–44	26.4	61.3	12.2	24.3	57.8	17.8
45–54	23.6	63.3	13.0	27.2	53.5	19.4
55–64	15.8	68.5	15.7	21.7	53.8	24.5
65–74	*	72.0	27.4	*	73.2	19.0
75 or more	*	19.5	*	*	88.0	*
Education of head						
No high school diploma	8.1	70.0	21.9	12.8	71.5	15.8
High school diploma	12.6	70.7	16.7	15.0	69.6	15.4
Some college	26.7	61.8	11.5	23.6	53.0	23.5
College degree	33.4	45.3	21.3	48.1	40.2	11.7
Race or ethnicity of respondent						
White non-Hispanic	25.9	56.3	17.8	32.1	52.1	15.9
Nonwhite or Hispanic	26.6	52.7	20.7	36.2	50.6	13.2
Percentile of net worth						
Less than 25	45.2	33.0	21.8	47.9	32.5	19.6
25–49.9	27.2	67.8	5.0	30.3	60.9	8.8
50–74.9	21.5	67.3	11.2	30.2	60.4	9.4
75–89.9	19.0	72.5	8.5	25.7	66.0	8.3
90–100	3.8	43.4	52.7	16.7	47.6	35.7

NOTE: See note to table 1.
* Ten or fewer observations.

by a person who was neither working nor retired; median balances declined more modestly for selected other groups.

Many families with credit cards do not carry a balance.[52] Of the 73.0 percent of families with credit cards in 2007, only 60.3 percent had a balance at the time of the interview; in 2004, 74.9 percent had cards, and 58.0 percent of these families had an outstanding balance on them (data not shown in the tables). The proportion of cardholders who had bank-type cards increased over this three-year period, as did the proportion with miscellaneous other credit cards, while the share of cardholders having gasoline or travel and entertainment card types declined considerably (table 15.1). These declines probably reflect, at least in part, a rise during the period in the issuance of bank-type cards under the brand names of stores and gasoline companies and in the issuance of new types of American Express cards that routinely allow carrying a balance.

15.1.

Type of credit card	Families with credit cards	
	2007 (percent)	Change, 2004–07 (percentage points)
Bank	96.1	.7
Store	56.7	−1.7
Gasoline	11.9	−5.4
Travel and entertainment	7.4	−2.6
Miscellaneous	3.7	1.1

Bank-type cards are the most widely held type of card and thus hold particular importance. Indeed, balances on such cards accounted for 87.1 percent of outstanding credit card balances in 2007, up from 84.9 percent in 2004 (data not shown in the tables). The proportion of holders of bank-type cards who had a balance went up 2.1 percentage points, to 58.3 percent; the proportion of holders of bank-type cards who reported that they usually pay their balances in full retreated a bit, from 55.7 percent in 2004 to 55.3 percent in 2007. Over the recent three-year period, the median outstanding charges for the month preceding the interview on all bank-type cards held

52. The remaining discussion of credit cards excludes revolving store accounts that are not tied to a credit card. In 2007, 5.4 percent (5.9 percent in 2004) of families had such an account, the median outstanding balance for families that had a balance was $700 ($790 in 2004), and the total of such balances accounted for 4.4 percent (4.3 percent in 2004) of the total of balances on credit cards and such store accounts (data not shown in the tables).

by the family fell from $280 in 2004 to $250 in 2007. For families having any bank-type cards, the median number of such cards remained at 2; the median credit limit on all such cards rose 21.4 percent, to $18,000, and the median interest rate on the card with the largest balance (or on the newest card, if no outstanding balances existed) rose 1.0 percentage point, to 12.5 percent.

Only 3.8 percent of families had an established line of credit other than a home equity line in 2007 (data not shown in the tables).[53] Even fewer families—1.7 percent—had a balance on such a line, an increase of 0.1 percentage point since 2004 and only 0.2 percentage point since 2001. The median amount outstanding on these lines climbed 15.2 percent between the most recent surveys, while the mean fell 38.3 percent.

Borrowing on other lines of credit was more common among households headed by a person who was self-employed, a pattern that is apparent in earlier SCF surveys; a similar pattern also holds when the analysis considers all available lines, not just those against which families carried a balance.

Other Debt

From 2004 to 2007, the proportion of families that owed money on other types of debts decreased 0.8 percentage point, to 6.8 percent.[54] The ownership of each underlying type of such debt also declined (table 15.2).

15.2.

Type of other debt	All families	
	2007 (percent)	Change, 2004–07 (percentage points)
Cash value life insurance loans	.9	–0.7
Pension account loans	3.4	–0.1
Margin account loans	.5	†
Other miscellaneous loans	2.4	–.3

† Less than 0.05 percent.

Rates of use of other debt were noticeably lower for families in the bottom income group as well as for families headed by a person who is 75 years of age or older or who is retired and for families in the next-to-highest net worth group. The highest rate of other debt ownership was for single families with children. The prevalence of such debt fell for families with higher levels of income, education, or net worth; the rate of use rose for the age groups between 45 and 74 and for all occupation categories except the managerial-or-professional group.

The median amount owed by families with this type of debt rose 13.6 percent, to $5,000, between 2004 and 2007; over the same period, the mean fell 17.1 percent. In 2007, 36.6 percent of the total amount of this type of debt was attributable to margin loans (50.4 percent in 2004), 21.3 percent to loans against a pension from a current job of the family head or that person's spouse or partner (21.2 percent in 2004), 12.1 percent to loans against cash value life insurance policies (9.8 percent in 2004), and the remaining 30.0 percent to miscellaneous loans (18.7 percent in 2004) (data not shown in the tables).

In 2007, the SCF collected information for the first time on whether a family member had taken out a loan in the past year that was supposed to be repaid in full out of that person's next paycheck.[55] Overall, 2.4 percent of families reported having taken out a so-called payday loan. The fraction of families that had taken out a payday loan declined with age, falling from 4.9 percent of families headed by a person younger than age 35 to essentially 0 percent for families headed by a person aged 65 or older (data not shown in the tables). Across income groups, the share of families that reported such a loan was between 3.5 percent and 4.0 percent for the bottom three quintiles, but families in the top two quintiles reported virtually no use of this type of short-term loan. Similarly, 5.8 percent of families in the bottom net worth quartile reported having taken out a payday loan, while 3.7 percent of families in the second quartile and virtually no families with net worth above the median reported having done so.

The data indicate that families tend to take out payday loans to finance immediate expenses. The most common reason given for choosing a payday loan for families that had taken out such a loan was "emergencies" and similar urgent needs or a lack of other options (35.9 percent).[56] Roughly equal shares of families cited convenience in obtaining the loan (21.0 percent) or the need to pay for living expenses, including food, gas, vehicle expenses, medical payments, utility costs, or rent (20.6 percent). A smaller fraction, 10.8 percent, of these families reported a need to pay other bills and loans. The remaining

53. In this article, borrowing on lines of credit excludes borrowing on credit cards.

54. The "other debt" category comprises loans on cash value life insurance policies, loans against pension accounts, borrowing on margin accounts, and a miscellaneous category largely comprising personal loans not explicitly categorized elsewhere.

55. The family may or may not have had such a loan outstanding at the time of the interview.

56. This discussion considers the primary reasons given by families when asked why they chose this type of loan. Families could provide up to two reasons, but 92.0 percent of those who had taken out a payday loan in the past year provided only one.

12.6 percent of families with a payday loan in the past year cited other needs, including "Christmas" or the need to "help family."

Reasons for Borrowing

The SCF provides information on the reasons that families borrow money (table 16). One subtle problem with the use of these data is that, even though money is borrowed for a particular purpose, it may be employed to offset some other use of funds. For example, a family may have sufficient funds to purchase a home without using a mortgage but may instead choose to finance the purchase to free existing funds for another purpose. Thus, trends in the data can only suggest the underlying use of funds by families.

Although the survey information on use is substantial, it is not exhaustive. Most important, in the case of credit cards, it was deemed impractical to ask about the purposes of borrowing, which might well be heterogeneous for individual families. For the analysis here, all credit card debt is included in the category "goods and services." The surveys before 2004 lack information on the use of funds borrowed through a first-lien mortgage; therefore, for purposes of this calculation, all funds owed on a first-lien mortgage on a primary residence are assumed to have been used for the purchase of the home, even when the homeowner had refinanced the mortgage and extracted equity for another purpose.

The great majority of family debt is attributable to the purchase of a primary residence; however, from 2004 to 2007, the share of debt for this purpose declined 0.7 percentage point after a similar decline in the 2004 survey. Looking more broadly at debt for residential real estate, the drop in debt for home purchase was more than offset by both an increase in balances owed on residential real estate other than the primary residence—the second-largest share of debt—and a slight rise in balances owed for improvements

16. Amount of debt of all families, distributed by purpose of debt, 1998–2007 surveys

Percent

Purpose of debt	1998	2001	2004	2007
Primary residence				
Purchase	67.9	70.9	70.2	69.5
Improvement	2.1	2.0	1.9	2.3
Other residential property	7.8	6.5	9.5	10.8
Investments excluding real estate	3.3	2.8	2.2	1.6
Vehicles	7.6	7.8	6.7	5.5
Goods and services	6.3	5.8	6.0	6.2
Education	3.5	3.1	3.0	3.6
Other	1.5	1.1	.6	.5
Total	100	100	100	100

NOTE: See note to table 8.

17. Amount of debt of all families, distributed by type of lending institution, 1998–2007 surveys

Percent

Type of institution	1998	2001	2004	2007
Commercial bank	32.8	34.1	35.1	37.3
Thrift institution[1]	9.7	6.1	7.3	4.2
Credit union	4.3	5.5	3.6	4.2
Finance or loan company	4.1	4.3	4.1	3.4
Brokerage	3.8	3.1	2.5	1.6
Mortgage or real estate lender	35.6	38.0	39.4	41.6
Individual lender	3.3	2.0	1.7	1.4
Other nonfinancial	1.3	1.4	2.0	2.0
Government	.6	1.1	.7	.4
Credit card issuer	3.9	3.7	3.0	3.6
Pension	.4	.3	.3	.2
Other	.3	.5	.2	.2
Total	100	100	100	100

NOTE: See note to table 1.

1. Savings and loan association or savings bank.

on the primary residence. In 2007, the fraction of debt owed for goods and services exceeded the share of borrowing for vehicles for the first time in any SCF survey since 1989, largely because of a decline in the share for vehicles between 2004 and 2007. The majority of the debt in the goods and services category, 56.5 percent, was outstanding balances on credit cards.[57]

Choice of Lenders

The survey provides information on the types of lenders to which families owe money at the time of the interview (table 17). Over the past decade, regulatory changes and other shifts have contributed to consolidation of financial institutions; at the same time, consumers have witnessed a continuing proliferation of similarly named subsidiaries of large financial institutions, which may offer a variety of possibly overlapping financial services. As a result, families in the SCF appear to have had difficulty in accurately classifying the institutional type of lender holding their loans. A parent company may, for example, offer installment loans through both a subsidiary commercial bank and a subsidiary finance company with similar names. Thus, the proportions shown in the table are only indicative, and small differences across categories or years should be interpreted with particular caution.

The share of total debt reportedly owed to thrift institutions (savings and loan associations and sav-

57. The surveys beginning with 2004 contain information on the use of funds obtained from refinancing a first-lien mortgage. If this information for 2007 is used to classify outstanding debt by purposes, the shares of debt were, for home purchase, 65.6 percent; for home improvements, 3.9 percent; for other residential real estate, 11.1 percent; for investments other than real estate, 1.9 percent; for vehicles, 5.7 percent; for goods and services, 7.7 percent; for education, 3.6 percent; and for other unclassified purposes, 0.5 percent.

ings banks) fell 3.1 percentage points between 2004 and 2007. The estimated shares held by finance and loan companies or brokerages declined 0.7 and 0.9 percentage point, respectively. The largest increases over the period were the reported rise of 2.2 percentage points in the shares of debt owed to a commercial bank and to mortgage or real estate lenders, followed by gains of 0.6 percentage point for both credit unions and credit card issuers.

In some cases, loans may have been held at the time of the interviews by institutions other than the ones that originally made the loans. This fact might likewise make determining the type of financial institution that holds such debt more difficult. Resale of loans is particularly important for mortgage debt. According to the 2007 survey, 39.5 percent of the first-lien mortgages on primary residences were held by lenders other than the ones that made the original loans, a figure 2.0 percentage points lower than in 2004.[58] In dollar-weighted terms, the results are similar; mortgages with non-originating lenders accounted for 40.3 percent of the outstanding balances on first-lien mortgages for primary residences in 2007 and 43.3 percent in 2004 (data not shown in the tables).

Credit Market Experiences

The SCF also collects some information on families' recent credit market experiences. Specifically, the survey asks whether the family had applied for any type of credit in the past five years and, if so, whether any application was either turned down or granted for a lesser amount than the amount initially requested. Families that gave such responses were asked the reason given for the decision. The survey also asks whether, at any time in the past five years, the family ever considered applying for credit but then decided not to apply because of a belief that the application would be rejected. Such families were asked the reason they believed they would have been turned down.

In 2007, 66.3 percent of families had applied for credit at some point in the preceding five years (68.7 percent in 2004). Of these families, 29.7 percent had at least once been either turned down for credit or approved for less credit than they had applied for in the past five years (30.4 percent in 2004). Of all families, 15.3 percent had considered applying but subsequently did not do so because they thought the application would be denied (15.8 percent in 2004). The most common reasons reported for either having been denied credit or having not applied for credit were reasons related to the borrower's credit characteristics, such as the lack of a credit history, previous performance on a loan or account from another institution, and the amount of debt held by the borrower (table 17.1).[59]

17.1.

Reason turned down or did not apply	Families who applied for credit and were turned down or received less credit than the amount requested (percent)	Families who did not apply for credit because they expected to be turned down (percent)
Personal characteristics	1.8	3.9
Credit characteristics	59.9	67.7
Financial characteristics	29.4	22.9
Miscellaneous, including no reason given	8.8	5.5

Debt Burden

The ability of individual families to service their loans is a function of two factors: the level of their loan payments and the income and assets they have available to meet those payments. In planning their borrowing, families make assumptions about their future ability to repay their loans. Problems may occur when events turn out to be contrary to those assumptions. If such misjudgments are sufficiently large and prevalent, a broad pattern of default, restraint in spending, and financial distress in the wider economy might ensue.

The Federal Reserve staff has constructed an aggregate-level debt service ratio, defined as an estimate of total scheduled loan payments (interest plus minimum repayments of principal) for all households, divided by disposable personal income. From the third quarter of 2004 to the same period in 2007, the aggregate-level measure stepped up 0.74 percentage point, to 14.39 percent.[60]

58. Mortgages and other loans may also be serviced by an institution other than the current lender, and some respondents may mistakenly report their loan as having been sold even though it is simply being serviced by an institution other than the current lender. Because a loan can also be sold without changing the servicer, some borrowers may mistakenly report that their loan has not been sold.

59. Personal characteristics include responses related to family background or size, marital status, sex, or age; credit characteristics include responses related to the need to have a checking or savings account, lack of a credit history, credit reports from a credit rating agency or from other institutions, or the level of outstanding debt and insufficient credit references; financial characteristics include responses related to previous difficulty getting credit, more "strict" lending requirements of the institution, an error in processing the application, or credit problems of an ex-spouse.

60. Data on this measure, the "debt service ratio," and a description of the series are available at www.federalreserve.gov/releases/housedebt/default.htm. See Karen Dynan, Kathleen Johnson, and

18. Ratio of debt payments to family income (aggregate and median), share of debtor families with ratio greater than 40 percent, and share of debtors with any payment 60 days or more past due, 1998–2007 surveys

Percent

Family characteristic	Aggregate				Median for debtors				Debtors with ratio greater than 40 percent				Debtors with any payment past due 60 days or more			
	1998	2001	2004	2007	1998	2001	2004	2007	1998	2001	2004	2007	1998	2001	2004	2007
All families	**14.9**	**12.9**	**14.4**	**14.5**	**17.9**	**16.7**	**18.0**	**18.6**	**13.6**	**11.8**	**12.2**	**14.7**	**8.1**	**7.0**	**8.9**	**7.1**
Percentile of income																
Less than 20	18.8	16.1	18.2	17.6	18.6	19.2	19.7	19.0	29.8	29.3	26.8	26.9	13.0	13.4	15.9	15.1
20–39.9	16.6	15.8	16.6	17.2	17.5	16.7	17.4	17.0	18.3	16.6	18.5	19.5	12.4	11.7	13.8	11.5
40–59.9	18.7	17.1	19.4	19.8	19.4	17.6	19.5	20.3	15.9	12.3	13.7	14.5	10.0	7.9	10.4	8.3
60–79.9	19.1	16.8	18.5	21.7	19.5	18.1	20.6	21.9	9.8	6.5	7.1	12.7	5.9	4.0	7.1	4.1
80–89.9	16.8	17.0	17.3	19.7	17.8	17.2	18.1	19.3	3.5	3.5	2.4	8.1	3.9	2.6	2.3	2.1
90–100	10.3	8.1	9.3	8.4	13.7	11.2	12.7	12.5	2.8	2.0	1.8	3.8	1.6	1.3	.3	.2
Age of head (years)																
Less than 35	17.2	17.2	17.8	19.7	16.9	17.7	18.0	17.5	12.9	12.0	12.8	15.1	11.1	11.9	13.7	9.4
35–44	17.7	15.1	18.2	18.5	20.0	17.8	20.6	20.3	12.5	10.1	12.5	12.7	8.4	5.9	11.7	8.6
45–54	16.4	12.8	15.3	14.9	17.9	17.4	18.4	19.3	12.8	11.6	13.1	16.0	7.4	6.2	7.6	7.3
55–64	13.4	10.9	11.5	12.5	17.6	14.3	15.7	17.5	14.0	12.3	10.2	14.5	7.5	7.1	4.2	4.9
65–74	8.8	9.2	8.7	9.6	13.2	16.0	15.6	17.9	18.1	14.7	11.6	15.6	3.1	1.5	3.4	4.4
75 or more	4.1	3.9	7.1	4.4	8.1	8.0	12.8	13.0	21.4	14.6	10.7	13.9	1.1	.8	3.9	1.0
Percentile of net worth																
Less than 25	15.0	13.4	13.0	15.0	13.6	11.5	13.0	12.1	13.1	11.6	10.5	10.4	16.3	17.7	22.9	16.8
25–49.9	20.1	18.1	19.5	22.4	20.2	20.1	21.2	23.4	15.9	14.2	15.8	19.3	9.8	7.1	11.0	7.7
50–74.9	18.3	16.7	20.6	20.3	20.2	18.3	21.4	21.5	13.0	11.2	12.8	15.9	5.5	3.6	3.2	4.2
75–89.9	14.8	15.4	15.1	17.0	17.8	16.9	17.8	18.2	12.3	10.6	9.6	13.0	1.0	.7	1.1	1.2
90–100	10.2	7.4	8.5	8.0	14.1	11.2	12.6	12.6	12.2	8.5	7.6	11.1	2.4	.3	.1	.7
Housing status																
Owner	16.3	13.9	15.6	15.6	21.2	20.0	21.5	22.8	16.5	14.7	14.9	18.0	6.1	4.3	5.6	4.8
Renter or other	8.2	7.4	7.2	7.9	8.5	8.3	8.1	8.2	6.5	4.2	4.3	5.4	12.9	14.0	18.6	13.5

NOTE: The aggregate measure is the ratio of total debt payments to total income for all families. The median is the median of the distribution of ratios calculated for individual families with debt. Also see note to table 1.

The survey data for individual families may be used to construct a similar estimate of debt burden for families overall as well as for various demographic groups (table 18).[61] The SCF-based estimate is the ratio of total debt payments for all families to total family income of all families.[62] From 2004 to 2007, the SCF-based estimate rose, albeit by less than the aggregate-level measure, increasing 0.1 percentage point, to 14.5 percent. In the previous three-year period, the SCF measure had increased at a faster pace than the aggregate-level measure; between 2001 and 2004, the aggregate estimate of the debt-burden ratio rose 1.4 percentage points, and the SCF-based measure increased 1.5 percentage points. If total payments and incomes are computed from the survey data using only families with debt payments, the results for the recent period show a slightly larger increase, from 17.7 percent in 2004 to 18.0 percent in 2007; if the ratio is computed using only families with home-secured debt, the data show a rise from 20.2 percent in 2004 to 20.5 percent in 2007 (data not shown in the tables). The SCF-based estimate of the aggregate debt-burden ratio increased for most demographic groups over the recent three-year period.

Karen Pence (2003), "Recent Changes to a Measure of U.S. Household Debt Service," *Federal Reserve Bulletin*, vol. 89 (October), pp. 417–26.

61. The survey measure of payments relative to income may differ from the aggregate-level measure for several reasons. First, the debt payments included in each measure are different. The aggregate-level measure includes only debts originated by depositories, finance companies, and other financial institutions, whereas the survey includes, in principle, debts from all sources.

Second, the aggregate-level measure uses an estimate of disposable personal income from the national income and product accounts for the period concurrent with the estimated payments as the denominator of the ratio, whereas the survey measure uses total before-tax income reported by survey families for the preceding year; the differences in these two income measures are complex.

Third, the payments in the aggregate-level measure are estimated using a formula that entails complex assumptions about minimum payments and the distribution of loan terms at any given time; the survey measure of payments is directly asked of the survey respondents but may also include payments of taxes and insurance on real estate loans.

Fourth, because the survey measures of payments and income are based on the responses of a sample of respondents, they may be affected both by sampling error and by various types of response errors. As mentioned earlier in this article, the survey income measure tracks the most comparable measure of income in the Census Bureau's Current Population Survey.

62. The definition of debt payments in the SCF does not include payments on leases or rental payments. The survey collects information on vehicle lease payments and rent on primary residences, and, thus, in principle a broader measure of debt payments could be constructed, one that would be similar to the "financial obligations ratio" estimated by the Federal Reserve staff.

The ability to look at the distribution of payments relative to income at the level of families potentially offers insights that are not available from any of the aggregate-level figures. In particular, the survey allows a detailed look at the spectrum of payments relative to income across all families with debts. Over the recent period, the median of the ratios for individual families that had any debt rose 0.6 percentage point, to 18.6 percent in 2007, a gain that extends a series of increases in this measure since 1989 that were interrupted only by a decline between 1998 and 2001. The median ratio of debt payments to income also rose at least slightly in the recent period for most demographic groups shown; the median fell for families with wealth in the lowest quartile, for families with income in the two lowest quintiles or the highest decile, and for families headed by a person younger than 45.[63]

A limitation of the median ratio is that it may not be indicative of distress because it reflects the situation of only a typical family. Unless errors of judgment by both families and lenders are pervasive, one would not expect to see signs of financial distress at the median. Thus, a more compelling indicator of distress is the proportion of families with unusually large total payments relative to their incomes. From 2004 to 2007, the proportion of debtors with payments exceeding 40 percent of their incomes rose 2.5 percentage points, to 14.7 percent; in the preceding three years, the proportion had increased 0.4 percentage point. The increase was shared by all demographic groups except families in the bottom net worth group, for which the share edged back 0.1 percentage point, to 10.4 percent; in contrast, this fraction increased between 3.0 and 3.5 percentage points for each of the other net worth groups. Compared with the increases for lower income groups, the share of families with income between the 60th and 90th percentiles who had a relatively high ratio of debt payment to income rose especially sharply.[64]

Fluctuations in a family's income away from its usual level can have substantial effect on the family's payment-to-income ratio. If the ratio is defined in terms of families' reported usual incomes, the fraction of families with a ratio exceeding 40 percent falls to 13.6 percent. This 1.1 percentage point difference reflects two facts: (1) 2.5 percent of families with debt had relatively high payment-to-income ratios based on the previous year's income but would not have if income had been at its usual level, and (2) 1.4 percent of families with debt had debt payments less than or equal to 40 percent of last year's income but would have had a ratio above 40 percent if income had been at its usual level. Families may draw on assets as well as income to meet debt payments. For all families with debt, 57.7 percent had transaction account balances equal to at least three months of debt payments. For families with payment-to-income ratios above 40 percent, however, this share falls to 25.9 percent.

Other commonly used indicators of debt-repayment problems are aggregate delinquency rates—that is, the percentage of delinquent accounts or the percentage of total balances on which payments are late. Both account-based and dollar-weighted aggregate measures indicate that delinquencies on mortgages rose, on net, from the third quarter of 2004 to the third quarter of 2007, but they began to rise more sharply thereafter. Over the 2004–07 period, the percentage of delinquent automobile loans declined, while a corresponding dollar-weighted measure rose; the fraction of delinquent loans leveled off in 2008, while the dollar-weighted measure continued to rise. On net, a dollar-weighted delinquency measure for other closed-end loans was unchanged from the third quarter of 2004 to the third quarter of 2007, while the percentage of delinquent loans rose; over the following year, both measures rose. Delinquency measures for credit cards also differed by whether the measure was based on dollar volume or delinquent accounts, but all pointed to comparatively small changes between the third quarter of 2004 and the third quarter of 2007; over the following four quarters, all of these measures showed clear increases.[65]

A related measure is collected in the SCF. Families that have any debt at the time of their interview are asked whether they have been behind in any of their loan payments in the preceding year. This measure differs conceptually from the aggregate delinquency rates in that the survey counts multiple occasions of late payments as one, counts families instead of balances or accounts, and includes all types of loans; because it counts individual families, not their balances, it is closer in spirit to aggregate measures based on the numbers of delinquent accounts than to those based on the amounts of delinquent balances. The survey shows a decrease from 8.9 percent in 2004 to 7.1 percent in 2007 in the proportion of

63. The median of the ratio for families with home-secured debt in 2007 was 25.1 percent, up from 24.2 percent in 2001 (data not shown in the tables).

64. Of families with home-secured debt, the proportion that had total payments of more than 40 percent of their income was 20.1 percent in 2007, a level 3.0 percentage points higher than that in 2004 (data not shown in the tables).

65. The most commonly used such measures are from the Consolidated Reports of Condition and Income (Call Report), the American Bankers Association, and Moody's Investors Service.

debtors who were 60 or more days late with their payments on any of their loans in the preceding year. This measure fell for families in each of the income groups but particularly for families in the middle 60 percent of the income distribution; the percentage declined for families with net worth below the median, and it rose for families with higher levels of net worth.[66] The share of families with debt who were at least 60 days late on a payment during the preceding year rose for families headed by a person aged 55 to 74 and fell for both homeowners and, more substantially, renters. For families with a payment-to-income ratio of 40 percent or more, 13.9 percent missed a debt payment by 60 days or more; by comparison, 6.0 percent of debtor families with lower ratios had fallen behind in debt repayment.

Summary

Data from the 2004 and 2007 SCF show that median income barely changed, while mean income rose substantially, an indication that income gains were much greater for families in the uppermost part of the distribution. Although overall both median and mean net worth increased strongly over this period—17.7 percent and 13.0 percent, respectively—these measures declined for families at the bottom of the wealth distribution. The preceding three years had seen only small changes in median and mean income and in median net worth but a sizable gain in mean net worth.

Although the median and mean of families' holdings of financial assets increased overall from 2004 to 2007, financial assets declined as a share of total assets, continuing an earlier trend. The offsetting expansion in the share of nonfinancial assets was most strongly driven by greater holdings of private business equity and, to a lesser degree, of residential real estate other than a primary residence. The homeownership rate, which had risen noticeably between the 2001 and 2004 surveys, turned down slightly. Unrealized capital gains were an important part of the increase in assets; in 2007, 35.8 percent of total assets was attributable to unrealized capital gains, and those gains were most concentrated in holdings of real estate and private business equity. In 2004, unrealized gains accounted for 30.7 percent of assets.

Debt and assets rose in about equal proportions over the recent three-year period. Thus, overall indebtedness as a share of assets was little changed. Home-secured debt fell slightly as a share of total family debt, but in 2007 it remained by far the largest component of family debt. The share of borrowing for residential real estate other than the primary residence increased appreciably. The percentage of families using credit cards for borrowing changed only slightly over the period, but the median balance on their accounts rose 25.0 percent, and the mean rose 30.4 percent.

Despite a moderate rise in typical consumer loan interest rates from 2004 to 2007, the median ratio of loan payments to family income for debtors, a common indicator of debt burden, at 18.6 percent, barely rose over the period; in the previous three years, this measure had risen more steeply. But data from the recent three-year period show an increase of 2.5 percentage points in the proportion of debtors with loan payments exceeding 40 percent of their income, a level traditionally considered to be high; the share of families with payment ratios this high was 14.7 percent in 2007.

Appendix: Survey Procedures and Statistical Measures

Detailed documentation of the SCF methodology is available elsewhere.[67] The 2007 data used here are derived from the final internal version of the survey information. Data from this survey, suitably altered to protect the privacy of respondents, along with additional tabulations of data from the surveys beginning with 1989, are expected to be available in February 2009 on the Federal Reserve's website at www.federalreserve.gov/pubs/oss/oss2/2007/scf2007data.html. Links to the data used in this article for earlier periods are available on that site. Results reported in this article for earlier surveys may differ from the results reported in earlier articles because of additional statistical processing, correction of data errors, revisions to the survey weights, conceptual changes in the definitions of variables used in the articles, and adjustments for inflation.

As a part of the general reconciliations required for this article, the survey data were compared with many external estimates, a few of which are mentioned in

66. For families with home-secured debt, the result is very similar to that for homeowners overall. The proportion with payments late 60 days or more in 2007 was 4.8 percent after rising to an estimated 5.7 percent in 2004 (data not shown in the tables).

67. See Arthur B. Kennickell (2000), "Wealth Measurement in the Survey of Consumer Finances: Methodology and Directions for Future Research" (Washington: Board of Governors of the Federal Reserve System, May); Arthur B. Kennickell (2001), "Modeling Wealth with Multiple Observations of Income: Redesign of the Sample for the 2001 Survey of Consumer Finances" (Washington: Board of Governors of the Federal Reserve System, October), www.federalreserve.gov/pubs/oss/oss2/method.html; and references cited in these papers.

the text. Generally, the survey estimates correspond fairly well to external estimates. One particularly important comparison is between the SCF and the Federal Reserve's flow of funds accounts for the household sector. This comparison suggests that when the definitions of the variables in the two sources can be adjusted to a common conceptual basis, the estimates of totals in the two systems tend to be close. The data series in the SCF and in the flow of funds accounts usually show very similar growth rates.[68] In general, the data from the SCF can be compared with those of other surveys only in terms of the medians because of the special design of the SCF sample.

Adjustment for Inflation

In this article, all dollar amounts from the SCF are adjusted to 2007 dollars using the "current methods" version of the consumer price index (CPI) for all urban consumers. In an ongoing effort to improve accuracy, the Bureau of Labor Statistics has introduced several revisions to its CPI methodology. The current-methods index attempts to extend these changes to earlier years to obtain a series as consistent as possible with current practices in the official CPI.[69] To adjust assets and liabilities to 2007 dollars and to adjust family income for the preceding calendar year to 2007, the figures given in table A.1 were applied.

A.1.

Survey year	Adjustment factor for assets and debts in the survey year	Adjustment factor for income in the calendar year before the survey year
1998	1.2732	1.2910
2001	1.1696	1.2024
2004	1.0983	1.1280
2007	1.0000	1.0284

Definition of "Family" in the SCF

The definition of "family" used throughout this article differs from that typically used in other government studies. In the SCF, a household unit is divided into a "primary economic unit" (PEU)—the family—and everyone else in the household. The PEU is intended to be the economically dominant single person or couple (whether married or living together as partners) and all other persons in the household who are financially interdependent with that economically dominant person or couple.

This report also designates a head of the PEU, not to convey a judgment about how an individual family is structured but as a means of organizing the data consistently. If a couple is economically dominant in the PEU, the head is the male in a mixed-sex couple or the older person in a same-sex couple. If a single person is economically dominant, that person is designated as the family head in this report.

Percentiles of the Distributions of Income and Net Worth

Throughout this article, references are made to various percentile groups of the distributions of income or net worth. For a given characteristic, a percentile can be used to define a family's rank relative to other families. For example, the 10th percentile of the distribution of income is the amount of income received by a family for whom just less than 10 percent of families have lower income and 90 percent have higher income. The percentiles of the distributions of income and net worth used to define the income and net worth groups in the tables in the article are given in table A.2.

A.2.

Item	Survey year			
	1998	2001	2004	2007
Percentile of income				
20	17,700	19,700	20,800	20,600
40	33,600	36,100	37,200	36,500
60	54,200	60,100	58,900	59,600
80	86,900	96,200	98,100	98,200
90	119,600	139,000	142,100	140,900
Percentile of net worth				
25	12,700	14,900	14,600	14,100
50	91,300	101,200	102,200	120,300
75	265,900	335,800	360,700	372,000
90	628,300	865,700	913,300	908,200

The groups that are created when a distribution is divided at every 10th percentile are commonly referred to as deciles. Similarly, when a distribution is divided at every 20th (25th) percentile, the groups are known as quintiles (quartiles). Families in the first income decile, for example, are those with income below the 10th percentile.

Racial and Ethnic Identification

In this article, the race and ethnicity of a family in the SCF are classified according to the self-identification of that family's original respondent to the SCF inter-

68. For details on how these comparisons are structured and the results of comparisons for earlier surveys, see Rochelle L. Antoniewicz (2000), "A Comparison of the Household Sector from the Flow of Funds Accounts and the Survey of Consumer Finances" (Washington: Board of Governors of the Federal Reserve System, October), www.federalreserve.gov/pubs/oss/oss2/method.html.

69. For technical information about the construction of this index, see Kenneth J. Stewart and Stephen B. Reed (1999), "Consumer Price Index Research Series Using Current Methods, 1978–1998," *Monthly Labor Review*, vol. 122 (June), pp. 29–38.

view. The questions underlying the method of classification used in the survey were changed in both 1998 and 2004. Starting in 1998, SCF respondents were allowed to report more than one racial identification; in surveys before then, only one response was recorded. For maximum comparability with earlier data, respondents reporting multiple racial identifications were asked to report their strongest racial identification first.

Beginning with the 2004 survey, the question on racial identification is preceded by a question on whether respondents consider themselves to be Hispanic or Latino in culture or origin; previously, such ethnic identification was captured only to the extent that it was reported as a response to the question on racial identification. The sequence of these two questions in the 2004 SCF is similar to that in the CPS. When families in the March 2004 CPS are classified in the way most compatible with the SCF, the proportion of Hispanic families is 10.5 percent; the 2004 SCF estimate is 11.2 percent. Differences in these proportions are attributable to sampling error and possibly to differences in the wording and context of the questions.

For greater comparability with the earlier SCF data, the data reported in this article ignore the information on ethnic identification available in 2007, but respondents reporting multiple racial identifications in the surveys starting with 1998 are classified as "nonwhite or Hispanic." In the 2007 SCF, 5.4 percent of respondents reported more than one racial identification, up from 2.3 percent in 2004 and 1.5 percent in 2001. Of those who responded affirmatively to the question on Hispanic or Latino identification in 2007, 82.8 percent also reported "Hispanic or Latino" as one of their racial identifications, and 74.5 percent reported it as their primary racial identification. Because the question on Hispanic or Latino ethnicity precedes the one on racial identification in the 2004 and 2007 surveys, the answer to the second of these two questions may have been influenced by the answer to the first.[70]

The Sampling Techniques

The survey is expected to provide a core set of data on family income, assets, and liabilities. The major aspects of the sample design that address this requirement have been constant since 1989. The SCF combines two techniques for random sampling. First, a standard multistage area-probability sample (a geographically based random sample) is selected to provide good coverage of characteristics, such as homeownership, that are broadly distributed in the population.

Second, a supplemental sample is selected to disproportionately include wealthy families, which hold a relatively large share of such thinly held assets as noncorporate businesses and tax-exempt bonds. Called the "list sample," this group is drawn from a list of statistical records derived from tax returns. These records are used under strict rules governing confidentiality, the rights of potential respondents to refuse participation in the survey, and the types of information that can be made available. Persons listed by *Forbes* magazine as being among the wealthiest 400 people in the United States are excluded from sampling.

Of the 4,422 interviews completed for the 2007 SCF, 2,915 were from the area-probability sample, and 1,507 were from the list sample; for 2004, 3,007 were from the area-probability sample, and 1,515 were from the list sample. The number of families represented in the surveys considered in this article is given by table A.3.

A.3.

Year	Number of families represented (millions)
1998	102.6
2001	106.5
2004	112.1
2007	116.1

The Interviews

The survey questionnaire has changed in only minor ways since 1989, except in a small number of instances in which the structure was altered to accommodate changes in financial behaviors, in types of financial arrangements available to families, and in regulations covering data collection. In these cases and in all earlier ones, every effort has been made to ensure the maximum degree of comparability of the data over time. Except where noted in the article, the data are highly comparable over time.

The generosity of families in giving their time for interviews has been crucial to the SCF. In the 2007 SCF, the median interview length was about 80 minutes. However, in some particularly complicated cases, the amount of time needed was substantially more than two hours. The role of the interviewers in

70. For a review of the effects of various approaches to measuring race and ethnicity, see Clyde Tucker, Ruth McKay, Brian Kojetin, Roderick Harrison, Manuel de la Puente, Linda Stinson, and Ed Robinson (1996), "Testing Methods of Collecting Racial and Ethnic Information: Results of the Current Population Survey Supplement on Race and Ethnicity," BLS Statistical Notes 40, CPS Publications (Washington: Bureau of Labor Statistics, June), www.bls.census.gov/cps/racethn/1995/stat40rp.htm.

this effort is also critical. Without their dedication and perseverance, the survey would not be possible.

The SCF interviews were conducted largely between the months of May and December in each survey year by NORC, a social science and survey research organization at the University of Chicago. The majority of interviews were obtained in person, although interviewers were allowed to conduct telephone interviews if that was more convenient for the respondent. Each interviewer used a program running on a laptop computer to administer the survey and collect the data.

The use of computer-assisted personal interviewing has the great advantage of enforcing systematic collection of data across all cases. The computer program developed to collect the data for the SCF was tailored to allow the collection of partial information in the form of ranges whenever a respondent either did not know or did not want to reveal an exact dollar figure.

The response rate in the area-probability sample is more than double that in the list sample. In both 2004 and 2007, about 70 percent of households selected for the area-probability sample actually completed interviews. The overall response rate in the list sample was about 30 percent; in the part of the list sample likely containing the wealthiest families, the response rate was only about 10 percent.

Weighting

To provide a measure of the frequency with which families similar to the sample families could be expected to be found in the population of all families, an analysis weight is computed for each case, accounting both for the systematic properties of the sample design and for differential patterns of nonresponse. The SCF response rates are low by the standards of some other major government surveys, and analysis of the data confirms that the tendency to refuse participation is highly correlated with net worth. However, unlike other surveys, which also almost certainly have differential nonresponse by wealthy households, the SCF has the means to adjust for such nonresponse. A major part of SCF research is devoted to the evaluation of nonresponse and adjustments for nonresponse in the analysis weights of the survey.[71]

Sources of Error

Errors may be introduced into survey results at many stages. Sampling error—the variability expected in estimates based on a sample instead of a census—is a particularly important source of error. Such error can be reduced either by increasing the size of a sample or, as is done in the SCF, by designing the sample to reduce important sources of variability. Sampling error can be estimated, and for this article we use replication methods to do so.

Replication methods draw samples, called replicates, from the set of actual respondents in a way that incorporates the important dimensions of the original sample design. In the SCF, weights were computed for all the cases in each of the replicates.[72] For each statistic for which standard errors are reported in this article, the weighted statistic is estimated using the replicate samples, and a measure of the variability of these estimates is combined with a measure of the variability due to imputation for missing data to yield the standard error.

Other errors include those that interviewers may introduce by failing to follow the survey protocol or misunderstanding a respondent's answers. SCF interviewers are given lengthy, project-specific training to minimize such problems. Respondents may introduce error by interpreting a question in a sense different from that intended by the survey. For the SCF, extensive pretesting of questions and thorough review of the data tend to reduce this source of error.

Nonresponse—either complete nonresponse to the survey or nonresponse to selected items within the survey—may be another important source of error. As noted in more detail above, the SCF uses weighting to adjust for differential nonresponse to the survey. To address missing information on individual questions within the interview, the SCF uses statistical methods to impute missing data; the technique makes multiple estimates of missing data to allow for an estimate of the uncertainty attributable to this type of nonresponse. □

71. The weights used in this article are adjusted for differential rates of nonresponse across a number of groups. See Arthur B. Kennickell (1999), "Revisions to the SCF Weighting Methodology: Accounting for Race/Ethnicity and Homeownership" (Washington: Board of Governors of the Federal Reserve System, January), www.federalreserve.gov/pubs/oss/oss2/method.html.

72. See Arthur B. Kennickell (2000), "Revisions to the Variance Estimation Procedure for the SCF" (Washington: Board of Governors of the Federal Reserve System, October), www.federalreserve.gov/pubs/oss/oss2/method.html.

Errata

In the analysis of the SCF reported in the article, privately held businesses do not include businesses that were reported to have a net value of zero; this fact was not made clear in the definition given in footnote 39. In 2007, 12.0 percent of families had a privately held business with a value different from zero; the median and mean values for families having such businesses were $100,500 and $1,071,100, respectively. If businesses with a value of zero are included in the business definition in 2007, ownership rises to 13.6 percent of families, and the median and mean values fall to $92,200 and $946,300, respectively.

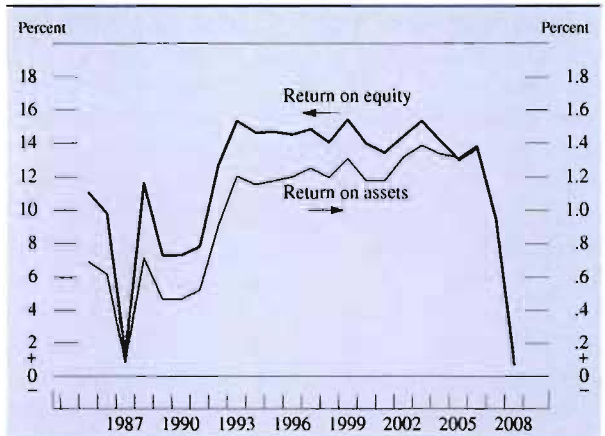
June 2009

Profits and Balance Sheet Developments at U.S. Commercial Banks in 2008

Morten L. Bech and Tara Rice, of the Board's Division of Monetary Affairs, prepared this article. Thomas C. Allard and Mary E. Muething assisted in developing the database underlying much of the analysis. Zénide Avellaneda and Robert Kurtzman provided research assistance.

The continued fallout from the ongoing financial turmoil and the economic downturn weighed heavily on the performance of the U.S. commercial banking industry in 2008.[1] As house prices continued to decline, the performance of mortgage-related assets deteriorated further, and, with the onset of recession, credit problems spread to other asset classes and to a wider range of financial institutions. Delinquent loans (those whose payments are 30 days or more past due) on banks' books continued to mount in all major loan categories, particularly among residential mortgages and construction and land development loans related to residential projects. Sizable losses and write-downs deepened concerns about the condition of some very large financial institutions, including some of their large commercial bank subsidiaries. When the financial strains intensified in the second half of 2008, the ensuing turmoil in global credit markets contributed to a steep decline in economic activity late in the year. At the same time, interest rate spreads on a wide range of private debt instruments widened further, and the functioning of many credit markets was, at times, significantly impaired. Credit default swap (CDS) premiums for banking organizations, which reflect investors' assessments of the likelihood of a default, shot up.[2] The stock prices of bank holding companies (BHCs) fell steeply for the year, underperforming the overall market by a wide margin.

1. Bank profitability, 1985–2008



NOTE: The data are annual.

SOURCE: Here and in subsequent figures and tables except as noted, Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report).

Against this backdrop, the net income of the commercial banking industry contracted substantially in 2008, and the industry return on equity for the full year fell to less than 1 percent (figure 1). Industry

NOTE: The data in this article cover insured domestic commercial banks and nondeposit trust companies (hereafter, banks). Except as otherwise indicated, the data are from the Consolidated Reports of Condition and Income (Call Report). The Call Report consists of two forms submitted by domestic banks to the Federal Financial Institutions Examination Council: FFIEC 031 (for those with domestic and foreign offices) and FFIEC 041 (for those with domestic offices only). The data thus consolidate information from foreign and domestic offices, and they have been adjusted to take account of mergers and the effects of push-down accounting. For additional information on the adjustments to the data, see the appendix in William B. English and William R. Nelson (1998), "Profits and Balance Sheet Developments at U.S. Commercial Banks in 1997," *Federal Reserve Bulletin*, vol. 84 (June), p. 408. Size categories, based on assets at the start of each quarter, are as follows: the 10 largest banks, large banks (those ranked 11 through 100), medium-sized banks (those ranked 101 through 1,000), and small banks (those ranked 1,001 and higher). At the start of the fourth quarter of 2008, the approximate asset sizes of the banks in those groups were as follows: the 10 largest banks, more than $171 billion; large banks, $8.3 billion to $163 billion; medium-sized banks, $528 million to $8.2 billion; and small banks, less than $528 million.

1. It is worth emphasizing that the analysis in this article is based on the Call Reports for commercial banks. For a commercial bank that is a subsidiary of a bank holding company or a financial holding company, the Call Report does not include the assets, liabilities, income, or expenses of the other subsidiaries of the larger organization. Thus, the profits of the commercial banks that are subsidiaries of a larger banking organization may differ substantially from the profits of the consolidated institution.

2. A CDS is a contract between two parties, whereby one party (the guarantor) provides protection against the default of an underlying asset to an investor seeking such protection (the beneficiary). The CDS premium is the annual fixed fee the buyer of protection pays to the seller of protection over the term of the contract, expressed as a percentage of the dollar amount of protection purchased.

profits were particularly hard hit in the fourth quarter, when banks in all size groups experienced losses. The primary drivers of the profitability slump were sizable provisions for loan losses in response to further deterioration in asset quality, goodwill impairment losses, heavy write-downs on securities holdings, and a sharp drop in trading revenue. For the year as a whole, losses were especially acute at some of the largest commercial banks.

The ongoing financial turmoil resulted in a steady stream of acquisitions and reorganizations in 2008, as financial institutions failed or required government assistance amid growing losses on mortgage-related and other assets. In March, a liquidity crisis at The Bear Stearns Companies, Inc., a major investment bank, led to its acquisition (with government assistance) by JPMorgan Chase & Co. In July, Countrywide Financial Corporation, a thrift institution and the largest U.S. mortgage originator, was acquired by Bank of America Corporation. In addition, the failure that month of IndyMac Bank, F.S.B., a large thrift institution, raised further concerns about the profitability and asset quality of financial institutions. The failure also raised depositors' concerns about the safety of deposits held by banks.

In early September, the Treasury Department and the Federal Housing Finance Agency announced that the housing-related government-sponsored enterprises (GSEs), Fannie Mae and Freddie Mac, had been placed into conservatorship. The GSEs' equity prices dropped considerably in response, and, as a result, many smaller banks that held sizable amounts of the preferred stock of the two GSEs had to recognize substantial losses in the third quarter. Amid plummeting investor confidence, and after posting sizable losses, several large nonbank financial institutions came under extreme pressure: Lehman Brothers Holdings filed for bankruptcy on September 15, 2008; during the same tumultuous period, Bank of America announced its intention to acquire Merrill Lynch & Co., Inc.; the Federal Reserve, with the full support of the Treasury, agreed to provide liquidity support to American International Group, Inc., or AIG; and the Federal Reserve approved the applications by Goldman Sachs Group, Inc., and Morgan Stanley to become BHCs.[3] Upon its collapse on September 25, 2008, Washington Mutual Bank, a large thrift institution, became the largest failure ever of a financial institution in the United States; its stakeholders absorbed significant losses.[4] Soon after, Wachovia Corporation, the fourth-largest commercial bank at the time, experienced acute funding pressures and agreed to merge with Wells Fargo & Company. In addition, a number of smaller banks, many located in states that had experienced the largest house price fluctuations in recent years (most notably California, Florida, Georgia, and Nevada), failed in 2008. At year-end, the total number of banking institution failures reached 25, the highest since 1993. The list of problem banks compiled by the Federal Deposit Insurance Corporation (FDIC) reached 252 banking institutions, with combined assets of $159 billion. Through mid-April of 2009, an additional 25 banking institutions had failed.

In mid-September, in large part because of losses on Lehman Brothers' debt, the net asset value of a prominent money market mutual fund fell below $1 per share—a development known as "breaking the buck"—a rare event that had not occurred in many years. Investors responded with massive withdrawals from prime money market mutual funds, which hold substantial amounts of commercial paper. These outflows severely undermined the stability of short-term funding markets, upon which many large corporations rely heavily to meet their short-term borrowing needs. As a result, many financial and nonfinancial firms turned to their backup lines of credit at commercial banks for funding.

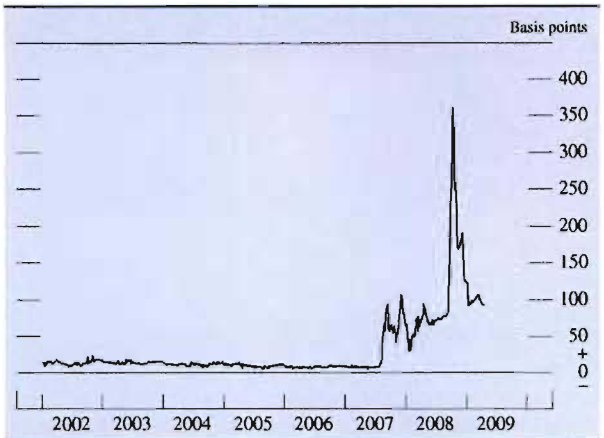
In response to the pressures on financial institutions and the associated uncertainty about their financial condition, banks and investors pulled back from risk-taking even further last fall, and conditions across most financial markets deteriorated sharply. With banks reluctant to lend to one another, the cost of borrowing in the interbank market—as exemplified by the London interbank offered rate, or Libor, a reference rate for a wide variety of contracts, including floating-rate mortgages—increased appreciably (figure 2). Securitization markets, with the exception of those for government-supported mortgages, essentially shut down, boosting the unanticipated demand for funds from commercial banks.

In an attempt to restore liquidity and stability to the U.S. financial system in general and the banking system in particular, public authorities took a number

3. See Ben S. Bernanke (2009), "American International Group," statement before the Committee on Financial Services, U.S. House of Representatives, Washington, March 24, www.federalreserve.gov/newsevents/testimony/bernanke20090324a.htm.

4. The Federal Deposit Insurance Corporation was able to resolve the failure without any loss to the insurance fund when most assets and liabilities were bought by JPMorgan Chase. See Federal Deposit Insurance Corporation (2008), "JPMorgan Chase Acquires Banking Operations of Washington Mutual," press release, September 25, www.fdic.gov/news/news/press/2008/pr08085.html.

2. Spreads of 3-month Libor over OIS rate, 2002–09



NOTE: The data are daily and extend through April 16, 2009. For the London interbank offered rate (Libor), quotes are as of 6 a.m.; for the overnight index swap (OIS) rate, quotes are as of the close of business of the previous trading day. An OIS is an interest rate swap with the floating rate tied to an index of daily overnight rates, such as the effective federal funds rate. At maturity, two parties exchange, on the basis of the agreed notional amount, the difference between interest accrued at the fixed rate and interest accrued through geometric averaging of the floating, or index, rate.

SOURCE: For Libor, British Bankers' Association; for the OIS rate, Prebon.

of unprecedented actions during 2008.[5] To address elevated pressures in a number of funding markets, the Federal Reserve augmented many of its existing lending facilities. As demand for dollar funding rose further over the course of 2008, the Federal Reserve expanded and extended the term of both the Term Auction Facility (TAF), under which term funds are auctioned off to depository institutions against the wide variety of collateral that can be used to secure loans at the discount window, and the temporary reciprocal currency arrangements (swap lines) with the European Central Bank and the Swiss National Bank. In the fall of 2008, the formal quantity limits on these lines, as well as the swap lines that had been set up with the Bank of Japan and the Bank of England, were eliminated, and the Federal Reserve introduced new liquidity swap lines with 10 other central banks. At year-end 2008, $450 billion and $553 billion were outstanding under the TAF and the swap lines, respectively. Moreover, in several cases, the Federal Reserve Board granted exemptions from restrictions under section 23A of the Federal Reserve Act in an effort to allow banks greater scope to provide liquidity to their nonbank affiliates.

In addition, the Federal Reserve established several temporary lending facilities over the course of the year. In March 2008, to address increasing liquidity pressures in funding markets, the Federal Reserve established the Term Securities Lending Facility (TSLF). Under the TSLF, the Federal Reserve lends Treasury securities to primary dealers, and the lending is secured by a pledge of other securities. After the demise of Bear Stearns, the Federal Reserve created the Primary Dealer Credit Facility to improve the ability of primary dealers to provide financing to participants in securitization markets. In addition, the Federal Reserve lowered the spread between the primary credit rate at the discount window and the intended target for the effective federal funds rate to 25 basis points and temporarily allowed primary credit loans for terms of up to 90 days.

In September, the Treasury and the Federal Reserve took several steps to ease investor concerns about the money market mutual fund industry and support the functioning of the commercial paper market. The Treasury introduced an insurance program for money market mutual fund investors, and the Federal Reserve announced the creation of the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF) to extend nonrecourse loans to banks to finance their purchases of high-quality asset-backed commercial paper from money market mutual funds. The following month, the Commercial Paper Funding Facility was created to provide a liquidity backstop to U.S. issuers of commercial paper.[6] Most Federal Reserve facilities have been extended through October 30, 2009.[7]

In October, the Congress passed the Emergency Economic Stabilization Act (EESA), a move that, among other things, created the $700 billion Troubled Asset Relief Program (TARP). The TARP was intended to reduce the strains in financial markets created by the substantial amount of illiquid structured securities and mortgages still held by banks. The EESA also raised basic deposit insurance coverage to $250,000 on a temporary basis. In addition, the FDIC announced the Temporary Liquidity Guarantee Program (TLGP), under which it provides guarantees of noninterest-bearing transaction deposits and se-

5. The appendix to the Federal Reserve's February 2009 *Monetary Policy Report to the Congress* contains a description of the Federal Reserve initiatives to address the financial strains. See Board of Governors of the Federal Reserve System (2009), "Appendix: Federal Reserve Initiatives to Address Financial Strains," in *Monetary Policy Report to the Congress* (Washington: Board of Governors, February 24), www.federalreserve.gov/monetarypolicy/files/20090224_mprfullreport.pdf.

6. The Money Market Investor Funding Facility (MMIFF) was also created in October 2008. Under the MMIFF, the Federal Reserve will provide senior secured funding to a series of special purpose vehicles to facilitate an industry-supported private-sector initiative to finance the purchase of eligible assets from eligible investors. As of year-end 2008, the facility had not been used.

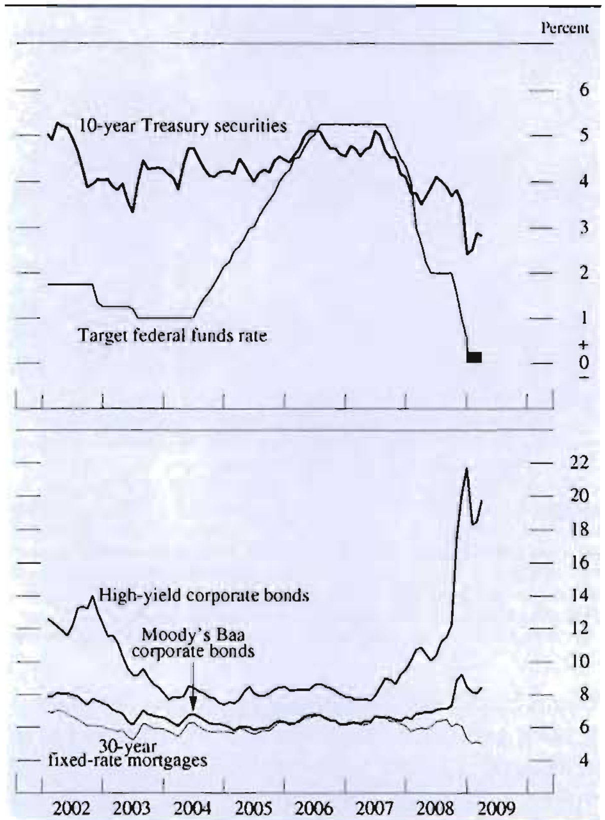
7. The Term Asset-Backed Securities Loan Facility has been authorized through December 31, 2009. Other Federal Reserve liquidity facilities, such as the TAF, do not have a fixed expiration date.

lected newly issued senior unsecured obligations of participating banks.[8] Shortly thereafter, the Treasury established the voluntary Capital Purchase Program (CPP), under which it has used TARP funds to inject about $200 billion of capital into U.S. banking organizations. In November, the U.S. government entered into an agreement with Citigroup, Inc., which provided the company—in exchange for preferred stock—with protection against the possibility of unusually large losses on an asset pool of loans and securities backed by residential and commercial real estate and other such assets. The Treasury provided another $20 billion of TARP capital to Citigroup as part of the same transaction.

Economic activity, the growth of which had slowed noticeably, on average, over the first three quarters of the year, contracted significantly in the final quarter of 2008, with nearly all major sectors of the economy registering steep declines in activity. At the same time, inflation pressures diminished appreciably as the margin of resource slack in the economy widened and commodity prices dropped considerably. In view of the implications of the substantial reduction in credit availability and the continuing deterioration in the economic outlook, the Federal Open Market Committee (FOMC) reduced the target federal funds rate from 4¼ percent at the end of 2007 to a range of 0 to ¼ percent by the end of 2008 (figure 3). Moreover, at its December 2008 meeting, the FOMC indicated that economic conditions were likely to warrant exceptionally low levels of the federal funds rate for some time.

With monetary policy easing, the economy slowing, and inflation pressures abating, most interest rates moved lower over 2008. Money market rates generally followed the federal funds rate lower, though widened risk spreads in the Eurodollar and commercial paper markets muted the decline somewhat. Yields on Treasury coupon securities declined substantially, particularly late in the year, pressed lower, in part, by speculation that the Federal Reserve might begin purchasing large quantities of longer-maturity Treasury securities. Interest rates on adjustable- and fixed-rate mortgages, while volatile, moved mostly sideways for the better part of 2008. However, rates on 30-year fixed-rate conforming

3. Selected interest rates, 2002–09



NOTE: The data are monthly and extend through March 2009. On December 16, 2008, the Federal Open Market Committee established a target range for the federal funds rate of 0 to ¼ percent. The black rectangle represents this range.

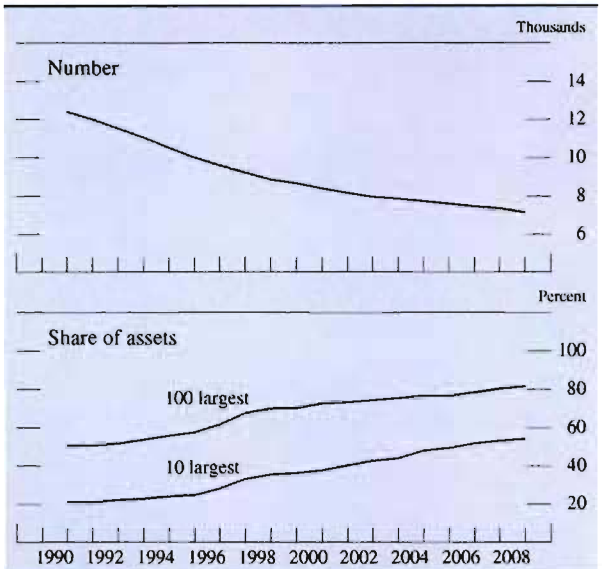
SOURCE: For Treasury securities, mortgages, and Moody's corporate bonds, Federal Reserve Board, Statistical Release H.15, "Selected Interest Rates" (www.federalreserve.gov/releases/h15); for federal funds, Federal Reserve Board (www.federalreserve.gov/fomc/fundsrate.htm); for high-yield corporate bonds, Merrill Lynch Master II index.

mortgages fell about 100 basis points, on net, after the November 25, 2008, announcement of the Federal Reserve's program to purchase mortgage-backed securities (MBS) backed by the housing-related GSEs and Ginnie Mae. However, the spread between the rates for nonconforming jumbo fixed-rate loans and those for conforming mortgages widened further. As conditions in financial markets deteriorated in September and October, credit spreads on investment-grade and high-yield corporate bonds, measured relative to yields on comparable-maturity Treasury securities, surged from already elevated levels.

The combination of financial turmoil and the downturn in economic activity exerted pressure on both sides of banks' balance sheets as institutions became more cautious in the extension of credit, saw losses deplete capital, and relied less on market sources of funding. In addition, the asset, liability, and capital positions of banks were materially affected by the

8. The FDIC's establishment of the TLGP was preceded by a determination of systemic risk by the Secretary of the Treasury (after consultation with the President) following receipt of the written recommendation of the FDIC Board, along with a similar written recommendation of the Board of Governors of the Federal Reserve System. See Federal Deposit Insurance Corporation (2009), "Temporary Liquidity Guarantee Program," resource for bank officers and directors, www.fdic.gov/regulations/resources/tlgp/index.html.

4. Number of banks, and share of assets at the largest banks, 1990–2008



NOTE: The data are as of year-end. For the definition of bank size, see the general note on the first page of the main text.

policy actions taken by public authorities in response to the rapidly evolving financial and economic landscape. Total bank assets expanded about 10 percent in 2008, owing, in part, to the absorption of assets from nonbank financial firms; after taking into account a few of the largest structure events that occurred during the year, the expansion of total bank assets was only about 6 percent (see box "Adjustments to the Balance Sheet Data for Structure Activity"). The value of loans on the books of banks was essentially flat last year after accounting for major structure events. Residential real estate loans contracted, and other major loan categories, including commercial and industrial (C&I) loans, consumer loans, and commercial real estate (CRE) loans, grew modestly.

The number of new commercial banks chartered in 2008 edged down. Merger activity also slowed last year but still outpaced bank formation. As a result, the number of banks declined further, to about 7,100 at the end of 2008 from about 7,300 at the end of 2007 (figure 4, top panel). The share of assets held by the 10 largest banks increased 1 percentage point over the year, to 54 percent at the end of 2008, and the share of assets held by the top 100 banks rose about 1.5 percentage points, to 82 percent, over the same period (figure 4, bottom panel).

The financial turmoil resulted in the conversion of several large financial companies to BHCs, with at least one subsidiary assuming a commercial bank charter, in part to gain access to more-stable insured deposits. Nonetheless, the formation of new BHCs slowed in 2008 to the lowest rate in the past two decades. Mergers among BHCs, however, rose for the fourth consecutive year, exceeding the rate at which new BHCs were formed. The number of BHCs thus fell to about 5,000 in 2008 (for multitiered BHCs, only the top-tier organization is counted in these figures). The number of financial holding companies declined slightly.[9]

Balance Sheet Developments

Balance sheet developments in 2008 continued to be influenced importantly by the turbulence in the financial markets, which intensified markedly after the bankruptcy of Lehman Brothers in mid-September. Moreover, banks were increasingly affected by the fallout from the slowdown in economic activity that began at the end of 2007 and accelerated late in 2008. In addition, as noted earlier, bank balance sheets were materially affected by the policy actions taken by public authorities in response to the financial and economic challenges. Using funds from the TARP, the Treasury established the CPP, under which the U.S. government bought preferred shares from a large number of eligible banking organizations. The Federal Reserve's expansion of its liquidity facilities for banks, as well as the FDIC's introduction of the TLGP, improved the industry's access to funding. The increase in deposit insurance coverage to $250,000 and the full guarantee of noninterest-bearing deposits supported strong growth in core deposits in the latter part of the year. Depository institutions' holdings of reserve balances increased substantially over the last few months of the year, and the Federal Reserve began to remunerate reserve balances.

Total loans on banks' books increased about 2 percent in 2008 (table 1). However, the growth was due mainly to the substantial structure events that took place during the year, and loans were essentially flat last year after removing the effects of these events. Residential mortgages experienced an outright decline, and growth in several other major loan categories was subdued. In contrast, loans drawn on home equity lines of credit expanded at a solid pace. The sluggish pace of lending reflected a confluence of

9. Statistics on financial holding companies include both domestic BHCs that have elected to become financial holding companies and foreign banking organizations operating in the United States as financial holding companies and subject to the Bank Holding Company Act. For more information, see Board of Governors of the Federal Reserve System (2003), *Report to the Congress on Financial Holding Companies under the Gramm-Leach-Bliley Act* (Washington: Board of Governors, November), www.federalreserve.gov/pubs/reports_other.htm.

Adjustments to the Balance Sheet Data for Structure Activity

One consequence of the turmoil in financial markets in 2008 was a steady stream of acquisitions and reorganizations by major financial institutions. Such structure activity may or may not affect the aggregated commercial bank balance sheet data discussed in the main text of this article. In general, consolidation activity that involves only commercial banks would not impact aggregate industry assets. In contrast, consolidation of nonbank assets onto the books of commercial banks would increase the assets, as described in this article, of the commercial banking sector.

Several high-profile structure events involving some of the largest bank holding companies occurred in 2008.[1] For example, in March, JPMorgan Chase & Co. acquired The Bear Stearns Companies, Inc., but as of year-end 2008, that consolidation occurred only at the holding company level and therefore did not directly affect the commercial bank aggregates reported in this article.[2] But in September, JPMorgan Chase acquired the banking operations of Washington Mutual Bank, a thrift institution, causing banking industry assets and liabilities to jump.

In general, the effects of such bank-nonbank structure activity on bank balance sheet data do not reflect net asset creation or elimination. To better capture balance sheet growth in recent quarters that stems from continuing operations, the data shown in table A have been adjusted to remove the effects on the series that have resulted from recent sizable structure events. Specifically, the growth rates of selected balance sheet components given in the table have been adjusted to remove the estimated effects of the following five major structure events that involved bank and nonbank organizations:[3]

- Goldman Sachs Group, Inc., reorganized some of its subsidiaries and consolidated a portion of its assets in a commercial bank subsidiary on November 29, 2008, boosting industry assets by about $125 billion.
- JPMorgan Chase acquired nearly all of Washington Mutual Bank's assets and liabilities on September 26, 2008, boosting industry assets by about $270 billion.
- Wachovia Corporation acquired some assets and liabilities of World Savings Bank, F.S.B., on October 12, 2007, boosting industry assets by about $80 billion.

1. In publishing its H.8 statistical release, "Assets and Liabilities of Commercial Banks in the United States," each week, the Federal Reserve describes nonbank structure activity that affects bank assets by $5.0 billion or more. For a list of such activity dating to December 16, 2005, see the "Notes on the Data" link on the release's webpage (www.federalreserve.gov/releases/h8/h8notes.htm). In addition, information about structure activity involving any banking organization is available in the Federal Financial Institutions Examination Council's central repository of data, the National Information Center (www.ffiec.gov/nicpubweb/nicweb/nichome.aspx).

2. Bank of America Corporation announced its intention to purchase Merrill Lynch & Co., Inc., in September, but the acquisition did not become effective until January 1, 2009.

3. The structure-adjusted growth rates shown in the table were generally based on the difference between the end-of-period reported data and the beginning-of-period data adjusted for the structure event. To adjust for Citibank, N.A., in 2006:Q4, Wachovia Corporation in 2007:Q4, and JPMorgan Chase in 2008:Q3, the beginning-of-period values were determined by adding the value of the assets of the acquired thrift(s) to the reported data for the previous quarter. To adjust for Countrywide's charter conversion in 2007:Q1, the beginning-of-period value was determined by subtracting Countrywide's assets from the reported data for the previous quarter. Because of the complexity of the Goldman Sachs reorganization and the lack of regulatory data for the quarter before the firm's conversion to a bank holding company, all commercial bank assets of Goldman Sachs were subtracted from the data for both 2008:Q3 and 2008:Q4.

both supply and demand factors. Throughout the year, banks reported in the Federal Reserve's Senior Loan Officer Opinion Survey on Bank Lending Practices (SLOOS) that they had continued to tighten credit standards and terms on loans in all major categories. Indeed, the fractions of banks tightening lending standards neared or surpassed historical highs for all major loan categories. Moreover, banks reportedly reduced or canceled lines of credit to both businesses and households, and unused commitments to fund loans contracted, particularly in the fourth quarter. At the same time, considerable fractions of banks reported a broad reduction in demand for loans, especially late in the year.

The expansion of the Federal Reserve's balance sheet resulting from the expansion and establishment of various liquidity and credit facilities by the Federal Reserve was consistent with a substantial increase in the excess reserve balances held by banks in the second half of 2008. Indeed, roughly 75 percent of the structure-adjusted growth in banks' balance sheets last year was accounted for by the surge in their reserve balances.

On the liability side of the balance sheet, core deposits expanded as a share of bank funding for the first time in years. In contrast, managed liabilities, which had been an important source of funds in the latter part of 2007, when assets unexpectedly came onto banks' balance sheets, grew only moderately last year. For example, banks' borrowing from the Federal Home Loan Bank (FHLB) system grew just 3 percent, on net, after adjusting for a money center

- Countrywide Bank converted to a thrift charter on March 12, 2007, reducing industry assets by about $90 billion.
- Citibank, N.A., consolidated two related federal savings banks onto its books on October 1, 2006, boosting industry assets by about $200 billion.

These events resulted in the net addition of more than $580 billion of nonbank assets to commercial banks' balance sheets over the nine quarters ending in the fourth quarter of 2008. As a consequence, the adjusted growth rates shown in the table are generally lower than the unadjusted growth rates shown in table 1 of the main text. The adjustments are particularly important for the second half of 2008. Notably, after accounting for JPMorgan Chase's acquisition of Washington Mutual Bank, the growth of residential real estate loans in the third quarter was markedly lower, more clearly reflecting the contraction in most residential real estate markets over that period. Overall, the adjusted data on growth in total loans show that, after abstracting for major structure events, bank lending stepped down noticeably over the second half of 2008, along with the pace of economic activity.

A. Structure-adjusted change in selected balance sheet items, all U.S. banks, 2006–08

Percent, annual rate

Balance sheet category	2006	2007				2008				2007	2008
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Assets	7.31	5.43	11.01	14.76	9.67	11.43	−2.45	11.12	4.05	10.60	6.13
Loans and leases (gross)	7.55	4.38	12.81	14.20	8.36	2.35	.86	1.23	−6.00	10.29	−.40
Commercial and industrial	10.06	11.04	16.73	30.83	17.26	8.85	1.41	7.34	−4.57	20.29	3.26
Consumer	18.11	−7.64	15.25	19.69	18.08	−2.22	7.74	6.00	.77	11.67	3.09
One- to four-family residential	4.70	8.04	10.37	3.63	−5.62	−3.93	−8.60	−7.52	−3.73	4.12	−5.82
Commercial real estate loans[1]	11.96	6.14	9.76	9.22	9.49	5.05	5.32	4.62	.80	8.93	4.00
Other loans and leases	7.15	2.30	11.82	11.96	12.77	5.90	5.84	11.41	−11.62	10.05	2.82
Securities	8.08	11.81	1.87	4.66	2.76	7.14	−3.76	8.54	−16.83	5.36	−1.35
Mortgage-backed securities	7.36	7.83	−2.58	−7.58	5.36	19.25	15.52	−13.10	15.49	.71	9.39
Liabilities	7.06	5.28	11.85	14.24	9.97	12.14	−2.63	13.08	5.22	10.73	7.08
Capital account	9.48	6.69	3.69	19.40	7.06	5.19	−.90	−4.89	−6.85	9.49	−1.88
MEMO											
Unused loan commitments	9.55	11.67	10.04	13.79	1.19	−3.02	−4.36	−12.55	−33.98	9.46	−12.99
Federal Home Loan Bank advances	1.53	22.09	10.09	92.30	.38	15.53	8.02	52.85	−56.15	33.27	3.13

NOTE: Data are from period-end to period-end and are as of April 16, 2009, for commercial banks and as of February 23, 2009, for thrift institutions. For the definition of structure-adjusted change, see the box text; for an explanation of the adjustment calculation, see note 3 of the box text.

1. Measured as the sum of construction and land development loans secured by real estate; real estate loans secured by nonfarm nonresidential properties or by multifamily residential properties; and loans to finance commercial real estate, construction, and land development activities not secured by real estate.

SOURCE: Federal Financial Institutions Examination Council, Consolidated Reports of Condition and Income (Call Report) for commercial banks; Office of Thrift Supervision, Thrift Financial Reports for thrifts; staff calculations.

bank's assumption of the advances of a large failed thrift.[10] As judged by regulatory standards, a large majority of banks remained well capitalized at year-end 2008, partly reflecting sizable common equity transfers from their parent bank holding companies in the fourth quarter, as the holding companies downstreamed capital received under the CPP.[11]

Loans to Businesses

C&I loans expanded around 3.5 percent during 2008—the lowest rate since 2003 and well below the 20 percent increase recorded in 2007. The growth in C&I loans was not materially affected by the significant structure activity during the year. According to the SLOOS, the deceleration in such loans can be explained, in part, by businesses' reduced demand to

10. The FHLBs were established in 1932 as GSEs chartered to provide a low-cost source of funds, primarily for mortgage lending. They are cooperatively owned by their member financial institutions, a group that originally was limited to savings and loan associations, savings banks, and insurance companies. Commercial banks were first able to join FHLBs in 1989, and since then FHLB advances have become a significant source of funding for them, particularly for medium-sized and small banks. The FHLBs are cooperatives, and the purchase of stock is required in order to borrow.

11. The reported regulatory capital ratios are consistent with a "well capitalized" designation under prompt corrective action standards enacted with the Federal Deposit Insurance Corporation Improvement Act of 1991.

1. Change in balance sheet items, all U.S. banks, 1999–2008

Percent

Item	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	MEMO Dec. 2008 (billions of dollars)
Assets	5.44	8.76	5.11	7.19	7.18	10.78	7.73	12.36	10.81	10.24	12,212
Interest-earning assets	5.87	8.66	3.96	7.53	7.27	11.29	7.97	12.45	10.11	8.59	10,389
Loans and leases (net)	8.10	9.24	1.82	5.90	6.51	11.21	10.39	11.97	10.57	2.23	6,617
Commercial and industrial	7.88	8.54	−6.73	−7.41	−4.56	4.35	12.53	11.81	20.27	3.49	1,408
Real estate	12.22	10.74	7.94	14.44	9.75	15.41	13.80	14.94	7.04	4.49	3,797
Booked in domestic offices	12.36	11.02	8.02	14.85	9.66	15.09	13.93	15.05	6.77	4.76	3,735
One- to four-family residential	9.70	9.28	5.70	19.86	10.01	15.75	11.95	15.11	5.53	3.08	2,056
Other real estate	16.06	13.31	10.95	8.81	9.19	14.20	16.61	14.96	8.39	6.89	1,678
Booked in foreign offices	6.28	−1.62	3.97	−7.41	15.74	35.59	7.19	8.79	22.76	−9.31	63
Consumer	−1.48	8.04	4.16	6.55	9.31	10.16	2.30	6.19	11.67	4.22	988
Other loans and leases	7.17	7.01	−2.02	−.03	8.31	3.57	−.18	3.17	13.01	−6.26	581
Loan loss reserves and unearned income	2.37	7.98	13.15	5.73	−2.68	−4.19	−5.75	1.63	27.97	75.00	158
Securities	5.11	6.36	7.22	16.20	9.44	10.58	2.40	11.53	4.54	.60	2,208
Investment account	6.68	2.85	8.88	13.53	8.70	6.15	1.19	6.94	−4.42	10.08	1,719
U.S. Treasury	−1.89	−32.72	−40.27	41.92	14.14	−15.87	−17.59	−19.30	−26.93	7.96	32
U.S. government agency and corporation obligations	1.83	3.75	12.84	18.09	9.68	9.46	−1.83	4.71	−12.15	14.81	1,025
Other	20.90	13.39	12.18	2.72	5.98	3.02	10.12	13.78	10.75	3.57	662
Trading account	−6.93	37.16	−3.72	36.12	14.01	36.81	7.96	31.32	35.98	−22.78	489
Other	−8.37	10.30	13.09	−2.93	6.76	14.25	5.81	19.31	22.35	73.68	1,565
Noninterest-earning assets	2.64	9.45	12.74	5.11	6.64	7.61	6.19	11.79	15.42	20.75	1,823
Liabilities	5.58	8.59	4.45	7.13	7.24	9.56	7.74	12.10	10.79	11.28	11,063
Core deposits	.23	7.53	10.55	7.58	7.29	8.25	6.40	5.84	5.49	14.47	5,405
Transaction deposits	−8.97	−1.31	10.20	−5.12	2.82	3.20	−1.18	−4.28	−1.22	20.51	838
Savings deposits (including MMDAs)	6.68	12.51	20.68	18.46	13.71	11.72	6.93	5.53	3.34	10.03	3,295
Small time deposits	−.76	7.20	−7.23	−4.92	−6.79	1.58	12.88	16.97	18.03	23.29	1,272
Managed liabilities[1]	15.54	8.79	−2.73	5.34	6.96	12.06	12.24	19.45	16.57	6.49	4,845
Large time deposits	14.19	19.37	−3.65	5.05	1.42	21.86	22.88	15.94	1.90	4.75	1,072
Deposits booked in foreign offices	14.60	7.84	−10.96	4.49	12.63	16.84	6.32	29.67	25.86	2.46	1,539
Subordinated notes and debentures	5.07	13.98	9.56	−.59	5.08	10.49	11.41	22.60	16.83	4.60	182
Gross federal funds purchased and RPs	1.56	6.49	5.72	12.75	−8.70	8.40	15.62	9.47	7.06	5.76	786
Other managed liabilities	35.27	1.80	−.28	.97	22.00	1.37	6.15	18.89	28.44	14.38	1,265
Revaluation losses held in trading accounts	−13.20	7.47	−17.06	33.44	14.03	−12.61	−17.86	6.89	42.66	88.60	388
Other	−1.26	20.61	14.90	5.23	5.28	17.19	−1.60	22.33	3.21	−8.45	425
Capital account	3.89	10.65	12.29	7.84	6.61	23.14	7.59	14.69	10.94	1.15	1,149
MEMO											
Commercial real estate loans[2]	15.42	12.16	13.10	6.82	8.99	13.93	16.87	14.91	9.20	6.77	1,684
Mortgage-backed securities	−3.34	3.29	29.05	15.54	10.12	13.45	2.06	10.22	−1.24	11.37	1,069
Federal Home Loan Bank advances	n.a.	n.a.	n.a.	17.21	3.71	3.73	10.00	29.80	30.62	15.60	526

NOTE: Data are from year-end to year-end and are as of April 16, 2009.

1. Measured as the sum of large time deposits in domestic offices, deposits booked in foreign offices, subordinated notes and debentures, federal funds purchased and securities sold under repurchase agreements, Federal Home Loan Bank advances, and other borrowed money.

2. Measured as the sum of construction and land development loans secured by real estate; real estate loans secured by nonfarm nonresidential properties or by multifamily residential properties; and loans to finance commercial real estate, construction, and land development activities not secured by real estate.

n.a. Not available.

MMDA Money market deposit account.

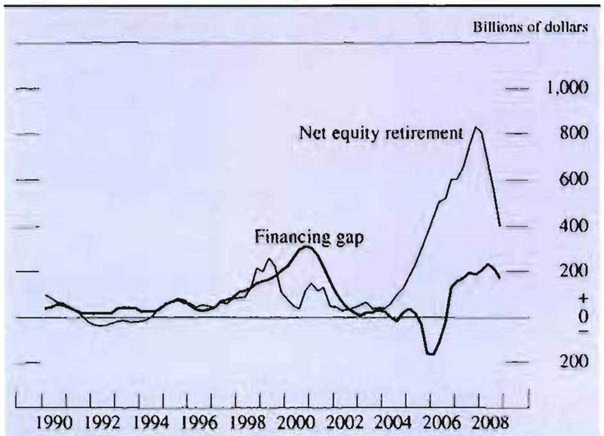
RP Repurchase agreement.

finance inventory accumulation and fixed investment. The financing gap—the difference between capital expenditures and internally generated funds—at nonfinancial corporations declined in the second half of 2008 (figure 5). Moreover, the slowdown in the pace of merger and acquisition activity contributed to a substantial drop in net equity retirement over the course of 2008, which also reportedly played a role in the decreased demand for C&I loans, as repurchases of equity are frequently financed with bank loans, at least initially.

C&I loan growth differed markedly by bank-size group last year. At the top 100 banks, C&I loans expanded only a little more than 2 percent, while C&I loans at banks outside the top 100 grew about 10 percent. The slower growth in C&I lending at larger banks was attributable not only to the domestic factors mentioned earlier but also to international ones. In particular, the restructuring of foreign operations by one large bank contributed to an 11 percent drop in C&I loans booked to non-U.S. addressees.

For the industry as a whole, C&I loans expanded over the first three quarters of the year and then contracted in the fourth quarter. Early in the year, strains in the syndicated loan market likely forced banks to hold loans on their balance sheets that had been intended for sale to market investors. After the severe financial market disruptions in the fall, some nonfinancial companies drew heavily on committed lines of credit with banks, which caused the growth of

5. Financing gap and net equity retirement at nonfarm nonfinancial corporations, 1990–2008

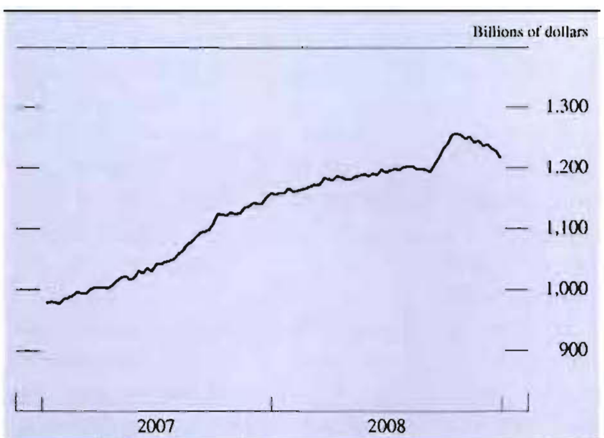


NOTE: The data are four-quarter moving averages. The financing gap is the difference between capital expenditures and internally generated funds. Net equity retirement consists of funds used to repurchase equity less funds raised in equity markets.
SOURCE: Federal Reserve Board, Statistical Release Z.1, "Flow of Funds Accounts of the United States," table F.102 (www.federalreserve.gov/releases/z1).

C&I loans to spike in September and October (figure 6). In fact, according to a special question on the October 2008 SLOOS, nearly 45 percent of banks, on net, reported an increase in the dollar amount of C&I loans drawn under preexisting commitments over the previous three months. Nevertheless, despite the unanticipated demand at times over the year, SLOOS respondents indicated weaker demand for C&I loans, on net, throughout 2008, especially in the fourth quarter (figure 7, top panel).

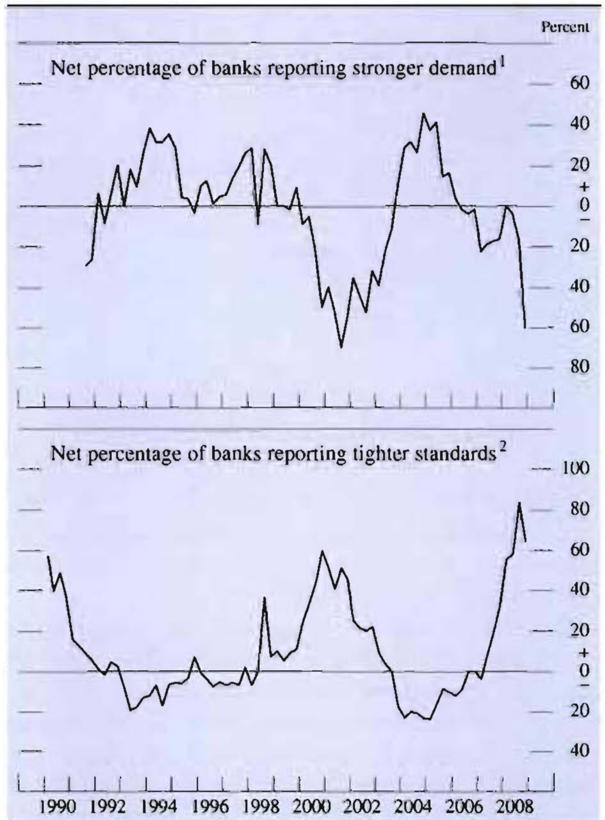
Each quarter last year, considerable numbers of banks indicated in the SLOOS that they had further

6. Commercial and industrial loans at domestically chartered commercial banks, 2007–08



NOTE: The data are weekly and seasonally adjusted.
SOURCE: Federal Reserve Board, Statistical Release H.8, "Assets and Liabilities of Commercial Banks in the United States" (www.federalreserve.gov/releases/h8).

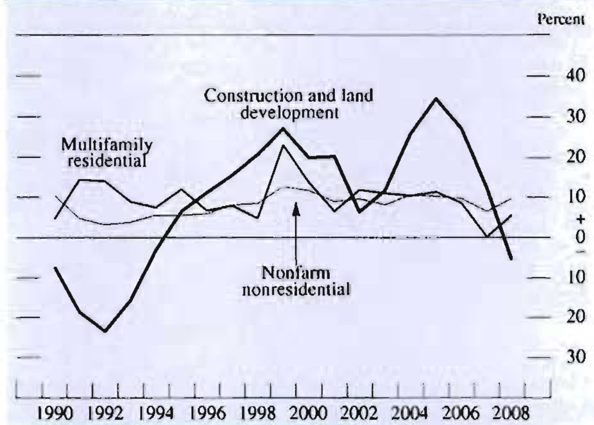
7. Changes in demand and supply conditions at selected banks for commercial and industrial loans to large and middle-market firms, 1990–2008



NOTE: The data are drawn from a survey generally conducted four times per year; the last observation is from the January 2009 survey, which covers 2008:Q4. Net percentage is the percentage of banks reporting an increase in demand or a tightening of standards less, in each case, the percentage reporting the opposite. The definition for firm size suggested for, and generally used by, survey respondents is that large and middle-market firms have annual sales of $50 million or more.
1. Series begins with the November 1991 survey.
2. Series begins with the May 1990 survey.
SOURCE: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices (www.federalreserve.gov/boarddocs/snloansurvey).

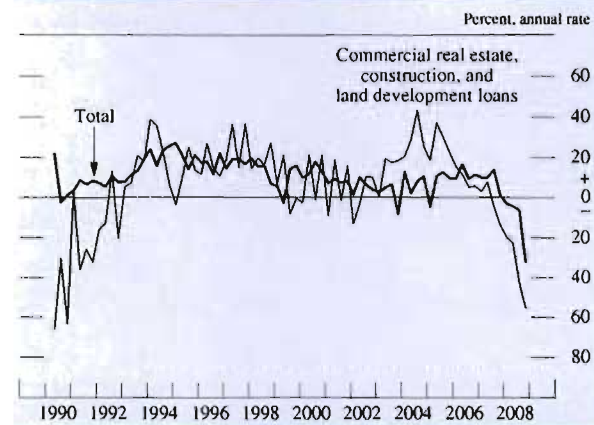
tightened their credit policies for C&I loans (figure 7, bottom panel). Significant majorities reported tightening credit standards; at the same time, many banks reported that they had increased spreads of C&I loan rates over their cost of funds, were charging higher premiums on riskier loans, and had increased the costs of credit lines to nonfinancial firms. In addition, substantial fractions of SLOOS respondents indicated having tightened nonprice terms on C&I loans, which involved, for example, reducing the maximum size, shortening the maturity, and strengthening the covenants associated with loans or credit lines. By late in the year, nearly all of the respondent banks were reporting that the move to a more stringent lending posture importantly reflected a less favorable or a more uncertain economic outlook, and large fractions

8. Change in commercial real estate loans, by major components, 1990–2008



NOTE: The data are annual and adjusted for major structure events.

9. Change in unused bank loan commitments to businesses and households, 1990–2008



NOTE: The data, which are quarterly, begin in 1990:Q2 and are not seasonally adjusted. The total consists of unused commitments relating to credit card lines; revolving, open-end lines secured by one- to four-family residential properties; commercial real estate, construction, and land development loans; securities underwriting; and "other."

of banks pointed to their reduced tolerance for risk. Large fractions also noted concerns about the capital position of their own bank as a reason for tightening standards and terms on C&I loans.

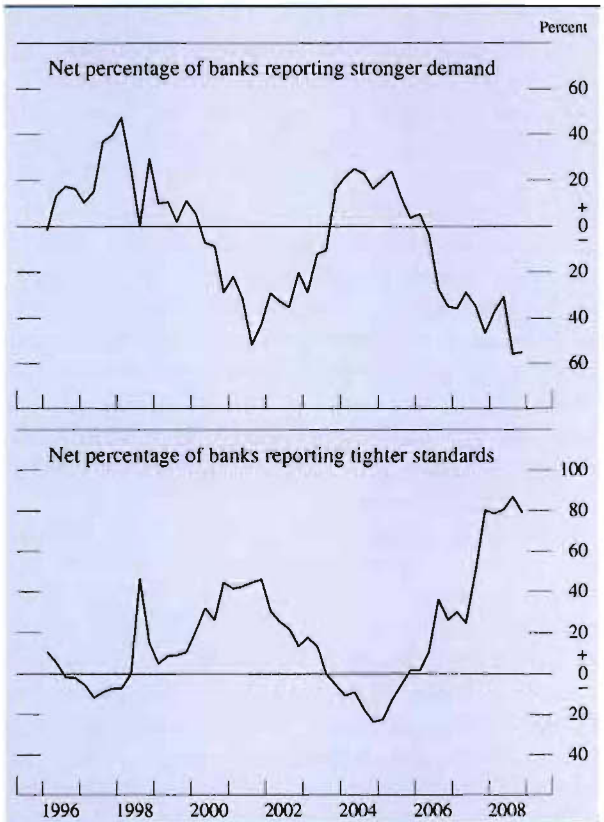
The Federal Reserve's quarterly Survey of Terms of Business Lending also showed a tightening of terms for C&I loans last year. The spread of C&I loan rates over Eurodollar and swap yields of comparable maturity increased for all loan sizes and all bank-size groups surveyed last year. The survey results also indicated a greater reluctance to lend to new customers, as the share of loans originated under previous commitment increased to the top of its historical range. In addition, spreads on loans not made under commitment, which generally reflect the most recent loan pricing, increased sharply late in the year.

CRE loans grew about 7 percent last year, down a couple of percentage points from 2007 and the slowest rate since 2004. After adjusting for the major structure events, CRE loans grew just 4 percent for the year, with the rate of expansion tailing off to near zero in the fourth quarter. Loans secured by nonfarm nonresidential properties, which account for about 60 percent of all CRE loans, expanded about 10 percent in 2008 (figure 8). Growth in this CRE component was supported by a 15 percent expansion in loans backed by owner-occupied property, which often function as C&I loans with real estate collateral pledged.[12] Construction and land development loans, which account for about one-third of all CRE loans, contracted 5 percent in 2008, with the decline accelerating over the course of the year. Commercial construction loans associated with one- to four-family residential projects dropped particularly sharply in the second half of 2008. Banks' unused commitments to fund construction of both commercial and residential properties fell about 30 percent for the year as a whole (figure 9). The growth of CRE loans has been slowing since 2006, a trend reflecting both moderation in demand and reduction in supply. Loan demand was damped last year by a further deterioration in market fundamentals, including falling rents, rising vacancies, and a rapid decline in CRE prices (figure 10, top panel). On the supply side, significant net fractions of respondents reported having tightened CRE lending standards over the past year (figure 10, bottom panel). In addition, in response to special questions on CRE lending in the January 2009 SLOOS, significant net fractions of banks reported having tightened all queried loan policies in 2008. By year-end, CRE loans constituted 13 percent of the assets of all commercial banks. The share of CRE loans relative to all loans at medium-sized and small banks declined marginally but stayed quite high last year (figure 11).

In the second half of 2008, issuance of commercial mortgage-backed securities (CMBS) essentially ceased (figure 12). In a response to a special question, some SLOOS respondents indicated that the shut-

12. Beginning last year, banks report the amount of loans secured by nonfarm nonresidential properties that are backed by owner-occupied property. Such loans account for about one-half of all loans secured by nonfarm nonresidential properties. These loans often function as C&I loans with real estate collateral pledged because, unlike other CRE loans secured by nonfarm nonresidential properties that are underwritten based on the rental or lease income from the properties, loans secured by owner-occupied properties are underwritten based on the future business revenues of the property's owner.

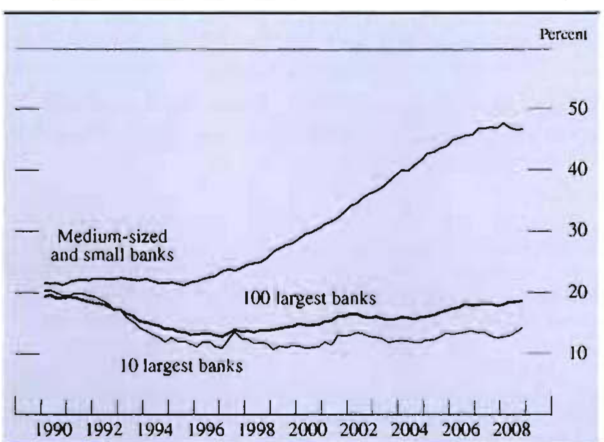
10. Changes in demand and supply conditions at selected banks for commercial real estate loans, 1996–2008



Note: See figure 7, general note and source note.

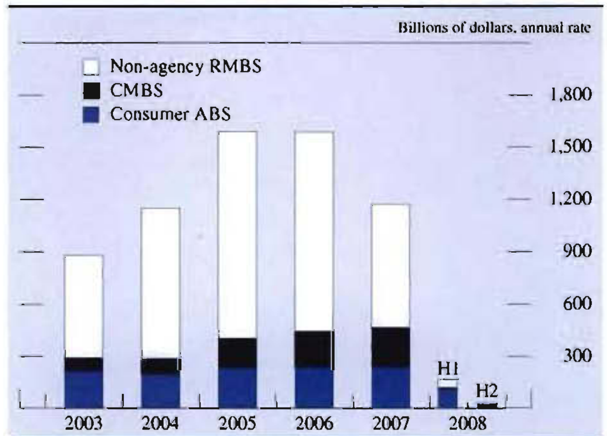
down of that market had led to an increased volume of CRE loans on their books in the latter part of the year. With the CMBS market impaired, banks reportedly faced less competition for higher-quality, longer-term CRE debt, and, in other cases, banks likely extended or refinanced maturing CRE loans that borrowers were unable to refinance in the CMBS market.

11. Commercial real estate loans as a share of all loans, by bank size, 1990–2008



Note: The data are quarterly. For the definition of bank size, see the general note on the first page of the main text.

12. Gross issuance of selected mortgage- and asset-backed securities, 2003–08



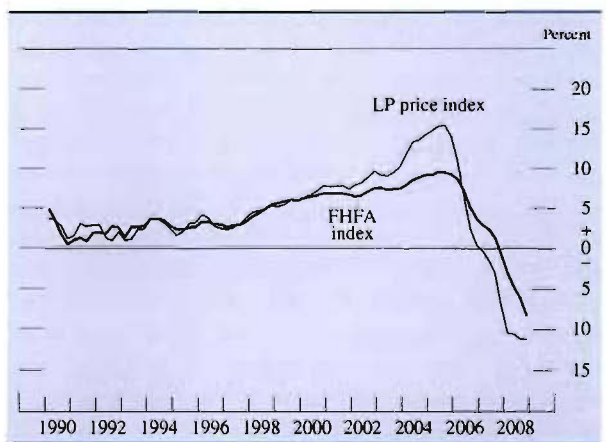
Note: The data are monthly. Non-agency RMBS are residential mortgage-backed securities issued by institutions other than Fannie Mae, Freddie Mac, and Ginnie Mae; CMBS are commercial mortgage-backed securities; and consumer ABS (asset-backed securities) are securities backed by credit card loans, nonrevolving consumer loans, and auto loans.

Source: For RMBS and ABS, *Inside MBS & ABS* and Merrill Lynch; for CMBS, Commercial Mortgage Alert.

Loans to Households

The continuing deterioration in housing market activity and the outright declines in home prices substantially affected bank lending to households last year (figure 13). Overall, the value of loans backed by one- to four-family residential properties held by commer-

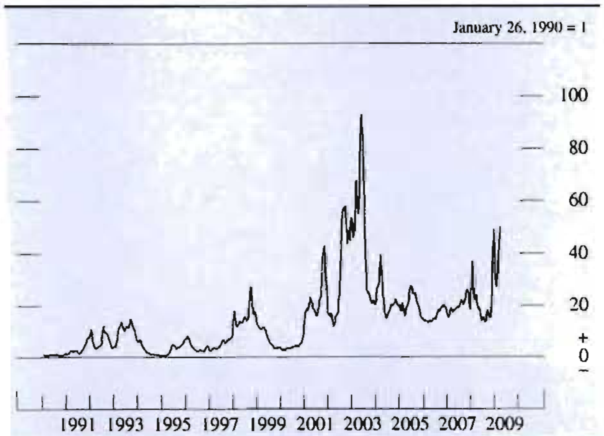
13. Change in prices of existing single-family homes, 1990–2008



Note: The data are quarterly and extend through 2008:Q4; changes are from one year earlier. The LP price index includes purchase transactions only. For 1990, the FHFA index (formerly calculated by the Office of Federal Housing Enterprise Oversight) includes appraisals associated with mortgage refinancings; beginning in 1991, it includes purchase transactions only.

Source: For LP, LoanPerformance, a division of First American CoreLogic; for FHFA, Federal Housing Finance Agency.

14. Level of refinancings of residential mortgages, 1990–2009



NOTE: The data, which are weekly and extend through April 17, 2009, are four-week moving averages. Residential mortgages include both first and second liens secured by one- to four-family residential properties.

SOURCE: Mortgage Bankers Association.

cial banks grew just 3 percent. However, after adjusting for major structure events, residential real estate loans held by banks, which had grown every year since at least the 1980s, posted an outright decline of about 6 percent for the year. More broadly, according to data from the Federal Reserve's Z.1 statistical release ("Flow of Funds Accounts of the United States"), household mortgage debt from all sources declined last year for the first time since data were recorded in the flow of funds beginning in 1945.

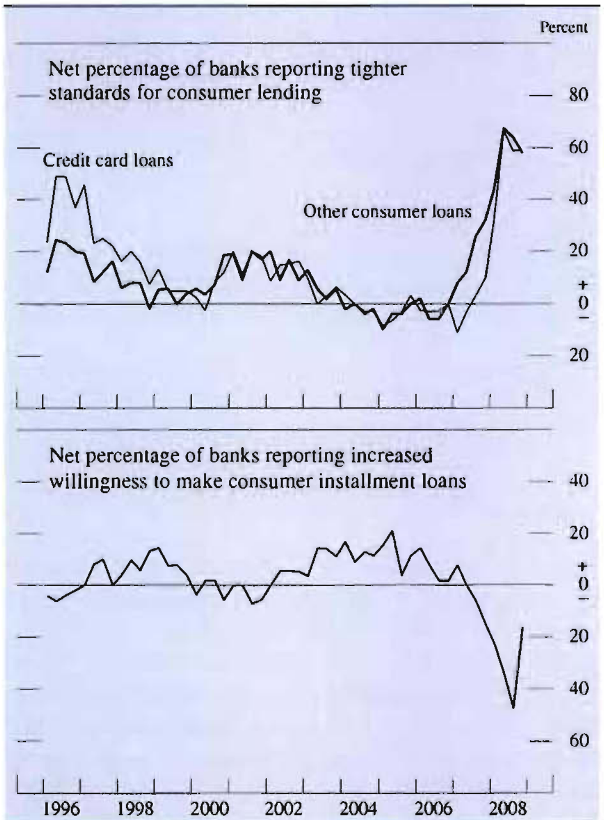
Survey evidence indicates that the decline in residential real estate lending last year stemmed from both tighter credit standards and weaker demand. Substantial fractions of SLOOS respondents reported tighter credit standards on such loans throughout 2008. Not surprisingly, the tightening of credit standards tended to be more pronounced for nontraditional and subprime mortgage products than for prime mortgage products. Indeed, only a few banks reported that they had originated subprime loans during the year. The fraction of banks reporting tighter credit standards on prime mortgages spiked to a record high of 75 percent in the July 2008 survey, and the fractions that so reported remained high in the October 2008 and January 2009 surveys. In addition, SLOOS respondents indicated further weakening in demand for residential mortgages each quarter last year, though to a lesser extent in the final quarter of the year. Refinancing activity picked up at the end of last year as households—specifically, those that were not constrained by deteriorating credit scores or increasing loan-to-value ratios—took advantage of the decline in mortgage rates late in the year (figure 14).

In contrast, loans drawn under revolving home equity lines of credit grew a solid 10 percent in 2008—the largest increase since 2004—even after adjusting for major structure events that took place last year. As households' access to other types of credit became tighter and "cash out" refinancing in many instances was no longer feasible, households probably drew on existing lines of credit. Moreover, because these loans usually carry variable interest rates, declining interest rates over the year likely spurred demand. On the supply side, banks sought to limit their exposure to home equity lines by canceling, suspending, or reducing such lines of credit, likely because of borrower financial difficulties and falling house prices that eliminated part or all of the collateral used to secure the loans.[13] In fact, unused commitments secured by residential housing dropped an unprecedented 10 percent last year after adjusting for major structure events.

Amid deteriorating credit quality, waning demand for consumer durables, and disruptions in the securitization markets, consumer loans on banks' books expanded modestly in 2008. Credit card loans, which at year-end accounted for about 40 percent of the value of consumer loans on banks' books, increased 5 percent, whereas other consumer loans grew less than 2 percent, down from 13 percent in 2007 (all adjusted for major structure events). According to the SLOOS, banks further tightened standards on consumer loans each quarter last year (figure 15, top panel). Particularly in the second half of the year, banks cut unused commitments for credit cards significantly as the unemployment rate climbed and disruptions in funding markets intensified. In addition, sizable net fractions of banks responding to the SLOOS reported having lowered credit limits on existing credit card accounts to both prime and nonprime borrowers, citing the less favorable economic outlook, reduced tolerance for risk, and declines in customer credit scores as important reasons for their moves. Moreover, banks generally reported weak demand for consumer loans. The net fraction of banks reporting an increased willingness to make consumer

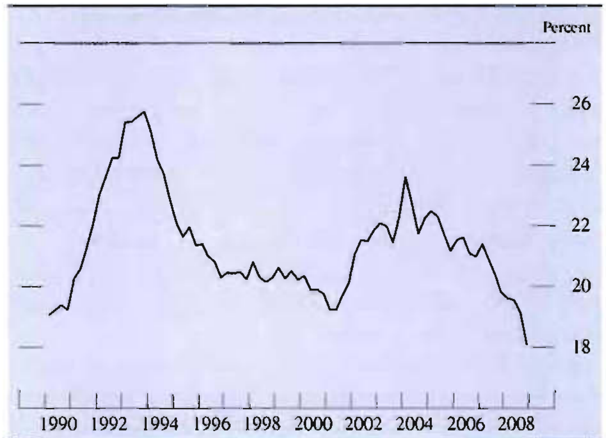
13. In June 2008, the FDIC issued supervisory guidance reminding institutions that although reducing or suspending home equity lines of credit may be an appropriate way to manage credit risk, certain legal requirements, in place to protect the borrowers, had to be followed. Specifically, the FDIC urged the institutions to work with borrowers to minimize hardships that may result from reductions or suspensions of credit lines. More information is in Federal Deposit Insurance Corporation (2008), "Consumer Protection and Risk Management Considerations When Reducing or Suspending Home Equity Lines of Credit and Suggested Best Practices for Working with Borrowers," financial institution letter, June 26, www.fdic.gov/news/news/financial/2008/fil08058a.html.

15. Changes in supply conditions at selected banks for consumer lending and for consumer installment loans, 1996–2008



NOTE: See figure 7, general note and source note.

16. Bank holdings of securities as a proportion of total bank assets, 1990–2008



NOTE: The data are quarterly.

installment loans in the October 2008 survey fell to its lowest level since at least 1990; banks continued to report decreased willingness to make such loans, on net, in the January 2009 survey (figure 15, bottom panel). The broad pullback in consumer credit also likely reflected, in part, difficulties in the market for asset-backed securities (ABS), which had typically funded a considerable fraction of consumer credit. In the second half of 2008, ABS issuance virtually ceased.

Reserve Balances

In response to widespread financial market strains that emerged in August 2007, the Federal Reserve established several new facilities to provide liquidity to banks and other financial institutions and made several important modifications to its existing facilities and operations. Before September 2008, the aggregate supply of reserve balances was not materially affected by the liquidity facilities, as any increases in reserve balances from the payouts of loans were largely offset (sterilized) by redemptions or outright sales of Treasury securities held by the Federal Reserve. But after the bankruptcy of Lehman Brothers, the magnitude of liquidity added to the system through various facilities and special interventions exceeded the Federal Reserve's ability to sterilize increases in reserves with draining operations. However, in December, the FOMC lowered its target for the federal funds rate to a range of 0 to ¼ percent. This low target was consistent with a very high level of banking system reserves. All told, reserve balances due from Federal Reserve Banks increased from about $20 billion at the beginning of 2008 to around $520 billion at year-end.[14]

Securities

Overall holdings of securities by banks were almost flat last year, growing a mere 0.6 percent, the slowest rate in more than a decade. Securities holdings were only marginally affected by the major structure events described earlier. As a proportion of total assets, banks' holdings of securities declined to 18 percent at the end of 2008 (figure 16). However, the aggregate numbers conceal developments in the underlying investment and trading accounts. Holdings of securities in banks' investment accounts grew 10 percent last year, whereas the value of the holdings of securities in their trading accounts declined 23 percent, as holdings booked in foreign accounts were roughly halved.

14. Total reserve balances, which include balances of thrift institutions and foreign banks, grew from $33 billion at the beginning of 2008 to $856 billion at year-end (see the Federal Reserve Board's H.4.1 statistical release, "Factors Affecting Reserve Balances of Depository Institutions and Condition Statement of Federal Reserve Banks," www.federalreserve.gov/releases/h41; Wednesday levels).

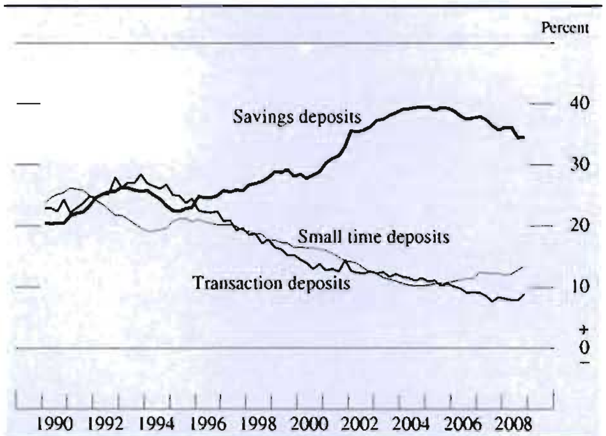
Widespread deterioration in financial market conditions caused the value of banks' securities holdings to decline throughout 2008. The difference between the reported fair value measurements and book values of available-for-sale securities in investment accounts widened significantly. The largest revaluation losses were incurred in non-agency MBS and domestic ABS portfolios, and the largest banks were more adversely affected than other bank-size groups. The 10 largest banks held roughly 45 percent of the available-for-sale securities in investment accounts at the beginning of the year but accounted for two-thirds of the revaluation losses for the year.

In the third quarter of 2008, held-to-maturity securities in investment accounts surged as banks purchased a large amount of high-quality asset-backed commercial paper from money market mutual funds with funding provided by the Federal Reserve's AMLF. On the year, held-to-maturity securities in investment accounts rose more than 60 percent but still accounted for only a very small fraction of banks' total securities holdings at year-end.

Other Loans and Leases

Other loans and leases decreased 8 percent during 2008, the largest drop in more than a decade. The decline in this volatile loan category occurred despite a spike during the financial turmoil in September and October, when unplanned overdrafts by a wide range of customers, including some money market mutual fund complexes, increased markedly and many nonbank financial firms drew down their lines of credit to ensure access to funds. The overall drop in other loans and leases likely reflected a confluence of factors related to the general economic slowdown and continuing distress in the financial markets. Loans to other banks dropped 18 percent at an annual rate, probably reflecting, in part, concerns about the solvency of some institutions and lower demand as a result of the expansion of the Federal Reserve's liquidity facilities. Loans for purchasing or carrying securities also fell with the deterioration in financial market conditions. Leases, which are made primarily to businesses for financing equipment or to households for financing automobiles, declined significantly as well, along with the step-down in capital investment and automobile sales. In contrast, bank lending to state and local governments grew robustly in 2008, perhaps because higher costs of bond issuances and dislocations in municipal bond markets, including markets for auction rate securities and variable-rate demand obligations, strained municipal governments' ability to borrow in capital markets.

17. Selected domestic liabilities at banks as a proportion of their total domestic liabilities, 1990–2008



NOTE: The data are quarterly. Savings deposits include money market deposit accounts.

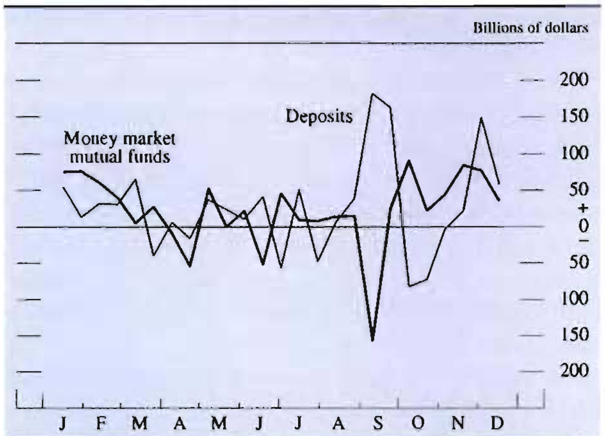
Liabilities

Bank liabilities increased 11 percent in 2008, outpacing the growth in assets by 1 percentage point. Adjusting for major structure events, the annual growth in liabilities was 7 percent. Core deposits grew 11 percent (adjusted) and, for the first time since 2003, increased as a share of bank funding.[15] At year-end, they composed 49 percent of bank liabilities, compared with 47 percent at the end of 2007 (figure 17). Core deposits are traditionally a more important source of funding for smaller institutions than for larger ones. However, in 2008, the growth rate of core deposits at the largest 100 banks outpaced the rate at institutions outside that bank-size category.

All components of core deposits grew during 2008. The majority of the expansion occurred over the second half of the year and was due to a range of factors, including a substantial easing of monetary policy, the continuing and intensifying financial turmoil, increasing economic uncertainty, and regulatory changes. Falling market interest rates reduced the opportunity cost of holding deposits, thereby spurring their growth. Moreover, turbulence in financial markets and economic uncertainty tend to generate demand for liquid and safe assets. In particular, the turmoil created by the bankruptcy of Lehman Brothers and the resulting outflows from the money market mutual fund sector contributed to strong demand for bank deposits in the fall (figure 18). To help maintain consumers' confidence in the banking system, the Emergency Economic Stabilization Act temporarily increased basic FDIC insurance coverage from

15. Core deposits consist of savings deposits, small-denomination time deposits, and transaction deposits.

18. Net flows into money market mutual funds and deposits at commercial banks, 2008



NOTE: The data are aggregated from weekly to biweekly frequency.
SOURCE: For money market mutual funds, iMoneyNet; for deposits, Federal Reserve Board, Statistical Release H.8, "Assets and Liabilities of Commercial Banks in the United States" (www.federalreserve.gov/releases/h8).

$100,000 to $250,000 per depositor in October 2008. In addition, in mid-October, the FDIC announced that the TLGP would provide an unlimited guarantee of deposits held in noninterest-bearing transaction accounts at participating depository institutions.

In line with these developments, savings deposits expanded in the first and fourth quarters of 2008, the periods in which the bulk of the 400 basis point easing in monetary policy occurred. Small time deposits grew briskly over the second half of 2008. After declining for three consecutive years, transaction deposits increased one-fifth in 2008. The growth was particularly strong in the fourth quarter—64 percent at an annual rate—likely driven by the TLGP.

Managed liabilities grew 6.5 percent over the year, the lowest rate in half a decade. With the growth of core deposits outstripping that of assets, banks were able to reduce their reliance on generally more expensive and less stable sources of funds. Moreover, access to and usage of the Federal Reserve's discount window and TAF further reduced the banks' need for market-sensitive funding options. In contrast to their experience over the two previous years, banks did not rely on deposits booked in foreign offices to fund asset growth for the year as a whole.

After the financial crisis began in the summer of 2007, the FHLB system became an increasingly important source of funding for banks because the FHLBs were able to lend against mortgages accumulated on banks' balance sheets. Heightened uncertainty led investors to put a higher premium on the perceived implicit government guarantee of FHLB debt, which, in turn, allowed the FHLBs to offer attractive rates to their members. As a result, FHLB advances extended to banks grew (after adjusting for the resolution of Washington Mutual Bank, under which JPMorgan Chase assumed the failing financial institution's advances) an average of 25 percent at an annual rate during the first three quarters of 2008, only to reverse most of the increase in the fourth quarter. All told, such advances ended the year up 3 percent (adjusted). The slowdown late in the year likely reflected, in part, the introduction of the TLGP, which provided an FDIC guarantee for some newly issued senior debt of banking organizations.

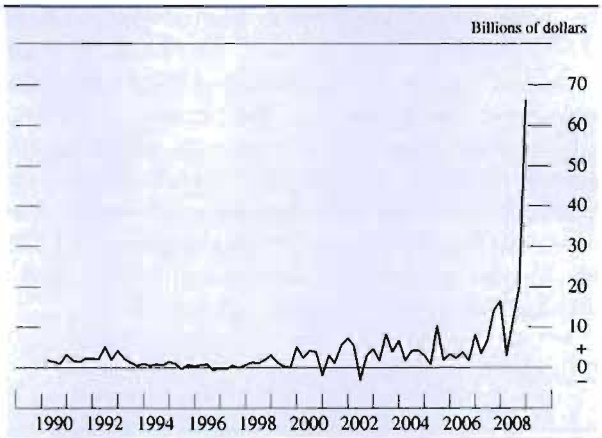
Capital

Equity capital at commercial banks rose 1.2 percent in 2008, the second-lowest rate since the 1980s and just one-ninth of the growth rate of assets in 2008. Adjusted for major structure events, the industry's equity capital contracted 2 percent. Nonetheless, both the tier 1 and tier 2 risk-based capital ratios for the industry as a whole rose noticeably in the fourth quarter of 2008.[16] At year-end, commercial banks maintained a total risk-based capital ratio of 12.8 percent, compared with 12.5 percent at the end of the third quarter. This increase was more than accounted for by $66 billion of capital transferred during the fourth quarter from parent bank holding companies (the largest such transfer reported over the past 25 years), much of which was presumably TARP money (figure 19). Without those capital injections, and holding risk-weighted assets constant, the total risk-based capital ratio at year-end would have declined to 12.0 percent. Alternatively, some banks may have chosen to reduce their risk-weighted assets in order to maintain a higher year-end capital ratio.

Although risk-based capital measures ticked up, the considerable pressures that remain on banks' balance sheets may affect their future capital positions. Banks recorded $26 billion in net unrealized losses on available-for-sale securities in 2008. If

16. Tier 1 and tier 2 capital are regulatory measures. Tier 1 capital consists primarily of common equity (excluding intangible assets such as goodwill and excluding net unrealized gains on investment account securities classified as available for sale) and certain perpetual preferred stock. Tier 2 capital consists primarily of subordinated debt, preferred stock not included in tier 1 capital, and loan loss reserves up to a cap of 1.25 percent of risk-weighted assets. Total regulatory capital is the sum of tier 1 and tier 2 capital. Risk-weighted assets are calculated by multiplying the amount of assets and the credit-equivalent amount of off-balance-sheet items (an estimate of the potential credit exposure posed by the items) by the risk weight for each category. The risk weights rise from 0 to 1 as the credit risk of the assets increases. The tier 1 ratio is the ratio of tier 1 capital to risk-weighted assets; the total ratio is the ratio of the sum of tier 1 and tier 2 capital to risk-weighted assets.

19. Capital transfers to commercial banks from parent bank holding companies, 1990–2008



NOTE: The data are quarterly.

banks decide to sell the securities, then the remaining unrealized losses on the securities currently recorded in other comprehensive income would be moved to net income and subtracted from retained earnings, which would reduce regulatory capital. The industry leverage ratio showed a modest decline last year.[17] The dichotomy between the increase in the risk-based capital ratios and the decrease in the leverage ratio reflected a substantial accumulation of cash assets—particularly reserve balances—which have a risk weight of zero. At the BHC level, regulatory capital ratios improved during 2008, supported importantly by substantial private capital investments in a few companies during the first half of the year and by the significant CPP investments by the Treasury toward the end of the year.

Derivatives

In 2008, the notional principal amount of derivatives contracts held by banks rose $35 trillion, or 21 percent, to more than $200 trillion (table 2). However, this surge importantly reflected the reorganization of a prominent derivatives dealer, which substantially increased the amount of derivatives booked at one of its commercial bank subsidiaries. If the effects of the reorganization are removed, the notional amount grew only 3 percent last year. In either case, the growth in the notional principal amount of derivatives contracts stemmed almost entirely from interest rate derivatives, which at year-end accounted for 82 percent of all contracts held at banks. The notional principal amounts for all other types of derivatives contracts were little changed or even fell.

As dealers, banks often enter into offsetting positions, a strategy that significantly boosts the notional value of their derivatives contracts. The fair market value of derivatives contracts held by banks reflects the contracts' replacement cost and is far smaller than the notional principal amount. The fair market value of contracts with a positive value in 2008 was about $7.0 trillion, whereas for contracts with a negative value, it was roughly $6.9 trillion.

An important way for banks to hedge interest rate risk, including that related to interest-sensitive assets such as mortgages and mortgage-backed securities, is through the use of interest rate swaps. Those swaps are the most common type of derivative used by banks and account for about three-fourths of the notional value of banks' derivatives contracts, though most of the swaps are held for trading and market-making purposes rather than for hedging. The notional value of interest rate swaps increased 27 percent in 2008, but the increase was only 6 percent after adjusting to remove the effect of the dealer's reorganization. Other types of interest rate derivatives contracts employed by banks include futures, forwards, and options. The notional value of these other interest rate derivatives contracts also grew 6 percent (adjusted).

One of the fastest growing components of banks' derivatives portfolios in recent years has been credit derivatives, which, prior to last year, had grown an average of 71 percent per year since 2000. Without adjusting to remove the impact of the dealer's reorganization mentioned earlier, the notional principal amount of credit derivatives held by banks grew in 2008 but only by 0.2 percent. Subtracting the year-end holdings of the reorganized dealer implies that the notional amount of credit derivatives held by banks dropped 9 percent over the year. Credit derivatives include total return swaps and credit options, but credit default swaps account for 98 percent of the notional value of credit derivatives held by banks. Banks are beneficiaries of protection when they buy credit derivatives contracts and providers of protection (guarantors) when they sell. Banks are typically net beneficiaries of protection; as of year-end, contracts in which banks were beneficiaries of protection totaled $8.0 trillion in notional value, and contracts in which they were guarantors totaled $7.8 trillion (fig-

17. The leverage ratio is the ratio of tier 1 capital to average tangible assets. Tangible assets are equal to total average consolidated assets less assets excluded from common equity in the calculation of tier 1 capital.

2. Change in notional value and fair value of derivatives, all U.S. banks, 2003–08

Percent

Item	2003	2004	2005	2006	2007	2008	MEMO Dec. 2008 (billions of dollars)
Total derivatives							
Notional amount	26.54	23.69	15.38	29.75	25.68	21.06	201,070
Fair value							
Positive	.36	13.71	-6.46	-4.50	68.18	250.20	7,100
Negative	1.00	13.75	-5.78	-4.27	65.77	249.27	6,908
Interest rate derivatives							
Notional amount	27.62	22.07	11.92	27.11	20.54	26.98	164,397
Fair value							
Positive	-5.95	13.14	-5.52	-14.55	56.19	290.51	5,120
Negative	-5.07	12.94	-5.15	-15.06	58.19	286.47	4,989
Exchange rate derivatives							
Notional amount	18.81	21.03	7.69	29.27	36.69	2.03	17,523
Fair value							
Positive	41.81	14.86	-35.84	22.86	43.59	149.12	645
Negative	38.81	12.74	-37.36	21.39	43.40	163.80	661
Credit derivatives							
Notional amount	55.98	134.52	148.09	54.93	75.87	.21	15,897
Guarantor	61.82	139.07	137.87	67.69	73.94	-.12	7,811
Beneficiary	51.13	130.46	157.53	44.03	77.79	.54	8,086
Fair value							
Guarantor	68.31	69.92	81.43	92.96	295.25	281.97	1,048
Positive	378.09	74.56	-5.62	201.40	-38.79	41.97	44
Negative	-68.87	38.37	827.98	-1.59	1187.41	312.45	1,004
Beneficiary	19.85	51.28	83.50	90.26	301.20	260.81	1,126
Positive	-63.13	2.64	505.51	3.98	1086.95	303.42	1,078
Negative	295.74	66.36	2.79	187.44	-18.95	6.54	48
Other derivatives[1]							
Notional amount	3.77	32.66	29.43	75.17	13.44	-9.31	3,254
Fair value							
Positive	3.16	8.55	58.51	18.99	41.22	33.70	213
Negative	-5.25	19.73	74.29	24.15	15.66	39.27	206

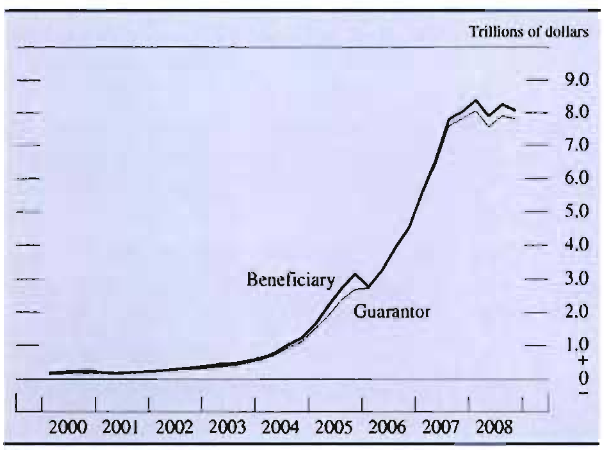
NOTE: Data are from year-end to year-end and are as of April 16, 2009.

1. Other derivatives consist of equity and commodity derivatives and other contracts.

ure 20). At year-end 2008, credit derivatives accounted for 8 percent of the notional principal value of all derivatives contracts held by banks.

Banks also use derivatives related to foreign exchange, equities, and commodities. Collectively, those instruments account for 10 percent of the notional value of the derivatives contracts held by banks. As with other derivatives, the pricing and volume of foreign-exchange-related contracts were affected by the financial turmoil. Increased market volatility raised the cost of hedging foreign exchange positions, and counterparty concerns reduced liquidity in some foreign exchange markets. The semiannual survey of North American foreign exchange volume conducted by the Foreign Exchange Committee, or FXC, showed year-over-year declines in trading volumes for several categories of foreign-exchange-related derivatives in 2008.[18] These declines were the first recorded since the survey began in 2004. Banks' notional holdings of foreign-exchange-related derivatives grew 2 percent in 2008, but, after adjusting for the derivatives dealer's reorganization, they dropped almost 8 percent. Banks' holdings of equity and commodity derivatives

20. Notional amounts of credit derivatives for which banks were beneficiaries or guarantors, 2000–08



NOTE: The data are quarterly.

18. The FXC is an industry group and includes representatives of major financial institutions engaged in foreign exchange trading in the United States. It is sponsored by the Federal Reserve Bank of New York and maintains a website at www.newyorkfed.org/FXC.

fell 13 percent and 2 percent, respectively, in 2008, and these two categories were materially unaffected by the structure change.

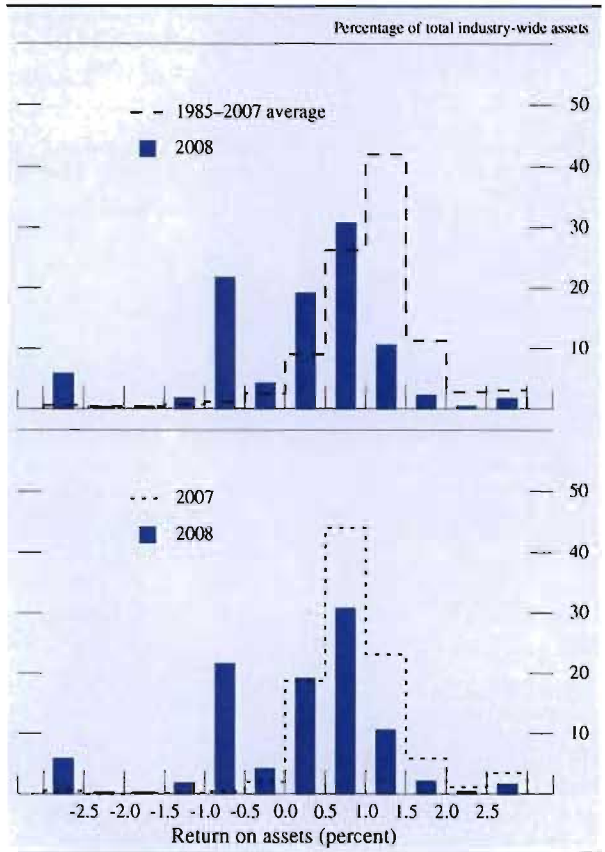
The reorganization of the large derivatives dealer also affected the industry-wide concentration of derivatives contracts. As reported in previous versions of this article, the share of industry contracts (in terms of notional value) at the 10 largest banks (in terms of assets) had for years been more than 97 percent, a concentration ratio that reflected the role that some of the largest banks play as dealers in the derivatives markets. However, at the end of 2008, that share declined to 84 percent, as the bank created by the reorganization was only the 11th-largest bank. Still, banks' derivatives holdings remained highly concentrated last year: For each individual category of derivatives contracts discussed earlier, the 10 banks with the largest holdings accounted for more than 99 percent of the notional principal value of contracts held by all banks.

Trends in Profitability

Total annual net income of the commercial banking industry declined sharply in 2008; it was down 92 percent from the 2007 level. The primary drivers of the contraction were sizable provisions for loan losses in response to further deterioration in asset quality, heavy write-downs of securities holdings, goodwill impairment charges, and a marked drop in trading revenue. Return on equity for the full year fell to less than 1 percent, down from 9.5 percent in 2007. Banks' annual return on assets (ROA) also dropped considerably, to 0.07 percent last year, its lowest level since 1991. The decrease in profitability was most pronounced in the fourth quarter; indeed, commercial banks posted an aggregate loss in that period.

Until the second half of 2007, the profitability of commercial banks had been relatively high and consistent for some time. The distribution of ROA among commercial banks between 1985 and 2007 is centered between 1 and 1.5 percent, with negative returns accounting for less than 7 percent of industry-wide assets (figure 21, top panel). The leftward shift in the distribution of ROA in 2008 shows the widespread nature of the deterioration in profitability last year. Bank profitability in 2008 eroded significantly even when compared with 2007, when strains on banks and their profitability had already emerged (figure 21, bottom panel). The fraction of banks that incurred annual losses in 2008 doubled from 2007 to about 20 percent, and these institutions accounted for about 35 percent of industry assets, the highest share since 1987.

21. Distribution of return on assets at commercial banks, by percentage of total industry-wide assets, 1985–2008



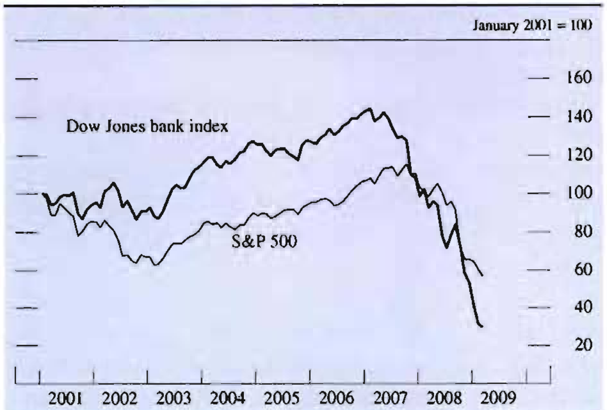
NOTE: Total industry-wide assets are deflated by a gross domestic product price deflator.

A drop in noninterest income for the year—the second consecutive annual decline—contributed importantly to lower bank profitability in 2008. Noninterest income was about 1.8 percent of average total assets last year, the lowest share since 1990. Trading activities resulted in an aggregate net loss to banks in 2008 of \$2.3 billion, the first annual loss reported in that business line in at least 25 years. The loss was driven by a \$13.9 billion realized loss from credit exposures in the trading account in 2008, three-fourths of which was incurred by the top 10 banks.[19] In addition, banks took other losses owing to substantial asset markdowns in 2008. Realized losses—which affect the income statement directly—reached their highest levels ever in the third quarter, in part because of large third-quarter losses on GSE preferred stock held by many, especially smaller, banks.

Profits in 2008 were also hit by a dramatic increase in loan loss provisions as credit quality worsened

19. In this context, credit exposures are defined as cash debt instruments (such as debt securities) and credit derivatives contracts (such as credit default swaps).

22. Stock price indexes, 2001–09



NOTE: The data are monthly and extend through March 2009.
SOURCE: Standard & Poor's and Dow Jones.

appreciably for all major loan categories. The delinquency rate for all loans and leases held by banks increased to about 4.6 percent in the fourth quarter. The delinquency rate on residential real estate loans climbed to 6.3 percent, its highest rate in more than 15 years, while the delinquency rate on CRE loans rose to 5.4 percent. The increase in CRE loan delinquencies primarily reflected soaring delinquencies on construction and land development loans. Especially late in the year, banks also experienced a noticeable increase in delinquency rates on C&I and consumer loans, particularly credit card loans. The total charge-off rate, which had started to climb in 2007, rose to nearly 2 percent of all loans and leases in the fourth quarter, increasing at a faster rate last year than the delinquency rate. The charge-off rate for CRE loans increased more than fivefold in the fourth quarter from the year-earlier quarter to just more than 2 percent, and that for C&I loans more than doubled to 1.4 percent.

With steep declines in profitability, dividends paid in 2008 were about one-half of the amount paid to shareholders in 2007. Even so, dividends exceeded earnings for the year. Investors remained concerned about the further erosion in profits driven by deteriorating asset quality and continued uncertainties about banks' exposures to structured finance products. As a result, the Dow Jones stock price index for banks fell considerably in 2008, significantly underperforming the S&P 500 index (figure 22). Reflecting the increase in the perceived riskiness of banks, CDS premiums on banking institutions' subordinated debt moved noticeably higher, on net, in 2008 (figure 23).

23. Premium on credit default swaps on subordinated debt at selected banking institutions, 2001–09

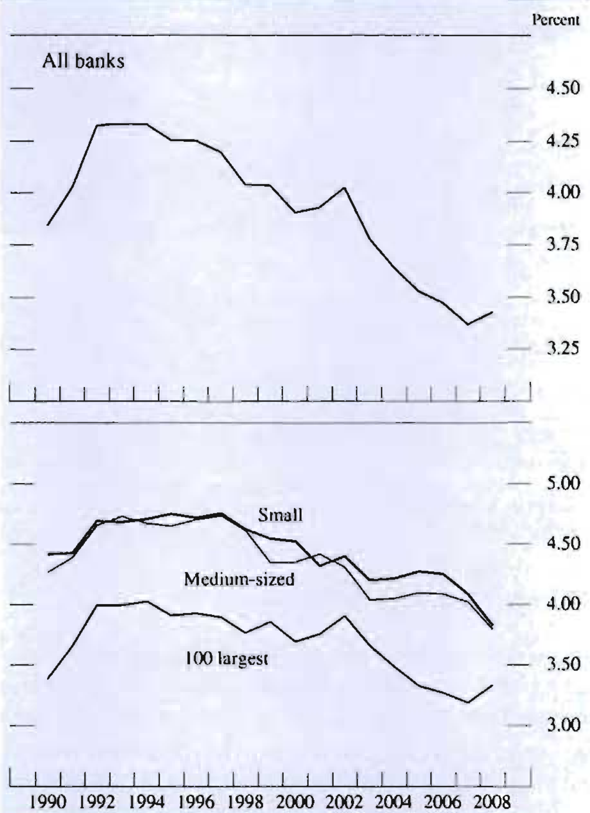
NOTE: The data are weekly and extend through April 15, 2009. Median spread of all available quotes.
SOURCE: Markit.

Interest Income and Expense

In response to the Federal Reserve's easing of monetary policy, the rates that banks earned on their assets and paid on their liabilities declined markedly over the year, generally following the rates on market instruments. Banks earned an average of 5.7 percent on their assets in 2008, down from 6.8 percent in 2007, and paid an average of 2.5 percent on their liabilities, compared with 3.8 percent in 2007. Because the aggregate rate paid on banks' liabilities dropped slightly more than the aggregate interest earned on banks' assets, the industry-wide net interest margin edged up to 3.43 percent in 2008, compared with 3.37 percent in 2007 (figure 24, top panel). This increase was concentrated at larger banks, as small and medium-sized banks experienced declines in their net interest margins (figure 24, bottom panel).

Core deposits are an attractive source of funding for banks because they tend to be fairly stable, as well as relatively inexpensive, compared with managed liabilities. The average effective interest rate that banks paid on core deposits dropped from 2.8 percent in 2007 to 1.9 percent in 2008. Taken together, banks lowered the rates paid on the components of core deposits fairly uniformly: Banks paid an average of 3.8 percent on small time deposits, 1.3 percent on savings deposits (including money market deposit accounts), and 1.2 percent on other checkable deposits, with each rate almost 1 full percentage point less than in 2007. Nonetheless, funds flowed into these

24. Net interest margin, by size of bank, 1990–2008



NOTE: The data are annual. Net interest margin is net interest income divided by average interest-earning assets. For the definition of bank size, see the general note on the first page of the main text.

deposit accounts, as investors, seeking the safety and liquidity of FDIC-guaranteed accounts, withdrew investments from money market mutual funds, longer-term mutual funds, equity markets, and hedge funds. In addition, a small number of banks increased their core deposit rates to attract funds, evidently to obtain stable funding during the crisis period.

The rates paid on banks' managed liabilities, which generally exceed those on other funding instruments, dropped 1.7 percentage points in 2008 to 3.1 percent on average.[20] However, although the rate fell substantially, its spread over market yields on short-term Treasury securities was considerably higher at the end of 2008 than in 2007.[21] That relatively high spread, which reflected the especially sharp decline in Treasury bill yields in response to the pronounced flight to quality, suggests that managed liabilities were a relatively more expensive source of funds for banks last year than in 2007.

The average interest rate earned on banks' assets in 2008 fell more than 1 percentage point, to 5.7 percent. The decline was due mostly to lower rates earned on loans and leases, which dropped 1.15 percentage points on average. However, the effective rate of return on loans was significantly lower as a result of the deterioration in asset quality. Net of loss provisions, the rate earned on loans and leases was a bit less than 4 percent, a historical low. The average interest rate earned on loans to both businesses and households declined last year. After holding steady in 2007, the average interest rate earned on business loans tumbled over the course of 2008. The Survey of Terms of Business Lending, which measures the interest rate on new C&I loan originations at a broad sample of banks, indicates that interest rates on new C&I loans fell 3 percentage points over the year (between the November 2007 and November 2008 surveys).[22] Despite this decline, spreads on C&I loans widened over the year as banks adjusted their pricing in response to the deterioration in the economic outlook and other factors. The weighted-average spread of C&I loan rates over Eurodollar and swap yields of comparable maturity increased about 30 basis points in 2008, a development consistent with the indication by large fractions of SLOOS respondents that they had increased the spread on C&I loans to both large and middle-market firms and to small firms over the course of 2008 (figure 25).

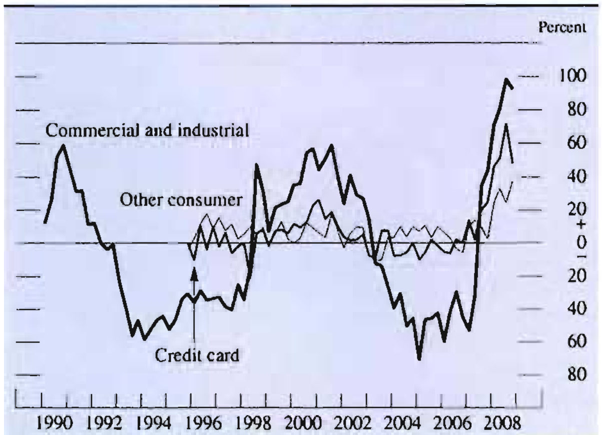
The average interest rate earned on consumer loans decreased to 9.5 percent in 2008 from 10.2 percent in 2007, while the average effective interest rate on real estate loans decreased about 1 percentage point during 2008, to 6.1 percent. Partly as a result of the dislocations in both the asset-backed and mortgage-backed securities markets, the spreads on credit cards, auto loans, and residential mortgages widened in 2008. The widening of spreads curbed the decline in household borrowing rates relative to the decline in market interest rates. The rate earned on real estate loans was also supported by the longer average maturity of such loans and the relatively high percentage of these loans with fixed interest rates. Moreover, because of reduced credit availability and increasing

20. Managed liabilities consist of large time deposits in domestic offices, deposits booked in foreign offices, subordinated notes and debentures, federal funds purchased and securities sold under repurchase agreements, Federal Home Loan Bank advances, and other borrowed money. Managed liabilities are generally funds over which the bank has significant discretion to increase or decrease in response to changing funding needs created by deposit outflows or new loan demand.

21. For example, the difference between the average rate paid on banks' managed liabilities and the average yield on three-month Treasury bills was 2.4 percentage points in the fourth quarter of 2008, while that spread was just 1.3 percentage points in the year-earlier quarter.

22. The effective (compounded) annual interest rates are calculated from the stated rates and other terms of the loans and weighted by the loan amounts.

25. Net percentage of selected domestic banks reporting increased spreads of rates over cost of funds, by type of loan, 1990–2008



NOTE: See figure 7, general note and source note.

26. Noninterest income as a proportion of total assets, 1990–2008

NOTE: The data are quarterly.

loan-to-value ratios, along with elevated interest rates on nonconforming mortgages, refinancing was not viable for many households.

Noninterest Income and Expense

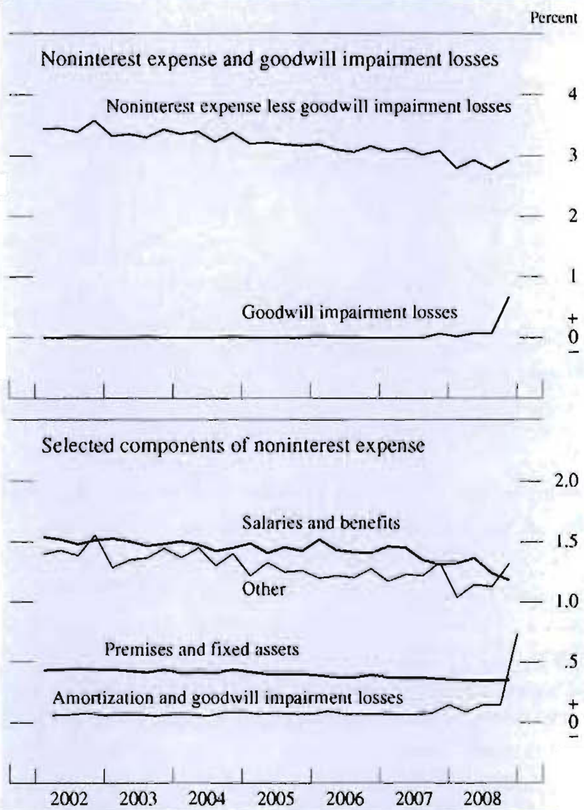
Total noninterest income declined for the second consecutive year, to its lowest level since 1990 (figure 26). Total noninterest expense rose in the fourth quarter of 2008 because of the sizable goodwill impairment losses that some large banks recorded in that quarter (figure 27, top panel).[23] Aside from the goodwill impairment charges, however, noninterest expense was flat at 2.9 percent of assets at year-end 2008. The cost of premises and fixed assets, which account for 12 percent of noninterest expense, fell modestly relative to average total assets in 2008, as did salaries and benefits (figure 27, bottom panel). Other indications that commercial banks were able to make progress in moderating personnel costs were a slight decline in the number of full-time-equivalent employees in 2008 and a growth rate for salaries and compensation per employee that was the second lowest in at least the past 25 years. Finally, other noninterest expense, which accounts for about 38 percent of noninterest expense, moved down slightly last year. This category includes a wide range of items that are not reported separately, including expenses for advertising and marketing, data processing, and consulting and advising.

Noninterest income dropped about 5 percent over the year, primarily as a result of a steep decline in trading revenue (figure 28, top panel). Banks reported nearly $14 billion in losses on the trading of credit exposures last year, which likely reflected substantial write-downs of some mortgage-related structured products as well as losses on collateralized debt obligations, credit derivatives, and syndicated leveraged loans. Moreover, an unprecedented number of credit events occurred in the CDS market in the second half of 2008, including events involving Lehman Brothers and the GSEs.[24] These events resulted in the termination of a large number of credit derivatives contracts, and guarantors suffered large losses on many of them. Aggregate losses also resulted from equity security and index trading. Revenue from interest-rate-related trading was down from 2007 but remained positive. Revenue from commodity-related trading and foreign-exchange-related trading increased somewhat in 2008, perhaps, in part, because the increased volatility in both of these markets boosted trading volume, allowing banks to earn more fee income. Deposit fees, which accounted for 20 percent of the total noninterest income of large banks and 26 percent of that of small banks, were relatively

23. Banks incur goodwill impairment losses when the market value of their business segments (or reporting units) drops below the fair value recorded by the company. Companies must test for impairment of goodwill annually or when events occur that would likely reduce the fair value of a reporting unit (business segment) below the carrying value. Assets are written down when considered overvalued compared with the market value—that is, the amount that a potential (or actual) acquirer would be willing to pay (or had paid) for the assets.

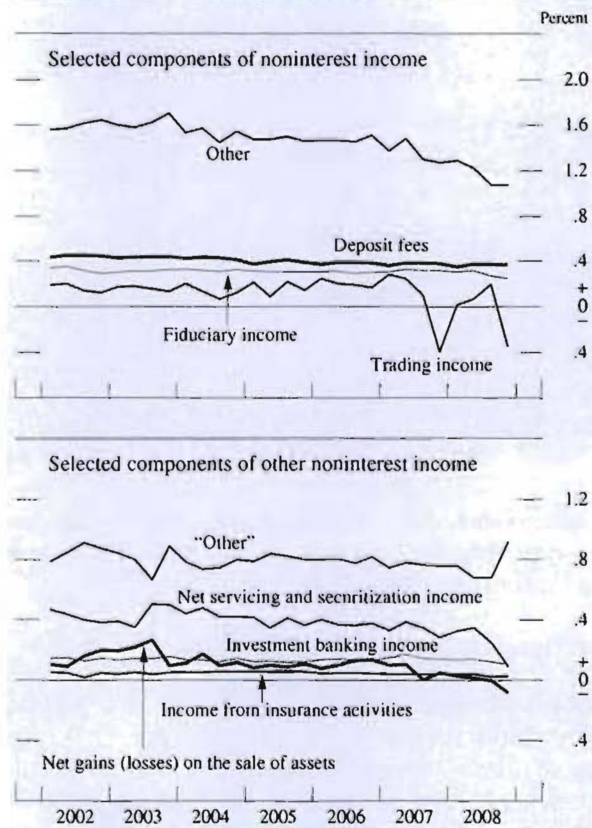
24. Twelve credit events occurred in 2008. Under definitions established by the International Swaps and Derivatives Association, Inc., a credit event is a bankruptcy, obligation acceleration, obligation default, failure to pay, repudiation/moratorium, or restructuring. The settlement of outstanding CDS contracts proceeded smoothly. For a review of the management of the CDS credit events, see Federal Reserve Bank of New York (2009), "Senior Supervisors Group Issues Report on Management of Recent Credit Default Swap Credit Events," press release, March 9, www.newyorkfed.org/newsevents/news/banking/2009/ma090309.html.

27. Noninterest expense and goodwill impairment losses, and selected components of noninterest expense, as a proportion of total assets, 2002–08



Note: The data are quarterly. For the definition of goodwill impairment losses, see text note 23; for the definition of other noninterest expense, see the main text.

28. Selected components of noninterest income and of other noninterest income as a proportion of total assets, 2002–08



Note: The data are quarterly. For definitions of other noninterest income and its "other" component, see the main text. Net gains (losses) on the sale of assets consist of the sale of loans and leases, other real estate owned, and other assets (excluding securities).

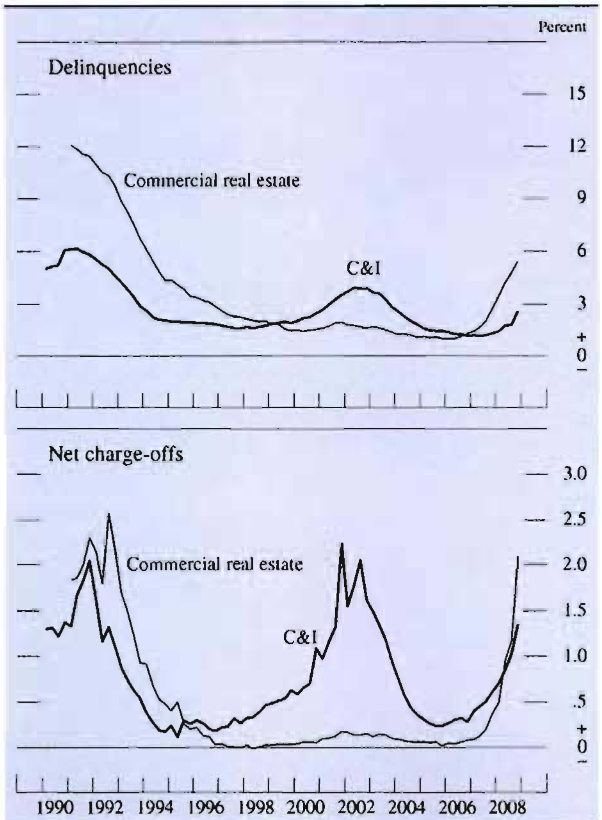
stable over the year. Likewise, income from fiduciary activities held up fairly well amid the financial crisis. Other noninterest income, which accounts for about 65 percent of total noninterest income, moved down last year. Other noninterest income includes net servicing and securitization income, investment banking income, income from insurance activities, net gains (losses) on the sale of assets, and an "other" category (figure 28, bottom panel). The largest components of the "other" category in 2008 were bank card and credit card interchange fees, earnings on the cash surrender value of bank-owned life insurance programs, and fees from automated teller machines.[25]

Loan Performance and Loss Provisioning

Credit quality declined across all major loan categories in 2008, and the overall delinquency rate at commercial banks (consisting of loans whose payments are 30 days or more past due) rose to 4.6 percent at year-end, its highest level since late 1992. The aggregate charge-off rate also moved up, to 1.9 percent of total loans, and the charge-off rate at the top 100 banks exceeded 2 percent. The most significant deterioration occurred in banks' residential and commercial real estate loan portfolios, where delinquencies and charge-offs rose to their highest levels in more than a decade (figure 29). Delinquencies and charge-offs on consumer loans also moved higher during 2008. The credit quality of C&I loans, which appeared fairly robust early in 2008, deteriorated later

25. Earnings on the cash surrender value of bank-owned life insurance (BOLI) programs are available to a bank when it cashes in (or "surrenders") the insurance policy or receives the proceeds of a death benefit upon the death of an insured employee. BOLI generally may be used only in an amount appropriate to fund a bank's exposure arising from employee compensation or benefits programs and is not to be used to fund other normal operating expenses or for speculation. More information is available in Board of Governors of the Federal Reserve System, Division of Banking Supervision and Regulation (2004), "Interagency Statement on the Purchase and Risk Management of Life Insurance," Supervision and Regulation Letter SR 04-19 (December 7), www.federalreserve.gov/boarddocs/srletters/2004/sr0419.htm.

29. Delinquency and charge-off rates for loans to businesses, by type of loan, 1990–2008



NOTE: The data are quarterly and seasonally adjusted; the data for commercial real estate begin in 1991. Delinquent loans are loans that are not accruing interest and those that are accruing interest but are more than 30 days past due. The delinquency rate is the end-of-period level of delinquent loans divided by the end-of-period level of outstanding loans. The net charge-off rate is the annualized amount of charge-offs over the period, net of recoveries, divided by the average level of outstanding loans over the period. For the computation of these rates, commercial real estate loans exclude loans not secured by real estate (see table 1, note 2). C&I is commercial and industrial.

in the year. The significant rise in nonperforming loans and the potential for even greater losses given the generally weaker economic outlook led banks to substantially boost their loss provisions in 2008. Nevertheless, some measures of reserve adequacy remained very low by historical standards.

C&I Loans

The delinquency rate on C&I loans, which had been near the lower end of its historical range over the past several years, rose in 2008 to 2.6 percent by year-end. The increase was concentrated among the larger banks, where delinquencies jumped from about 1.2 percent at the end of 2007 to about 2.5 percent at the end of 2008. The deterioration at smaller banks was also noticeable, with the delinquency rate increasing about 70 basis points, to about 2.8 percent.

30. Interest-payment ratio for nonfinancial corporations, 1990–2008

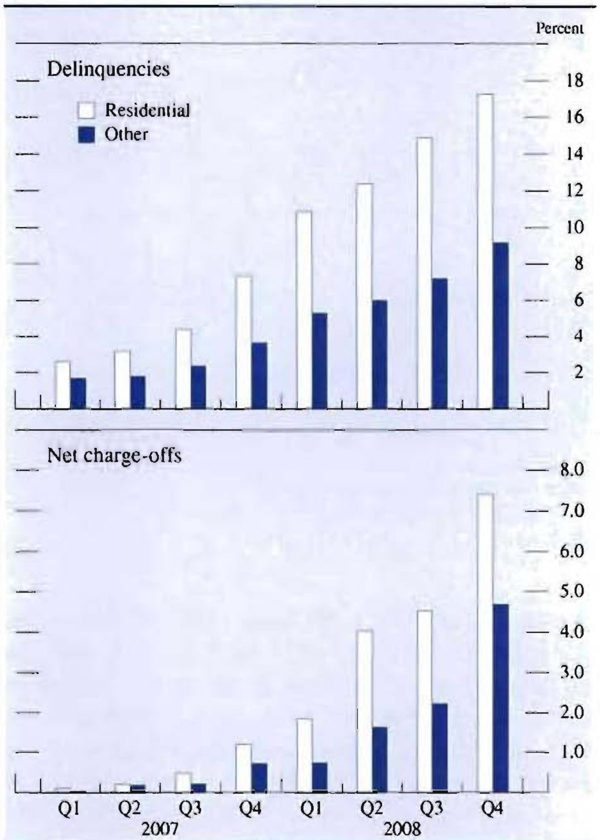
NOTE: The data are quarterly. The interest-payment ratio is calculated as interest payments as a percentage of cash flow.
SOURCE: National income and product accounts and Federal Reserve Board.

Charge-off rates for C&I loans more than doubled year over year for banks of all sizes. Both charge-offs and delinquencies climbed in the latter part of 2008 as nearly all major sectors of the economy registered steep declines in activity and the profitability of nonfinancial firms plummeted. Reflecting these adverse developments, the interest-payment ratio for nonfinancial firms, calculated as interest payments as a percentage of cash flow, moved up a bit in the second half of the year. Although this ratio remained in the bottom part of its historical range, the recent increase suggests that credit strains are likely to intensify over coming quarters (figure 30).

Commercial Real Estate Loans

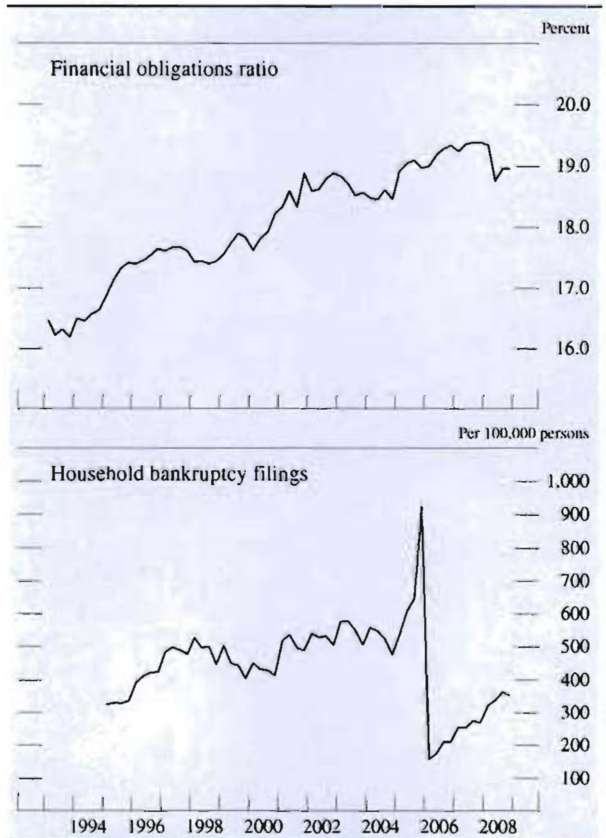
The rate of delinquency on CRE loans doubled in each of the past two years, mainly because of deterioration in the credit quality of construction and land development loans, particularly those linked to residential projects (figure 31). Reflecting the ongoing problems in the housing sector, the delinquency rate on construction and land development loans that financed residential development jumped sixfold, to 17.3 percent, from the beginning of 2007 to year-end 2008, while the charge-off rate rose from near zero to 7.4 percent over the same time period. Those increases occurred despite a tightening of credit standards on CRE loans that began in the second half of 2006. Moreover, the share of construction and land development loans in total CRE loans declined from 34 percent in 2007 to 32 percent by the end of 2008. In part because of an increase in vacancy rates, the

31. Delinquency and charge-off rates for construction and land development loans, by type of loan, 2007–08



NOTE: For definitions of delinquencies and net charge-offs, see the note for figure 29.

32. Indicators of household financial stress, 1993–2008



NOTE: The data are quarterly. The financial obligations ratio is an estimate of debt payments and recurring obligations as a percentage of disposable personal income; debt payments and recurring obligations consist of required payments on outstanding mortgage debt, consumer debt, auto leases, rent, homeowner's insurance, and property taxes. The series shown for bankruptcy filings begins in 1995:Q1 and is seasonally adjusted.

SOURCE: For financial obligations ratio, Federal Reserve Board (www.federalreserve.gov/releases/housedebt); for bankruptcy filings, staff calculations based on data from Lundquist Consulting.

delinquency rate on multifamily properties rose from 1.9 percent at the end of 2007 to 3.2 percent at the end of last year. Amid a sharp deterioration in the economic fundamentals for commercial buildings, the delinquency rates on loans secured by existing nonresidential structures significantly increased in 2008 from 1.5 percent to 2.5 percent.

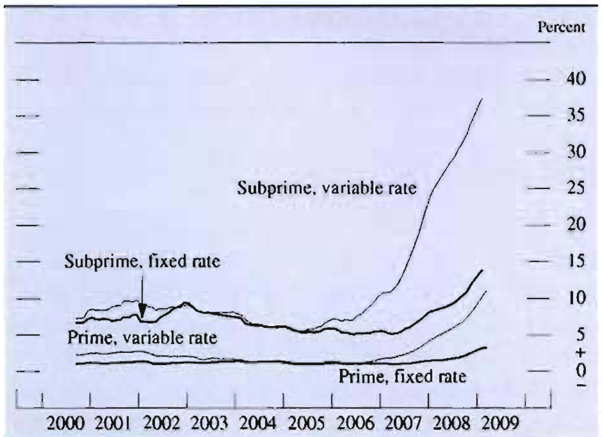
Loans to Households

Financial conditions in the household sector deteriorated further, on balance, in 2008, reflecting significant job losses, lower equity and housing wealth, and depressed consumer sentiment. Against this backdrop, consumer credit growth weakened considerably over the year. Partly as a result of lower interest rates on consumer loans, the household financial obligations ratio, an estimate of debt payments and recurring obligations as a percentage of disposable income, edged down to 19 percent from its recent high of 19.4 percent (figure 32, top panel). In such adverse economic circumstances, delinquencies and foreclosures on residential mortgages climbed further, and the credit quality of credit card and other consumer loans declined appreciably. Although household bankruptcy filings remained low relative to the levels seen before the 2005 changes in bankruptcy laws, the bankruptcy rate moved up in 2008 (figure 32, bottom panel).

Residential Real Estate Loans

The credit quality of residential mortgages continued to worsen sharply in 2008, with the subprime mortgage deterioration that began in 2007 spreading to stronger credits. Default rates on alt-A mortgages rose as house prices dropped further. The weakening in the economy affected the credit quality of the full range of mortgage products, and, throughout 2008, credit rating agencies downgraded residential mortgage-backed securities backed by prime, alt-A, and subprime mortgages. In addition, mortgage securitiza-

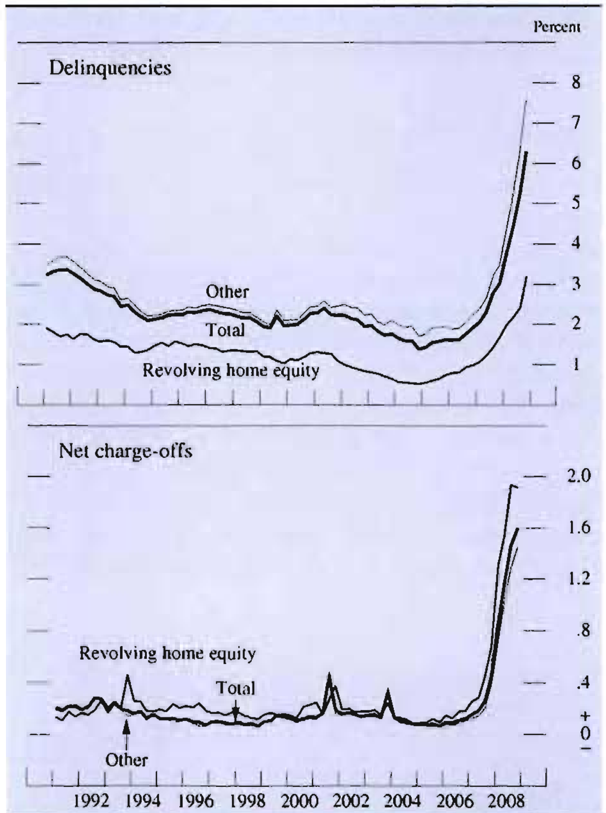
33. Rate of serious delinquency on residential mortgages, by type of mortgage and type of interest rate, 2000–09



NOTE: The data are monthly and extend through January 2009. Seriously delinquent loans are 90 days or more past due or in foreclosure. The prime mortgage data are representative of all residential mortgages, not just those held by commercial banks. The subprime mortgage data cover only securitized loans.

SOURCE: For prime mortgages, McDash Analytics; for subprime mortgages, LoanPerformance, a division of First American CoreLogic.

34. Delinquency and charge-off rates for residential real estate loans at commercial banks, by type of loan, 1991–2008



NOTE: The data are quarterly and seasonally adjusted. For definitions of delinquencies and net charge-offs, see the note for figure 29.

tions other than those backed by the housing-related GSEs and Ginnie Mae essentially ceased last year. Regarding the supply of mortgage credit, large fractions of commercial banks reported in the SLOOS that they had tightened credit standards on a broad range of residential mortgage products, a move that further impaired the ability of borrowers to refinance existing mortgages. Reflecting these developments, national data on variable-rate mortgage loans show that delinquency rates on such loans increased more than those on fixed-rate loans, especially for subprime borrowers (figure 33). All told, the delinquency rate on variable-rate subprime mortgages jumped to more than 35 percent by the end of 2008.

At commercial banks, delinquencies on residential real estate loans reached 6.3 percent at the end of 2008, their highest rate on record (figure 34). Net charge-offs on these loans increased to 1.6 percent at an annual rate in the fourth quarter of 2008, also a record high. The deterioration in the credit quality of residential mortgages on banks' books was widespread last year; delinquency and charge-off rates rose across all types of mortgage products and all bank sizes.

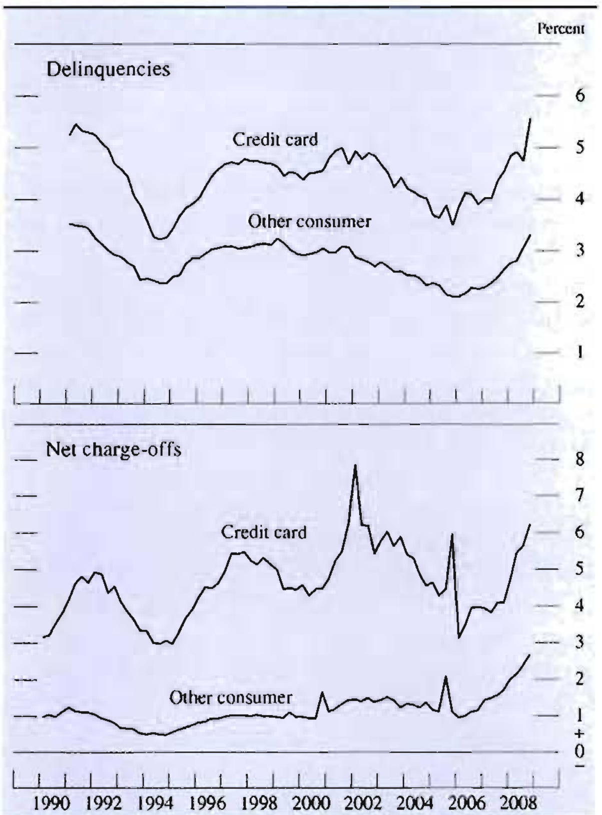
Delinquency rates on closed-end one- to four-family mortgage loans held by banks rose to 7.9 percent on first-lien mortgages and 5.1 percent on junior-lien mortgages in the fourth quarter. Delinquency rates on revolving home equity lines of credit also rose substantially, to 3.2 percent. In general, junior liens and home equity lines of credit are offered to higher-quality borrowers, as suggested by the lower delinquency rates on those products than on first-lien mortgages. However, in the event of a default, a bank that holds a loan secured by a junior lien on a one- to four-family residential property is repaid only after the first-lien mortgage has been fully repaid. In the case of foreclosure, the holder of a junior-lien mortgage may not be repaid at all, especially if the property has lost a significant portion of its value. Indeed, while the charge-off rates on all types of residential mortgages increased considerably last year, the charge-off rate on closed-end junior liens (3.9 percent) was about four times higher than that on closed-end first liens (1.1 percent). However, although the charge-off rate was much higher for closed-end junior liens, the volume of such loans was just 15 percent of the total aggregate volume of first liens at the end of 2008. Charge-off rates on revolving home equity lines of credit more than doubled last year, increasing from 0.7 percent at year-end 2007 to 1.9 percent at year-end 2008.

The credit quality of residential mortgages worsened the most at the 100 largest banks in 2008. For closed-end mortgages, the delinquency rate increased about 4.8 percentage points at the largest banks, to 8.5 percent, but it also moved up more than 1 percentage point at smaller banks, to about 3.7 percent. Last year's rise in charge-off rates was also somewhat greater at larger banks than at smaller banks.

Consumer Loans

The weakening in the credit quality of consumer loans no doubt reflected the slower pace of economic growth, the rise in the unemployment rate, and slower growth in households' income. Moreover, financial pressures on households were intensified by the inability of some borrowers to lower their interest payments and to obtain cash by refinancing mortgages. The delinquency rate on credit card loans held by banks rose moderately over most of 2008, but it jumped noticeably in the fourth quarter to 5.6 percent (figure 35). The charge-off rate on such loans increased more steadily over the year, rising from 4.1 percent at the end of 2007 to 6.3 percent at the end of 2008.[26] The delinquency rate on other (non-credit-card) consumer loans also rose somewhat, to 3.3 percent at year-end. Charge-off rates on those loans climbed from about 1.7 percent in 2007 to 2.7 percent in 2008, a considerable increase that brought the rate to its highest level in at least the past 25 years.

35. Delinquency and charge-off rates for loans to households, by type of loan, 1990–2008



NOTE: The data are quarterly and seasonally adjusted; data for delinquencies begin in 1991. For definitions of delinquencies and net charge-offs, see the note for figure 29.

Securitized Loans

The credit quality of loans that were sold and securitized weakened in 2008, though not, in most cases, to the same extent as loans that were held on banks' balance sheets.[27] The majority of loans securitized by banks in this manner are residential mortgages on one- to four-family homes (63 percent). At year-end 2008, the volume of securitized one- to four-family residential real estate loans stood at about one-third of the volume of such loans held on banks' balance sheets. The delinquency rate on securitized one- to four-family residential mortgages was about 8 percent in the fourth quarter of 2008, up significantly from 2007. Charge-off rates on these mortgages increased modestly but stayed well below the rates on residential loans on banks' books.

The delinquency rate on securitized credit card loans—which make up roughly one-fourth of the loans securitized by banks and are about equal in dollar value to the credit card loans that banks hold on their balance sheets—moved up, from about 4 percent in 2007 to 5.3 percent in 2008. Charge-off rates on those loans increased significantly last year, from 4.8 percent at year-end 2007 to 7.2 percent at year-end 2008.

Delinquency rates on the small amount of bank-securitized auto loans, which make up less than 1 percent of total securitized loans, remained relatively stable in 2008 after a modest run-up in 2007, whereas charge-off rates doubled. Delinquency and charge-off rates on the small amount of securitized C&I loans (also less than 1 percent of total securitized loans) rose last year.

Outstanding securitizations of other types of loans and leases, a category that includes CRE loans and accounts for about 11 percent of all loans securitized

26. For a discussion of the change in bankruptcy law that was implemented in 2005 and its effect on credit card loans, see the box "The New Bankruptcy Law and Its Effect on Credit Card Loans," in Elizabeth Klee and Gretchen Weinbach (2006), "Profits and Balance Sheet Developments at U.S. Commercial Banks in 2005," *Federal Reserve Bulletin*, vol. 92 (June), p. A89.

27. Loans that banks sold and securitized with servicing rights retained or with recourse or other seller-provided enhancements are hereafter referred to, for simplicity, as "securitized" loans. The analysis excludes loans that were sold to, and securitized by, a third party (for example, the Federal National Mortgage Association or the Federal Home Loan Mortgage Corporation).

by banks, amounted to about $200 billion. These securitizations equal roughly 45 percent of the total volume of these types of loans held on banks' books. The delinquency rate on such securitizations rose modestly over the year to about 0.8 percent, though the charge-off rate was about zero.

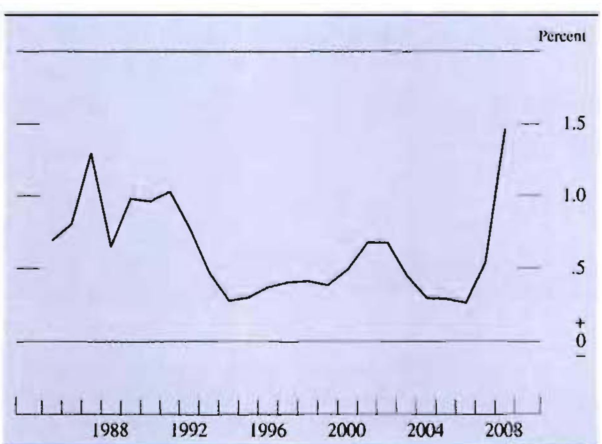
Loss Provisioning

The continued erosion of credit quality spurred banks to step up appreciably the annual rate of loan loss provisioning in 2008 to almost 1.5 percent of total assets. As a proportion of total assets, loss provisioning in 2008 surpassed the highs reached during the late 1980s and early 1990s (figure 36). Loss provisioning consumed more than 30 percent of total revenue in 2008.

Provisioning increased considerably at banks of all sizes. At the top 100 banks, provisioning reached an annual rate of 1.9 percent of average assets in the fourth quarter, compared with 0.9 percent at the end of 2007. Provisioning at banks outside the top 100 rose to 1.3 percent of assets at the end of 2008, more than double the rate at the end of 2007.

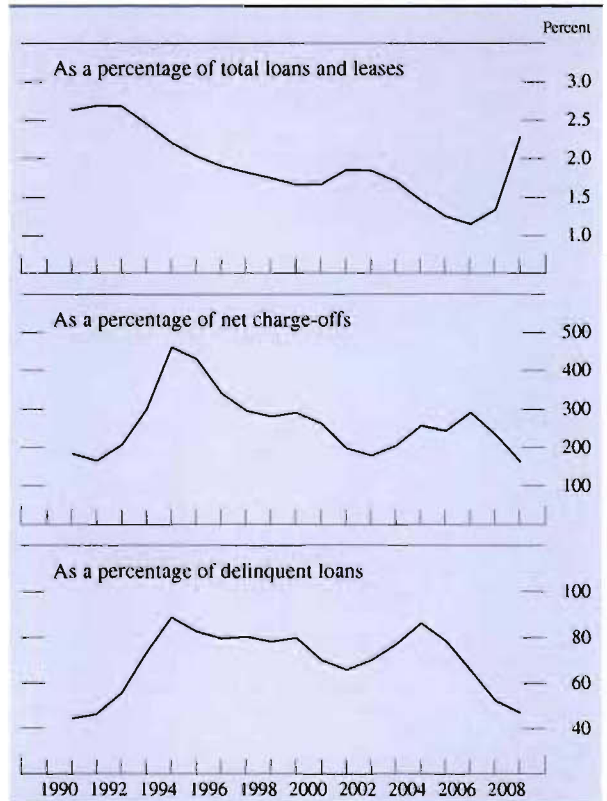
For the second consecutive year, the rate of loss provisioning significantly outpaced that of charge-offs, implying an increase in reserves as a percentage of total loans and leases (figure 37, top panel). However, net charge-offs rose appreciably as well, leading to declines in some measures of reserve adequacy. At the average charge-off rate for all of 2008 and without additional loss provisions, current reserves are sufficient to cover only about 1.6 years of charge-offs, a record low level (figure 37, middle panel). The ratio of charge-offs to delinquent loans, an estimate of recent loss rates on nonperforming assets, reached nearly 11 percent in the fourth quarter, the highest level in the past two decades. Yet reserves are sufficient to cover only about 47 percent of delinquent loans (figure 37, bottom panel).

36. Provisions for loan and lease losses as a proportion of total assets, 1985–2008



NOTE: The data are annual.

37. Reserves for loan and lease losses, 1990–2008



NOTE: The data are as of year-end. For definitions of delinquencies and net charge-offs, see the note for figure 29.

International Operations of U.S. Commercial Banks

The share of U.S. bank assets booked in foreign offices declined from 14 percent at year-end 2007 to about 12 percent at year-end 2008. Assets booked in foreign offices remained highly concentrated among the largest banks. On the whole, commercial banks lost money on their international operations in 2008. Net income abroad was significantly adversely affected by restructuring activity at one large bank, which consolidated some of its foreign operations into its domestic operations. Other reported losses at banks' foreign offices were attributable to securities write-downs and higher loan loss provisions.

Loan loss provisions in banks' foreign offices increased about 67 percent from the level of a year earlier, a substantially smaller increase than was posted at domestic offices. While interest income declined 20 percent in 2008, interest expense dropped

3. Exposure of U.S. banks to selected economies at year-end relative to tier 1 capital, 1997–2008

Percent

Year	Asia				Latin America and the Caribbean			Eastern Europe	G-10 and Switzerland[1]	Non-G-10 developed countries[2]	Total
	All	China	India	Korea	All	Mexico	Brazil				
1997	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1998	28.2	1.0	2.2	7.1	42.9	9.9	11.3	3.5	182.5	37.1	294.3
1999	26.1	.8	2.4	6.6	39.0	9.5	10.5	2.9	164.2	32.5	264.6
2000	24.0	.8	2.6	6.4	37.9	9.1	11.2	4.4	174.6	32.8	273.7
2001	22.4	.9	2.5	5.8	54.1	26.0	13.0	4.3	164.8	28.4	274.0
2002	21.9	.9	2.7	5.8	38.9	20.8	8.4	5.5	172.1	29.8	259.8
2003	22.8	1.3	3.9	5.5	32.8	18.0	6.8	5.4	182.0	35.0	278.1
2004	32.2	1.4	4.2	15.0	31.8	16.6	6.5	6.1	198.2	37.2	305.4
2005	30.7	2.4	4.9	12.9	31.8	17.4	6.9	5.9	165.2	31.6	265.3
2006	34.7	4.1	6.1	13.6	30.8	16.8	5.7	6.5	174.7	38.5	285.1
2007	44.6	4.5	9.8	14.4	35.6	17.2	8.2	9.0	219.3	48.3	356.6
2008	30.8	3.4	6.1	10.7	25.5	12.9	5.0	5.4	166.3	35.3	263.3
MEMO											
Total exposure (billions of dollars)											
1997	87.1	3.5	5.1	25.3	101.7	18.8	33.4	11.9	354.9	88.7	644.3
1998	69.1	2.3	5.4	17.3	105.0	24.1	27.6	8.5	446.3	90.8	719.6
1999	67.9	2.0	6.2	17.2	101.6	24.8	27.3	7.4	427.8	84.7	689.5
2000	68.0	2.2	7.5	18.1	107.3	25.7	31.6	12.3	494.6	93.0	775.3
2001	67.2	2.7	7.7	17.5	162.4	78.0	39.0	12.9	495.1	85.4	823.0
2002	69.5	2.7	8.7	18.4	123.5	66.2	26.6	17.5	546.5	94.7	824.7
2003	79.9	4.4	13.6	19.2	115.2	63.0	23.7	19.1	638.5	122.7	975.4
2004	125.8	5.3	16.3	58.7	124.4	65.2	25.5	23.8	775.7	145.5	1,195.4
2005	134.8	10.4	21.6	56.7	139.7	76.1	30.4	25.7	724.8	138.6	1,163.5
2006	190.5	22.7	33.6	74.8	168.9	92.5	31.5	35.5	959.1	211.2	1,565.2
2007	249.8	25.5	54.9	80.8	199.3	96.1	46.2	50.2	1,229.0	270.5	1,998.8
2008	217.4	24.3	43.1	75.3	179.7	90.7	35.6	37.9	1,172.9	248.6	1,856.5

NOTE: Exposures consist of lending and derivatives exposures for cross-border and local-office operations. Respondents may file information on one bank or on the bank holding company as a whole. For the definition of tier 1 capital, see text note 16.

The 2008 data cover 68 banks with a total of $705.1 billion in tier 1 capital.

1. The G-10 (Group of Ten) countries are Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Sweden, and the United Kingdom.

2. The non-G-10 developed countries include Australia, Austria, Denmark, Finland, Greece, Iceland, Israel, New Zealand, Norway, Portugal, South Africa, Spain, and Turkey.

n.a. Not available.

SOURCE: Federal Financial Institutions Examination Council, Statistical Release E.16, "Country Exposure Lending Survey" (www.ffiec.gov/E16.htm).

more than twice that amount. The resulting rise in net interest income boosted net income at foreign offices. Trading revenue, which accounts for about one-third of noninterest income, rose about 85 percent in 2008, but other noninterest income and income from investment banking activities, which account for most of the rest of noninterest income, were both down moderately at foreign offices.

Banks' total exposures to foreign economies through lending and derivatives activities dropped about 7 percent in 2008 after two years of sizable growth.[28] While banks reduced their exposures to both advanced foreign economies and emerging market economies, the most pronounced declines in U.S. banks' cross-border lending and derivatives activity—in dollar terms—occurred in the advanced foreign economies.[29] In relative terms, however, U.S. banks' exposures to some emerging market economies declined the most. The regions of Eastern Europe, Asia, and Latin America showed declines in dollar exposures of 25 percent, 13 percent, and 10 percent, respectively (table 3).

Overall, the decline in U.S. banks' exposures to foreign economies was likely attributable to the sharp decline in foreign economic activity and the attendant reduction in credit demand. In addition, exposures were likely reduced as banks pulled back from lending to foreign accounts in an effort to boost capital ratios and limit their credit and market risk. Indeed, total exposures from lending to foreign residents (excluding derivatives activity) fell about 17 percent in 2008.[30]

Developments in Early 2009

U.S. economic activity continued to contract in the first quarter of 2009.[31] The deterioration in labor

28. These exposures declined more significantly relative to tier 1 capital because the reporting institutions' tier 1 capital increased from $560 billion in 2007 to $705 billion in 2008.

29. The advanced foreign economies are those of Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and "other non-G-10 developed countries."

30. Exposures to foreign residents arising from derivatives activities with foreign counterparties actually doubled in 2008, most likely because of greater volatility in financial markets, especially late in the year.

31. This section reflects information available through mid-April.

market conditions accelerated in the first few months of the year, with steep job losses across virtually all sectors. In the first quarter, consumer spending showed some tentative signs of stabilization around the low level at which it ended 2008. Available data suggest that the outstanding amount of consumer credit was flat over the first two months of the year. Although housing market activity rebounded a little in February and March, for the quarter as a whole, single-family starts declined to a post–World War II low of about 350,000 units at an annual rate. Delinquencies on residential real estate loans rose further in the first part of the year, but foreclosures on residential properties were about flat, in part because of the temporary moratoriums by the housing-related GSEs and major banks on such foreclosures. Nonresidential construction also weakened further in the first quarter. The April 2009 SLOOS indicated that banks continued to tighten standards and terms on all major types of loans to businesses and households during the first quarter and that demand continued to weaken for nearly all types of loans.

Against this backdrop, financial markets and institutions generally remained under pressure through the first part of 2009. Early in the year, investors continued to be very reluctant to bear risk, and broad equity price indexes declined steeply in January and February while corporate bond spreads remained very high. However, sentiment in financial markets appears to have improved noticeably since then, partly reflecting positive investor guidance on first-quarter earnings at some major banks as well as investors' positive reception of the actions announced by the FOMC after its March meeting. Equity prices rose, on balance, in March while high-yield corporate bond spreads narrowed. Nonetheless, for the first quarter as a whole, bank stock prices declined considerably, on net, with the S&P bank stock index down about 40 percent. Premiums on credit default swaps for commercial banking firms also rose in the first quarter of 2009, on net, and the largest institutions experienced the greatest widening.

Reflecting the ongoing financial strains and the deterioration in the economic outlook, the Federal Reserve and the Treasury took a number of further actions during the first quarter to provide additional support to financial markets and institutions and contribute to a resumption of economic growth. The Federal Reserve began purchasing agency MBS during January.[32] In addition, at the conclusion of its March FOMC meeting, the Committee announced that the Federal Reserve would increase its long-term asset purchases, indicating that it would buy an additional $750 billion of MBS (up to a total of $1.25 trillion) and an additional $100 billion of agency debt (up to a total of $200 billion) this year to provide greater support to mortgage and housing markets. The Committee also announced that it would purchase up to $300 billion in longer-term Treasury securities over the period ending September 2009 to help improve conditions in private credit markets. Long-term Treasury yields, which had risen earlier in the year as market participants anticipated a greater supply of Treasury securities resulting from federal budget deficits, declined on the FOMC's announcement, and fixed-rate mortgage rates for high-quality borrowers dropped below 5 percent. Mortgage rates declined to their lowest levels since at least the 1970s, when these data were first collected.

In January 2009, the U.S. government, as part of its commitment to support financial market stability, entered into an agreement with Bank of America. In exchange for preferred stock, the government provided Bank of America with protection against the possibility of unusually large losses on certain pools of on-balance-sheet securities backed by residential and commercial real estate loans and by other assets. Moreover, the government invested an additional $20 billion from the TARP in the bank.

In February, the Treasury, FDIC, Office of the Comptroller of the Currency, Office of Thrift Supervision, and Federal Reserve initiated a Capital Assistance Program to ensure appropriate capitalization of the banks. Under the program, the bank supervisory agencies assessed the capital needs of 19 major U.S. banking institutions with year-end 2008 assets exceeding $100 billion under a baseline and a more challenging economic scenario. Should that evaluation indicate that an additional capital buffer is warranted, an institution will have an opportunity to turn first to private markets to raise capital. If the firm is unable to raise sufficient private capital, the temporary capital buffer will be made available from the government. The Public-Private Investment Program, introduced by the Treasury in March, with the participation of the FDIC and the Federal Reserve, will establish public-private investment funds to purchase legacy assets. Capital for the funds will be provided jointly by private investors and the Treasury. In addition, the government will provide the funds with leverage (through Federal Reserve lending or FDIC guarantees) that currently cannot be raised from market

32. The program was first announced in November 2008; more information on the MBS purchases is in Federal Reserve Bank of New York (2009), "Agency Mortgage-Backed Securities Purchase Program," www.newyorkfed.org/markets/mbs.

sources, allowing the funds to increase their purchases of legacy assets.

In March, the Federal Reserve initiated operations of the Term Asset-Backed Securities Loan Facility (TALF), originally announced in November 2008. The TALF is designed to catalyze the securitization markets by providing financing to investors to support their purchases of certain AAA-rated asset-backed securities. The market for ABS had been virtually shuttered since the worsening of the financial crisis in October 2008. The program initially accepted ABS backed by student loans, auto loans, credit card loans, and loans guaranteed by the Small Business Administration, but various types of ABS backed by loans to businesses were added in April, and several other asset types were being evaluated for acceptance, including commercial mortgage-backed securities and non-agency residential mortgage-backed securities. Under the TALF, the Federal Reserve lends an amount equal to the market value of the ABS less a "haircut," and the loan is secured at all times by the ABS. The Treasury—under the TARP—provides further credit protection to the Federal Reserve in connection with the TALF.

According to the Federal Reserve's weekly data, domestic commercial bank credit contracted in the first quarter of 2009. C&I loans ran off as demand waned and as banks reported widespread paydowns of outstanding loans. A temporary buildup of residential real estate loans on banks' books was unwound in March, as banks reportedly sold large amounts of such loans to the housing-related GSEs. Revolving home equity loans continued to grow despite further tightening of lending standards and terms reported by banks. Consumer loans increased slightly as a result of significant purchases of loans from nonbanks, likely owing, in part, to banks' better access to funding while the market for credit card and auto securitizations was impaired.

According to the April SLOOS, banks continued to tighten standards and terms over the first quarter of 2009 on all major categories of loans to both businesses and households. Although the net percentage of banks that reported having done so declined in some cases relative to the January survey, these percentages remained in the high end of their historical ranges for all loan categories. Respondents also indicated that demand for all types of loans continued to weaken, with the notable exception of prime residential mortgages. This result coincided with a slight upturn in applications for mortgages to purchase homes and a substantial rise in applications for refinancing. Assuming the economy progresses according to consensus forecasts, a significant majority of banks reported that delinquencies and charge-offs on existing loans to businesses and households were likely to deteriorate further over the remainder of this year.

In early April, the Financial Accounting Standards Board issued guidance related to fair value measurements and other-than-temporary impairments (OTTI). The new fair value guidance reduces the emphasis to be placed on the "last transaction price" in valuing assets when markets are not active and transactions are likely to be forced or distressed. The new guidance may result in higher fair value estimates if current fair values inappropriately rely on distressed transaction prices. The new OTTI guidance will require impairment write-downs through earnings only for the credit-related portion of a debt security's fair value impairment when two criteria are met: (1) The institution does not have the intent to sell the debt security, and (2) it is unlikely that the institution will be required to sell the debt security before a forecasted recovery of its cost basis. This guidance may result in reductions in impairments, thus improving institutions' earnings.[33]

By the middle of April, about one-half of banking organizations had reported their earnings for the first quarter of 2009. While earnings per share (EPS) results were better than expected at some (especially large) banking organizations, about one-third of the firms reported losses, and about two-thirds fell short of analysts' expectations. Banks cited continued declines in house prices as well as the weakening economic environment and its impact on commercial loan portfolios as the primary reasons for the losses. Their earnings results, coupled with analysts' estimates available through mid-April, indicated that banking firms will earn in the first quarter of 2009, on average, about one-fourth of their EPS in the same quarter last year and just slightly more per share than in the fourth quarter of 2008. □

33. More information on the guidance, which consists of Statement of Financial Accounting Standards (FAS) 157-e, FAS 115-a, FAS 124-a, and guidance from the Emerging Issues Task Force, EITF 99-20-b, is in Financial Accounting Standards Board (2009), "Summary of Board Decisions," April 2, www.fasb.org/action/sbd040209.shtml.

Appendix tables start on p. A87

A.1. Portfolio composition, interest rates, and income and expense, U.S. banks, 1999–2008

A. All banks

Item	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	Balance sheet items as a percentage of average net consolidated assets									
Interest-earning assets[1]	87.03	87.13	86.49	86.42	86.08	86.90	86.82	86.86	86.94	85.30
Loans and leases (net)	59.34	60.48	58.95	57.83	56.88	56.98	57.88	58.26	58.37	56.73
Commercial and industrial	17.07	17.16	16.08	14.07	12.18	11.06	11.17	11.42	11.84	12.08
U.S. addressees	14.43	14.67	13.69	12.04	10.48	9.52	9.64	9.73	9.86	10.12
Foreign addressees	2.64	2.49	2.39	2.04	1.70	1.54	1.53	1.70	1.98	1.96
Consnmer	9.71	9.38	9.23	9.35	9.06	9.18	9.12	8.53	8.43	8.33
Credit card	3.51	3.52	3.69	3.78	3.55	3.87	4.06	3.73	3.72	3.68
Installment and other	6.20	5.87	5.55	5.57	5.51	5.31	5.06	4.80	4.71	4.65
Real estate	25.44	27.04	27.10	28.39	29.91	30.77	32.40	33.19	33.37	31.95
In domestic offices	24.87	26.49	26.60	27.91	29.45	30.24	31.84	32.61	32.76	31.35
Construction and land development	2.18	2.51	2.85	2.98	2.99	3.26	3.90	4.73	5.05	4.72
Farmland	.56	.56	.55	.56	.54	.54	.54	.53	.53	.52
One- to four-family residential	14.10	14.96	14.67	15.40	16.96	17.42	18.26	18.23	18.31	17.29
Home equity	1.76	1.96	2.18	2.80	3.40	4.34	4.95	4.71	4.49	4.60
Other	12.34	13.00	12.49	12.60	13.57	13.08	13.31	13.51	13.82	12.70
Multifamily residential	.88	.99	.97	1.02	1.05	1.06	1.08	1.06	1.04	1.10
Nonfarm nonresidential	7.15	7.48	7.56	7.95	7.91	7.97	8.06	8.07	7.84	7.72
In foreign offices	.57	.54	.50	.48	.46	.53	.56	.58	.60	.61
To depository institutions and acceptances of other banks	1.96	1.87	1.83	1.87	1.98	2.11	1.73	1.65	1.21	1.19
Foreign governments	.16	.12	.10	.09	.08	.08	.06	.04	.03	.02
Agricultural production	.83	.78	.75	.70	.63	.59	.56	.55	.52	.49
Other loans	2.75	2.58	2.34	2.06	2.00	2.35	2.09	2.19	2.48	2.64
Lease-financing receivables	2.51	2.63	2.58	2.44	2.11	1.79	1.58	1.43	1.23	1.08
LESS: Unearned income on loans	–.06	–.05	–.04	–.05	–.04	–.04	–.03	–.03	–.02	–.02
LESS: Loss reserves[2]	–1.04	–1.02	–1.04	–1.11	–1.04	–.91	–.79	–.71	–.70	–1.03
Securities	20.40	20.02	19.53	21.27	21.90	22.57	22.04	21.32	20.77	19.29
Investment account	18.33	17.59	16.82	18.30	18.97	18.99	17.87	16.89	15.41	14.13
Debt	17.73	16.93	16.48	17.99	18.72	18.79	17.71	16.73	15.23	13.95
U.S. Treasury	2.14	1.66	.85	.78	.90	.89	.62	.47	.32	.24
U.S. government agency and corporation obligations	10.85	10.31	10.08	11.46	12.26	12.37	11.51	10.65	9.32	8.11
Government-backed mortgage pools	5.24	4.75	5.13	6.09	6.75	7.13	6.78	6.43	5.82	5.47
Collateralized mortgage obligations	2.15	1.92	1.95	2.35	2.34	2.01	1.80	1.58	1.34	1.24
Other	3.46	3.63	2.99	3.02	3.17	3.22	2.93	2.65	2.16	1.40
State and local government	1.62	1.52	1.49	1.49	1.48	1.41	1.36	1.34	1.34	1.20
Private mortgage-backed securities	.88	.95	1.09	1.25	1.30	1.41	1.76	1.89	2.15	2.13
Other	2.24	2.48	2.98	3.01	2.78	2.72	2.47	2.37	2.10	2.28
Equity	.61	.66	.34	.31	.25	.20	.16	.16	.18	.18
Trading account	2.06	2.43	2.72	2.97	2.93	3.59	4.17	4.43	5.36	5.16
Gross federal funds sold and reverse RPs	4.61	4.12	5.11	4.81	4.85	4.58	4.75	5.30	5.49	6.03
Balances at depositories[1]	2.68	2.52	2.90	2.52	2.46	2.76	2.14	1.98	2.30	3.25
Noninterest-earning assets[1]	12.97	12.87	13.51	13.58	13.92	13.10	13.18	13.14	13.06	14.70
Revaluation gains held in trading accounts	2.57	2.28	2.37	2.42	2.70	2.19	1.82	1.64	1.73	2.83
Other	10.41	10.58	11.14	11.16	11.22	10.91	11.36	11.51	11.33	11.87
Liabilities	91.52	91.58	91.25	90.85	90.96	90.57	89.91	89.84	89.78	90.07
Core deposits	48.60	46.52	47.07	48.98	49.18	48.56	47.52	45.56	43.89	42.71
Transaction deposits	12.58	11.07	10.36	10.06	9.73	9.10	8.46	7.45	6.43	6.16
Demand deposits	9.78	8.61	8.00	7.67	7.26	6.58	6.16	5.41	4.66	4.53
Other checkable deposits	2.81	2.46	2.36	2.39	2.47	2.52	2.30	2.04	1.77	1.63
Savings deposits (including MMDAs)	22.47	22.43	24.53	28.13	30.12	31.19	30.83	29.49	28.21	27.04
Small time deposits	13.55	13.01	12.18	10.80	9.33	8.27	8.23	8.62	9.26	9.50
Managed liabilities[3]	36.59	38.83	37.42	35.05	34.61	35.69	36.25	38.29	39.85	41.08
Large time deposits	7.89	8.77	8.89	8.30	8.09	8.00	9.11	10.07	9.13	9.13
Deposits booked in foreign offices	10.96	11.43	10.66	9.42	9.38	10.25	10.39	11.18	12.81	13.09
Subordinated notes and debentures	1.36	1.37	1.43	1.40	1.33	1.30	1.34	1.40	1.55	1.51
Gross federal funds purchased and RPs	7.97	7.83	7.95	7.77	7.75	7.24	7.05	7.53	7.06	6.98
Other managed liabilities	8.40	9.44	8.49	8.16	8.06	8.91	8.37	8.11	9.31	10.38
Revaluation losses held in trading accounts	2.52	2.29	2.21	2.09	2.30	1.95	1.67	1.51	1.59	2.27
Other	3.81	3.94	4.54	4.73	4.87	4.36	4.47	4.47	4.44	4.01
Capital account	8.48	8.42	8.75	9.15	9.04	9.43	10.09	10.16	10.22	9.93
MEMO										
Commercial real estate loans[4]	10.87	11.58	12.09	12.57	12.47	12.78	13.52	14.35	14.47	14.10
Other real estate owned[5]	.06	.05	.05	.06	.06	.06	.04	.05	.07	.13
Mortgage-backed securities	8.27	7.63	8.17	9.69	10.39	10.56	10.33	9.89	9.31	8.84
Federal Home Loan Bank advances	n.a.	n.a.	2.89	3.17	3.19	3.07	3.04	3.07	3.66	4.44
Balances at the Federal Reserve[1]	.52	.42	.40	.38	.40	.35	.29	.24	.20	3.44
Interest-earning	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.00
Noninterest-earning	.52	.42	.40	.38	.40	.35	.29	.24	.20	.44
Interest-earning balances at depositories other than the Federal Reserve	2.68	2.52	2.90	2.52	2.46	2.76	2.14	1.98	2.30	2.69
Average net consolidated assets (billions of dollars)	5,439	5,907	6,334	6,635	7,249	7,879	8,592	9,427	10,396	11,578

A.1. Portfolio composition, interest rates, and income and expense, U.S. banks, 1999–2008—*Continued*

A. All banks—*Continued*

Item	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	Effective interest rate (percent)[6]									
Rates earned										
Interest-earning assets	7.73	8.20	7.37	6.10	5.29	5.08	5.70	6.65	6.78	5.72
Taxable equivalent	7.78	8.26	7.42	6.15	5.33	5.12	5.73	6.68	6.82	5.75
Loans and leases, gross	8.50	9.00	8.15	6.89	6.15	5.91	6.52	7.55	7.54	6.39
Net of loss provisions	7.99	8.33	7.15	5.84	5.47	5.47	6.09	7.18	6.70	3.91
Securities	6.30	6.47	6.04	4.95	3.96	3.86	4.18	4.71	5.02	4.87
Taxable equivalent	6.48	6.65	6.22	5.10	4.10	3.99	4.30	4.83	5.14	4.95
Investment account	6.28	6.45	6.05	5.04	4.00	3.96	4.29	4.86	5.13	4.93
U.S. Treasury securities and U.S. government agency obligations (excluding MBS)	n.a.	n.a.	5.76	4.42	3.29	3.11	3.46	4.19	4.71	4.23
Mortgage-backed securities	n.a.	n.a.	6.45	5.44	4.24	4.38	4.60	5.10	5.29	5.21
Other	n.a.	n.a.	5.60	4.74	4.08	3.76	4.23	4.76	5.02	4.58
Trading account	6.48	6.63	6.01	4.38	3.71	3.35	3.72	4.16	4.70	4.67
Gross federal funds sold and reverse RPs	4.78	5.56	3.86	1.93	1.40	1.40	2.66	4.31	5.07	2.53
Interest-bearing balances at depositories[1]	5.95	6.48	4.01	2.79	2.09	1.98	3.70	5.10	5.13	3.23
Rates paid										
Interest-bearing liabilities	4.31	4.94	3.93	2.38	1.72	1.63	2.47	3.59	3.82	2.53
Interest-bearing deposits	3.88	4.45	3.61	2.11	1.47	1.36	2.06	3.05	3.39	2.26
In foreign offices	4.91	5.61	3.94	2.38	1.62	1.72	2.77	3.92	4.23	2.47
In domestic offices	3.64	4.17	3.54	2.06	1.44	1.29	1.91	2.85	3.18	2.21
Other checkable deposits	2.08	2.34	1.96	1.06	.75	.77	1.41	1.88	2.04	1.16
Savings deposits (including MMDAs)	2.50	2.86	2.19	1.13	.74	.72	1.24	2.01	2.22	1.26
Large time deposits	4.93	5.78	5.04	3.37	2.59	2.35	3.19	4.39	4.71	3.48
Other time deposits	5.11	5.69	5.43	3.70	2.88	2.56	3.14	4.11	4.72	3.82
Gross federal funds purchased and RPs	4.74	5.77	3.83	1.88	1.30	1.49	3.07	4.57	4.97	2.39
Other interest-bearing liabilities	6.49	6.97	5.91	4.49	3.69	3.34	4.58	6.28	5.46	4.05
	Income and expense as a percentage of average net consolidated assets									
Gross interest income	6.75	7.18	6.38	5.27	4.54	4.43	4.97	5.85	5.94	4.89
Taxable equivalent	6.80	7.22	6.42	5.31	4.58	4.46	5.00	5.88	5.97	4.91
Loans	5.13	5.53	4.92	4.06	3.55	3.42	3.82	4.48	4.47	3.68
Securities	1.15	1.15	1.00	.89	.74	.74	.77	.84	.80	.70
Gross federal funds sold and reverse RPs	.23	.23	.20	.09	.07	.07	.13	.23	.28	.15
Other	.24	.27	.27	.22	.18	.20	.25	.31	.39	.36
Gross interest expense	3.22	3.76	2.98	1.79	1.30	1.25	1.89	2.79	2.99	1.96
Deposits	2.21	2.56	2.09	1.23	.86	.81	1.23	1.84	2.05	1.34
Gross federal funds purchased and RPs	.39	.45	.31	.15	.10	.11	.22	.36	.36	.17
Other	.63	.75	.58	.41	.33	.33	.44	.59	.58	.45
Net interest income	3.52	3.41	3.40	3.48	3.24	3.17	3.07	3.05	2.95	2.93
Taxable equivalent	3.57	3.46	3.44	3.52	3.28	3.21	3.11	3.09	2.98	2.95
Loss provisions[7]	.39	.50	.68	.68	.45	.30	.30	.27	.55	1.47
Noninterest income	2.66	2.59	2.54	2.54	2.54	2.40	2.35	2.36	2.10	1.80
Service charges on deposits	.40	.40	.42	.45	.44	.42	.39	.38	.38	.37
Fiduciary activities	.38	.38	.35	.32	.31	.32	.31	.30	.32	.28
Trading revenue	.19	.21	.20	.16	.16	.13	.17	.20	.05	−.02
Interest rate exposures	.07	.08	.09	.08	.07	.03	.05	.05	.04	.01
Foreign exchange rate exposures	.09	.08	.07	.07	.07	.07	.07	.08	.07	.10
Other commodity and equity exposures	.03	.04	.03	.01	.02	.03	.04	.07	.03	*
Credit exposures	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	−.09	−.12
Other	1.70	1.61	1.57	1.60	1.63	1.53	1.48	1.48	1.36	1.16
Noninterest expense	3.77	3.66	3.57	3.47	3.36	3.34	3.19	3.13	3.09	3.07
Salaries, wages, and employee benefits	1.59	1.51	1.49	1.51	1.50	1.46	1.44	1.44	1.39	1.27
Occupancy	.48	.45	.44	.44	.43	.42	.41	.39	.37	.35
Other	1.71	1.70	1.64	1.51	1.43	1.46	1.34	1.30	1.33	1.45
Net noninterest expense	1.11	1.07	1.03	.93	.82	.94	.84	.76	.99	1.28
Gains on investment account securities	*	−.04	.07	.10	.08	.04	*	−.01	−.01	−.14
Income before taxes and extraordinary items	2.03	1.81	1.77	1.96	2.05	1.97	1.93	2.00	1.41	.04
Taxes	.72	.63	.59	.65	.67	.64	.62	.65	.43	.02
Extraordinary items, net of income taxes	*	*	−.01	*	.01	*	*	.03	−.02	.05
Net income	1.31	1.18	1.17	1.32	1.39	1.33	1.31	1.39	.97	.07
Cash dividends declared	.96	.89	.87	1.01	1.07	.76	.75	.87	.82	.37
Retained income	.35	.29	.31	.30	.31	.58	.56	.51	.15	−.31
MEMO: Return on equity	15.43	13.97	13.41	14.38	15.34	14.14	12.99	13.64	9.45	.69

NOTE: Data are as of April 16, 2009.

1. Effective October 1, 2008, the Federal Reserve began paying interest on depository institutions' required and excess reserve balances. Beginning with the 2008:Q4 Call Report, balances due from Federal Reserve Banks are now reported under "Interest-earning assets" rather than "Noninterest-earning assets."

2. Includes allocated transfer risk reserve.

3. Measured as the sum of large time deposits in domestic offices, deposits booked in foreign offices, subordinated notes and debentures, federal funds purchased and securities sold under repurchase agreements, Federal Home Loan Bank advances, and other borrowed money.

4. Measured as the sum of construction and land development loans secured by real esate; real estate loans secured by nonfarm nonresidential properties or by multifamily residential properties; and loans to finance commercial real estate, construction, and land development activities not secured by real estate.

5. Other real estate owned is a component of other noninterest-earning assets.

6. When possible, based on the average of quarterly balance sheet data reported on schedule RC-K of the quarterly Call Report.

7. Includes provisions for allocated transfer risk.

* In absolute value, less than 0.005 percent.

n.a. Not available.

MMDA Money market deposit account.

RP Repurchase agreement.

MBS Mortgage-backed securities.

A.1. Portfolio composition, interest rates, and income and expense, U.S. banks, 1999–2008

B. Ten largest banks by assets

Item	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	Balance sheet items as a percentage of average net consolidated assets									
Interest-earning assets[1]	81.49	82.23	81.74	81.68	81.39	83.54	83.96	84.68	85.03	83.09
Loans and leases (net)	53.37	55.22	53.86	53.61	52.20	51.29	51.35	52.03	53.21	50.66
Commercial and industrial	19.20	19.87	18.82	16.16	12.98	10.54	10.61	11.20	11.58	11.85
U.S. addressees	13.14	13.95	13.42	11.69	9.40	7.49	7.74	8.08	8.05	8.45
Foreign addressees	6.06	5.92	5.41	4.47	3.59	3.06	2.87	3.12	3.53	3.40
Consumer	5.94	5.43	6.17	7.82	7.96	8.49	8.80	8.17	8.98	8.43
Credit card	1.36	1.34	1.69	2.90	2.81	3.19	3.60	3.05	3.87	3.54
Installment and other	4.58	4.09	4.48	4.92	5.15	5.30	5.21	5.13	5.11	4.89
Real estate	16.96	19.82	19.23	20.78	22.68	23.21	24.55	25.51	27.04	25.26
In domestic offices	15.55	18.48	18.05	19.70	21.74	22.21	23.52	24.50	26.00	24.29
Construction and land development	.90	.98	1.27	1.42	1.36	1.40	1.70	2.01	2.01	1.86
Farmland	.10	.11	.11	.12	.10	.10	.10	.10	.09	.09
One- to four-family residential	10.77	13.37	12.41	13.51	16.03	16.71	17.73	18.30	19.86	18.40
Home equity	1.54	1.61	1.78	2.35	2.96	4.04	5.22	5.40	5.46	5.59
Other	9.22	11.76	10.63	11.17	13.07	12.67	12.52	12.90	14.40	12.80
Multifamily residential	.43	.60	.51	.55	.47	.45	.44	.44	.55	.69
Nonfarm nonresidential	3.35	3.42	3.76	4.09	3.78	3.55	3.55	3.65	3.49	3.25
In foreign offices	1.41	1.34	1.18	1.08	.94	1.00	1.03	1.01	1.03	.97
To depository institutions and acceptances of other banks	4.34	3.78	3.23	3.20	3.54	4.10	3.15	2.97	1.71	1.67
Foreign governments	.38	.28	.20	.20	.17	.16	.12	.07	.05	.02
Agricultural production	.26	.23	.28	.23	.19	.22	.20	.20	.17	.15
Other loans	3.96	3.75	3.51	2.94	2.87	3.32	2.81	2.88	3.08	3.21
Lease-financing receivables	3.40	3.07	3.43	3.44	2.87	2.08	1.78	1.60	1.22	1.06
LESS: Unearned income on loans	–.05	–.04	–.04	–.08	–.06	–.04	–.04	–.02	–.02	–.02
LESS: Loss reserves[2]	–1.03	–.97	–.97	–1.12	–1.02	–.80	–.65	–.56	–.60	–.98
Securities	18.34	18.98	17.81	20.54	21.22	22.95	23.37	23.05	21.97	21.02
Investment account	13.08	13.71	12.14	14.35	15.31	15.99	15.58	15.12	12.81	12.44
Debt	12.57	13.03	11.88	14.13	15.11	15.83	15.44	14.97	12.66	12.32
U.S. Treasury	1.98	1.96	.68	.59	.82	.86	.56	.43	.24	.16
U.S. government agency and corporation obligations	6.35	6.59	6.84	8.69	9.20	9.92	9.69	9.48	8.02	6.90
Government-backed mortgage pools	5.03	4.88	4.99	6.38	7.59	8.64	8.65	8.64	7.53	6.48
Collateralized mortgage obligations	.79	.93	1.11	1.52	.91	.70	.54	.53	.33	.33
Other	.52	.78	.74	.79	.70	.58	.50	.32	.16	.09
State and local government	.45	.51	.55	.59	.59	.57	.58	.64	.65	.55
Private mortgage-backed securities	.57	.51	.58	.92	1.10	.96	1.18	1.09	1.45	2.06
Other	3.22	3.47	3.22	3.34	3.40	3.52	3.43	3.33	2.30	2.66
Equity	.51	.68	.26	.22	.20	.16	.14	.15	.16	.12
Trading account	5.25	5.26	5.67	6.18	5.91	6.96	7.79	7.94	9.16	8.57
Gross federal funds sold and reverse RPs	6.64	5.02	6.38	5.26	5.79	6.37	6.96	7.60	7.47	8.13
Balances at depositories[1]	3.14	3.01	3.69	2.28	2.18	2.93	2.28	1.99	2.38	3.28
Noninterest-earning assets[1]	18.51	17.77	18.26	18.32	18.61	16.46	16.04	15.32	14.97	16.91
Revaluation gains held in trading accounts	6.66	5.66	5.48	5.40	5.79	4.45	3.50	3.07	3.03	4.77
Other	11.85	12.11	12.78	12.93	12.83	12.01	12.54	12.25	11.93	12.14
Liabilities	92.28	92.36	92.14	91.52	91.94	91.64	90.81	91.10	90.82	91.34
Core deposits	33.76	33.28	36.38	40.61	41.07	42.02	40.18	38.03	35.08	34.49
Transaction deposits	8.55	8.01	8.40	8.34	7.74	6.65	6.05	5.41	4.69	4.73
Demand deposits	7.83	7.28	7.50	7.40	6.72	5.43	4.90	4.32	3.80	3.91
Other checkable deposits	.72	.74	.90	.95	1.02	1.22	1.15	1.09	.89	.81
Savings deposits (including MMDAs)	18.94	19.24	22.21	26.82	28.99	31.54	30.11	28.11	25.55	24.59
Small time deposits	6.26	6.03	5.77	5.44	4.34	3.83	4.02	4.52	4.84	5.18
Managed liabilities[3]	45.49	46.84	43.41	38.89	38.60	39.33	40.83	43.75	46.83	47.69
Large time deposits	5.19	5.55	5.46	5.13	5.53	5.21	6.28	6.85	6.13	6.72
Deposits booked in foreign offices	22.22	22.76	20.28	17.31	16.62	17.20	17.51	18.50	19.86	20.16
Subordinated notes and debentures	1.98	2.10	2.16	2.11	1.92	1.78	1.89	1.99	2.17	2.09
Gross federal funds purchased and RPs	8.84	8.89	9.04	8.83	8.62	7.79	8.39	9.51	8.42	8.18
Other managed liabilities	7.27	7.55	6.47	5.53	5.90	7.35	6.76	6.89	10.26	10.54
Revaluation losses held in trading accounts	6.51	5.69	5.10	4.63	4.88	3.95	3.21	2.83	2.79	3.77
Other	6.52	6.55	7.26	7.39	7.40	6.34	6.60	6.47	6.12	5.39
Capital account	7.72	7.64	7.86	8.48	8.06	8.36	9.19	8.90	9.18	8.66
MEMO										
Commercial real estate loans[4]	5.69	5.87	6.68	6.92	6.31	5.99	6.33	6.73	6.64	6.37
Other real estate owned[5]	.06	.04	.04	.03	.03	.03	.02	.03	.05	.09
Mortgage-backed securities	6.40	6.32	6.68	8.82	9.60	10.30	10.36	10.25	9.31	8.87
Federal Home Loan Bank advances	n.a.	n.a.	.82	.82	.84	.79	.63	.75	2.33	2.79
Balances at the Federal Reserve[1]	.26	.20	.27	.23	.23	.25	.21	.17	.15	3.92
Interest-earning	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.61
Noninterest-earning	.26	.20	.27	.23	.23	.25	.21	.17	.15	.32
Interest-earning balances at depositories other than the Federal Reserve	3.14	3.01	3.69	2.28	2.18	2.93	2.28	1.99	2.38	2.69
Average net consolidated assets (billions of dollars)	1,935	2,234	2,527	2,785	3,148	3,654	4,232	4,759	5,469	6,241

A.1. Portfolio composition, interest rates, and income and expense, U.S. banks, 1999–2008—*Continued*

B. Ten largest banks by assets—*Continued*

Item	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	Effective interest rate (percent)[6]									
Rates earned										
Interest-earning assets	7.37	7.76	6.83	5.82	4.99	4.71	5.29	6.32	6.52	5.44
Taxable equivalent	7.39	7.78	6.86	5.85	5.01	4.73	5.31	6.34	6.54	5.45
Loans and leases, gross	7.99	8.46	7.50	6.52	5.76	5.52	6.15	7.36	7.33	6.14
Net of loss provisions	7.65	7.92	6.55	5.30	5.19	5.29	5.84	7.02	6.29	3.23
Securities	6.58	6.48	6.23	5.04	4.15	4.04	4.27	4.69	4.99	4.91
Taxable equivalent	6.65	6.55	6.31	5.11	4.21	4.10	4.32	4.75	5.04	4.94
Investment account	6.59	6.40	6.23	5.30	4.26	4.37	4.63	5.11	5.29	5.14
U.S. Treasury securities and U.S. government agency obligations (excluding MBS)	n.a.	n.a.	5.01	3.74	2.62	2.92	3.29	4.15	4.15	3.02
Mortgage-backed securities	n.a.	n.a.	6.42	5.55	4.51	4.83	4.92	5.30	5.41	5.34
Other	n.a.	n.a.	6.34	5.30	4.28	3.76	4.26	4.81	5.08	4.77
Trading account	6.56	6.70	6.24	4.46	3.87	3.32	3.57	3.90	4.57	4.56
Gross federal funds sold and reverse RPs	4.52	4.93	3.86	2.20	1.60	1.43	2.46	4.07	5.06	2.59
Interest-bearing balances at depositories[1]	7.22	7.43	3.73	3.40	2.49	1.80	4.06	5.59	5.36	3.46
Rates paid										
Interest-bearing liabilities	4.52	5.03	3.78	2.33	1.67	1.62	2.52	3.74	3.87	2.47
Interest-bearing deposits	3.82	4.40	3.27	1.94	1.34	1.29	2.01	2.96	3.30	2.08
In foreign offices	4.99	5.67	4.02	2.59	1.74	1.81	2.77	3.88	4.28	2.52
In domestic offices	3.04	3.51	2.84	1.67	1.18	1.08	1.70	2.55	2.80	1.85
Other checkable deposits	1.44	1.61	1.67	.93	.80	.97	2.27	2.46	2.36	1.13
Savings deposits (including MMDAs)	2.11	2.43	1.92	1.02	.73	.71	1.15	1.87	1.98	1.10
Large time deposits	4.36	5.32	4.40	3.26	2.36	2.14	3.06	4.32	4.72	3.35
Other time deposits	4.95	5.53	5.11	3.44	2.70	2.61	3.40	4.05	4.55	3.46
Gross federal funds purchased and RPs	4.53	5.47	3.81	2.02	1.39	1.59	3.11	4.63	5.15	2.54
Other interest-bearing liabilities	8.26	8.07	6.84	5.57	4.42	3.83	5.40	7.78	5.61	4.32
	Income and expense as a percentage of average net consolidated assets									
Gross interest income	6.01	6.39	5.55	4.77	4.05	3.94	4.47	5.46	5.61	4.52
Taxable equivalent	6.03	6.41	5.57	4.79	4.07	3.96	4.48	5.48	5.63	4.53
Loans	4.35	4.74	4.13	3.57	3.04	2.86	3.19	3.91	3.98	3.15
Securities	.85	.88	.72	.73	.63	.69	.72	.80	.69	.65
Gross federal funds sold and reverse RPs	.30	.25	.25	.12	.10	.10	.18	.31	.38	.20
Other	.51	.51	.44	.35	.28	.30	.38	.45	.56	.51
Gross interest expense	3.16	3.60	2.69	1.65	1.19	1.20	1.89	2.88	3.00	1.88
Deposits	1.97	2.33	1.74	1.05	.74	.74	1.17	1.72	1.87	1.17
Gross federal funds purchased and RPs	.40	.49	.35	.18	.13	.13	.27	.47	.46	.21
Other	.79	.78	.59	.41	.33	.33	.45	.69	.68	.50
Net interest income	2.84	2.78	2.87	3.12	2.86	2.74	2.58	2.58	2.61	2.63
Taxable equivalent	2.86	2.80	2.89	3.14	2.88	2.76	2.59	2.60	2.63	2.65
Loss provisions[7]	.26	.38	.59	.73	.35	.16	.20	.22	.60	1.52
Noninterest income	2.55	2.54	2.26	2.31	2.32	2.21	2.37	2.35	1.95	1.66
Service charges on deposits	.37	.40	.44	.48	.46	.45	.42	.41	.40	.40
Fiduciary activities	.31	.27	.29	.25	.26	.24	.27	.23	.20	.21
Trading revenue	.46	.48	.43	.32	.30	.23	.31	.37	.05	−.01
Interest rate exposures	.17	.20	.20	.15	.12	.07	.11	.09	.08	.03
Foreign exchange rate exposures	.19	.18	.14	.14	.14	.12	.12	.14	.09	.14
Other commodity and equity exposures	.09	.11	.08	.03	.04	.04	.07	.13	.06	−.01
Credit exposures	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	−.18	−.17
Other	1.41	1.39	1.10	1.26	1.30	1.28	1.38	1.35	1.31	1.07
Noninterest expense	3.45	3.31	3.13	3.16	3.02	3.11	2.99	2.89	2.80	2.71
Salaries, wages, and employee benefits	1.57	1.46	1.38	1.41	1.39	1.34	1.38	1.39	1.32	1.20
Occupancy	.50	.47	.45	.46	.45	.43	.43	.40	.37	.35
Other	1.38	1.39	1.30	1.28	1.18	1.33	1.19	1.09	1.12	1.17
Net noninterest expense	.90	.77	.87	.85	.70	.91	.62	.54	.85	1.05
Gains on investment account securities	.03	−.03	.08	.13	.11	.07	*	−.01	.02	−.05
Income before taxes and extraordinary items	1.71	1.60	1.48	1.67	1.92	1.74	1.75	1.82	1.18	*
Taxes	.66	.60	.49	.56	.63	.56	.57	.59	.33	−.07
Extraordinary items, net of income taxes	*	*	−.01	*	*	*	*	.02	*	.09
Net income	1.05	1.00	.99	1.11	1.29	1.18	1.18	1.25	.85	.16
Cash dividends declared	.79	.86	.66	1.05	.99	.65	.59	.64	.60	.28
Retained income	.26	.13	.32	.06	.30	.53	.59	.62	.25	−.11
MEMO: Return on equity	13.58	13.04	12.55	13.14	16.06	14.07	12.86	14.08	9.23	1.89

NOTE: Data are as of April 16, 2009.

1. Effective October 1, 2008, the Federal Reserve began paying interest on depository institutions' required and excess reserve balances. Beginning with the 2008:Q4 Call Report, balances due from Federal Reserve Banks are now reported under "Interest-earning assets" rather than "Noninterest-earning assets."

2. Includes allocated transfer risk reserve.

3. Measured as the sum of large time deposits in domestic offices, deposits booked in foreign offices, subordinated notes and debentures, federal funds purchased and securities sold under repurchase agreements, Federal Home Loan Bank advances, and other borrowed money.

4. Measured as the sum of construction and land development loans secured by real estate; real estate loans secured by nonfarm nonresidential properties or by multifamily residential properties; and loans to finance commercial real estate, construction, and land development activities not secured by real estate.

5. Other real estate owned is a component of other noninterest-earning assets.

6. When possible, based on the average of quarterly balance sheet data reported on schedule RC-K of the quarterly Call Report.

7. Includes provisions for allocated transfer risk.

* In absolute value, less than 0.005 percent.

n.a. Not available.

MMDA Money market deposit account.

RP Repurchase agreement.

MBS Mortgage-backed securities.

A.1. Portfolio composition, interest rates, and income and expense, U.S. banks, 1999–2008

C. Banks ranked 11 through 100 by assets

Item	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	Balance sheet items as a percentage of average net consolidated assets									
Interest-earning assets[1]	88.40	88.67	88.09	88.34	88.10	88.18	87.87	87.05	87.01	85.34
Loans and leases (net)	64.22	64.88	62.14	60.00	59.48	60.63	63.37	62.77	60.99	60.04
Commercial and industrial	19.39	18.19	15.84	13.27	11.96	11.90	12.17	12.13	12.74	12.80
U.S. addressees	18.17	17.64	15.36	12.94	11.66	11.64	11.91	11.81	12.41	12.46
Foreign addressees	1.22	.55	.48	.33	.30	.26	.27	.32	.33	.34
Consumer	13.58	13.79	13.20	12.79	12.57	12.74	12.84	11.94	9.99	10.61
Credit card	6.79	6.97	7.05	6.56	6.35	6.90	7.45	7.12	5.29	5.67
Installment and other	6.79	6.82	6.15	6.22	6.21	5.83	5.39	4.82	4.70	4.94
Real estate	24.79	26.21	27.29	28.94	30.67	32.16	34.89	35.23	33.53	32.50
In domestic offices	24.61	26.12	27.21	28.88	30.54	31.96	34.73	35.03	33.35	32.19
Construction and land development	2.44	3.00	3.31	3.36	3.22	3.51	4.21	5.27	5.95	5.62
Farmland	.19	.22	.23	.22	.20	.19	.19	.17	.21	.26
One- to four-family residential	14.14	14.51	15.51	17.05	18.79	19.52	21.05	20.27	17.80	16.57
Home equity	2.08	2.49	2.90	3.92	4.74	5.90	6.04	5.01	4.01	3.90
Other	12.06	12.02	12.60	13.13	14.05	13.62	15.01	15.26	13.79	12.67
Multifamily residential	1.02	1.11	1.16	1.20	1.32	1.34	1.45	1.45	1.27	1.22
Nonfarm nonresidential	6.81	7.28	6.99	7.05	7.00	7.41	7.83	7.86	8.13	8.52
In foreign offices	.19	.09	.09	.06	.13	.20	.16	.21	.18	.31
To depository institutions and acceptances of other banks	.93	1.05	1.40	1.44	1.21	.54	.56	.45	1.05	.94
Foreign governments	.06	.03	.03	.02	.02	.01	.02	.01	.01	.03
Agricultural production	.33	.37	.32	.27	.23	.19	.19	.18	.21	.23
Other loans	2.99	2.57	2.03	1.80	1.59	1.87	1.62	1.88	2.43	2.56
Lease-financing receivables	3.28	3.82	3.18	2.65	2.35	2.30	2.07	1.83	1.80	1.51
LESS: Unearned income on loans	−.04	−.03	−.02	−.02	−.02	−.02	−.01	−.01	−.01	−.01
LESS: Loss reserves[2]	−1.11	−1.12	−1.13	−1.17	−1.10	−1.06	−.97	−.87	−.75	−1.12
Securities	17.78	17.32	19.00	20.30	21.16	21.28	19.96	19.22	19.89	16.87
Investment account	17.27	16.10	17.71	19.17	20.09	20.12	18.80	17.72	17.99	14.99
Debt	16.62	15.50	17.32	18.82	19.88	19.96	18.69	17.60	17.88	14.84
U.S. Treasury	1.70	1.12	.67	.74	.95	.89	.60	.44	.38	.31
U.S. government agency and corporation obligations	10.57	9.70	10.09	11.45	12.99	12.80	11.62	10.07	9.06	7.72
Government-backed mortgage pools	5.12	4.31	5.19	6.00	6.08	5.74	4.83	4.04	3.73	3.76
Collateralized mortgage obligations	2.89	2.55	2.42	2.79	3.72	3.42	3.39	2.94	2.68	2.43
Other	2.56	2.84	2.48	2.65	3.19	3.64	3.40	3.10	2.65	1.54
State and local government	.99	.96	.99	.97	.95	.96	.98	1.01	1.16	1.03
Private mortgage-backed securities	1.33	1.66	2.01	2.13	2.14	2.65	3.58	4.29	4.60	3.23
Other	2.03	2.06	3.56	3.53	2.85	2.66	1.90	1.78	2.67	2.54
Equity	.65	.60	.39	.34	.21	.16	.11	.12	.12	.14
Trading account	.51	1.22	1.29	1.13	1.07	1.16	1.16	1.50	1.90	1.89
Gross federal funds sold and reverse RPs	3.34	3.76	4.06	4.71	4.20	2.98	2.30	2.84	3.41	4.27
Balances at depositories[1]	3.06	2.71	2.88	3.33	3.26	3.29	2.24	2.22	2.72	4.16
Noninterest-earning assets[1]	11.60	11.33	11.91	11.66	11.90	11.82	12.13	12.95	12.99	14.66
Revaluation gains held in trading accounts	.56	.40	.55	.47	.60	.42	.33	.30	.48	.91
Other	11.04	10.92	11.37	11.19	11.30	11.40	11.80	12.65	12.51	13.75
Liabilities	91.66	91.57	91.15	90.79	90.65	89.87	88.86	88.08	88.40	88.17
Core deposits	48.33	46.28	46.28	47.07	47.93	46.55	48.18	46.84	47.44	46.35
Transaction deposits	12.12	9.93	8.37	7.49	7.29	7.06	6.64	5.74	5.15	5.13
Demand deposits	10.52	8.61	7.17	6.32	5.96	5.65	5.35	4.54	3.90	3.89
Other checkable deposits	1.60	1.32	1.20	1.17	1.33	1.41	1.29	1.20	1.25	1.24
Savings deposits (including MMDAs)	23.89	24.02	26.62	30.07	32.34	31.75	33.33	32.66	32.99	31.51
Small time deposits	12.31	12.33	11.28	9.51	8.30	7.74	8.20	8.44	9.30	9.71
Managed liabilities[3]	39.85	41.98	40.81	39.48	38.12	39.29	37.04	37.60	37.02	37.82
Large time deposits	8.17	9.54	9.72	8.99	8.20	8.76	10.10	11.44	10.20	9.76
Deposits booked in foreign offices	8.20	7.56	7.05	6.28	6.54	7.21	6.02	6.43	8.52	7.80
Subordinated notes and debentures	1.71	1.54	1.53	1.44	1.38	1.39	1.31	1.32	1.40	1.31
Gross federal funds purchased and RPs	9.78	9.28	9.71	9.66	9.69	8.95	7.17	6.74	6.79	6.72
Other managed liabilities	11.99	14.07	12.79	13.11	12.30	12.97	12.44	11.66	10.10	12.23
Revaluation losses held in trading accounts	.58	.41	.52	.44	.56	.40	.34	.29	.47	.85
Other	2.91	2.91	3.54	3.80	4.05	3.64	3.30	3.35	3.48	3.15
Capital account	8.34	8.43	8.85	9.21	9.35	10.13	11.14	11.92	11.60	11.83
MEMO										
Commercial real estate loans[4]	11.00	12.06	12.06	12.24	12.10	12.85	13.93	15.05	15.95	16.01
Other real estate owned[5]	.03	.03	.04	.05	.06	.05	.04	.05	.06	.10
Mortgage-backed securities	9.34	8.52	9.63	10.93	11.93	11.81	11.81	11.27	11.01	9.42
Federal Home Loan Bank advances	n.a.	n.a.	4.07	4.85	4.75	4.65	5.19	5.54	5.35	6.45
Balances at the Federal Reserve[1]	.64	.43	.36	.37	.37	.28	.21	.18	.19	3.89
Interest-earning	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	3.18
Noninterest-earning	.64	.43	.36	.37	.37	.28	.21	.18	.19	.72
Interest-earning balances at depositories other than the Federal Reserve	3.06	2.71	2.88	3.33	3.26	3.29	2.24	2.22	2.72	3.43
Average net consolidated assets (billions of dollars)	1,879	2,031	2,130	2,124	2,287	2,376	2,403	2,579	2,798	3,177

A.1. Portfolio composition, interest rates, and income and expense, U.S. banks, 1999–2008—*Continued*

C. Banks ranked 11 through 100 by assets—*Continued*

Item	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	Effective interest rate (percent)[6]									
Rates earned										
Interest-earning assets	7.90	8.44	7.54	6.03	5.30	5.21	5.98	6.93	6.87	5.86
Taxable equivalent	7.94	8.48	7.58	6.07	5.33	5.24	6.02	6.97	6.91	5.88
Loans and leases, gross	8.56	9.14	8.26	6.80	6.11	5.98	6.61	7.58	7.45	6.44
Net of loss provisions	7.86	8.25	6.96	5.59	5.11	5.19	5.89	7.04	6.64	3.76
Securities	6.41	6.64	5.96	4.79	3.80	3.63	4.18	4.99	5.25	4.85
Taxable equivalent	6.55	6.77	6.08	4.91	3.90	3.73	4.29	5.10	5.37	4.93
Investment account	6.43	6.66	6.04	4.86	3.87	3.64	4.11	4.84	5.18	4.74
U.S. Treasury securities and U.S. government agency obligations (excluding MBS)	n.a.	n.a.	5.83	4.28	3.17	2.94	3.47	4.28	4.85	3.92
Mortgage-backed securities	n.a.	n.a.	6.60	5.34	4.20	4.02	4.34	5.02	5.23	5.02
Other	n.a.	n.a.	5.13	4.22	3.61	3.29	4.06	4.87	5.28	4.42
Trading account	5.62	6.25	4.83	3.59	2.56	3.39	5.30	6.74	5.94	5.72
Gross federal funds sold and reverse RPs	5.13	6.06	3.86	1.68	1.14	1.25	3.24	4.95	5.16	2.47
Interest-bearing balances at depositories[1]	4.82	5.49	4.38	2.46	1.93	2.27	3.20	4.24	4.84	2.97
Rates paid										
Interest-bearing liabilities	4.23	4.97	3.94	2.22	1.61	1.56	2.44	3.48	3.72	2.40
Interest-bearing deposits	3.80	4.42	3.60	1.96	1.35	1.29	2.03	3.07	3.33	2.16
In foreign offices	4.71	5.38	3.67	1.70	1.23	1.42	2.76	4.10	4.01	2.21
In domestic offices	3.64	4.26	3.60	1.99	1.36	1.27	1.95	2.95	3.22	2.15
Other checkable deposits	2.06	2.57	2.32	.94	.64	.72	1.29	2.12	2.60	1.33
Savings deposits (including MMDAs)	2.51	2.94	2.30	1.08	.66	.65	1.30	2.14	2.44	1.36
Large time deposits	5.00	5.88	5.11	3.37	2.70	2.49	3.31	4.45	4.46	3.14
Other time deposits	5.08	5.73	5.42	3.68	2.95	2.58	3.03	4.09	4.74	3.87
Gross federal funds purchased and RPs	4.91	6.02	3.86	1.73	1.20	1.37	3.04	4.46	4.71	2.07
Other interest-bearing liabilities	5.44	6.25	5.29	3.65	3.04	2.77	3.81	4.90	5.25	3.66
	Income and expense as a percentage of average net consolidated assets									
Gross interest income	7.03	7.54	6.70	5.31	4.67	4.63	5.28	6.08	5.99	5.02
Taxable equivalent	7.07	7.57	6.73	5.34	4.70	4.65	5.31	6.11	6.02	5.04
Loans	5.60	6.05	5.28	4.15	3.72	3.71	4.27	4.85	4.60	3.95
Securities	1.11	1.09	1.06	.90	.75	.73	.77	.87	.93	.71
Gross federal funds sold and reverse RPs	.18	.22	.15	.08	.04	.03	.06	.13	.17	.10
Other	.14	.18	.21	.18	.15	.15	.18	.23	.29	.26
Gross interest expense	3.29	3.96	3.14	1.77	1.30	1.26	1.94	2.78	2.96	1.90
Deposits	2.04	2.41	2.01	1.09	.77	.74	1.18	1.84	2.04	1.28
Gross federal funds purchased and RPs	.51	.56	.38	.17	.12	.13	.23	.30	.32	.14
Other	.74	.99	.75	.51	.41	.40	.53	.63	.59	.48
Net interest income	3.75	3.58	3.56	3.54	3.37	3.36	3.34	3.30	3.03	3.12
Taxable equivalent	3.78	3.61	3.59	3.57	3.40	3.39	3.37	3.33	3.06	3.14
Loss provisions[7]	.55	.68	.91	.80	.67	.55	.52	.41	.55	1.69
Noninterest income	3.38	3.18	3.35	3.30	3.29	3.09	2.81	2.91	2.73	2.35
Service charges on deposits	.42	.42	.42	.42	.42	.40	.37	.35	.33	.32
Fiduciary activities	.48	.52	.42	.42	.37	.42	.35	.41	.54	.41
Trading revenue	.08	.07	.08	.08	.09	.07	.06	.07	.09	–.04
Interest rate exposures	.02	.02	.04	.04	.04	–.01	–.01	.02	*	–.02
Foreign exchange rate exposures	.05	.04	.03	.04	.04	.05	.04	.05	.08	.08
Other commodity and equity exposures	*	*	*	*	.01	.03	.02	*	*	*
Credit exposures	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	.01	–.10
Other	2.40	2.18	2.43	2.37	2.41	2.20	2.03	2.09	1.77	1.66
Noninterest expense	4.15	4.00	3.95	3.73	3.64	3.55	3.36	3.34	3.45	3.54
Salaries, wages, and employee benefits	1.54	1.44	1.47	1.49	1.47	1.45	1.37	1.34	1.32	1.22
Occupancy	.46	.43	.42	.40	.41	.39	.37	.33	.34	.32
Other	2.16	2.14	2.07	1.84	1.76	1.70	1.62	1.68	1.79	2.00
Net noninterest expense	.77	.82	.60	.43	.35	.45	.55	.43	.72	1.19
Gains on investment account securities	–.01	–.05	.09	.10	.06	.03	*	–.03	–.05	–.29
Income before taxes and extraordinary items	2.42	2.02	2.14	2.41	2.42	2.39	2.27	2.43	1.71	–.05
Taxes	.87	.70	.74	.82	.82	.82	.77	.83	.59	.12
Extraordinary items, net of income taxes	*	*	*	*	*	*	.01	.07	–.05	–.01
Net income	1.55	1.32	1.39	1.59	1.59	1.57	1.50	1.67	1.06	–.18
Cash dividends declared	1.17	.94	.96	.99	1.05	.95	1.00	1.37	1.26	.43
Retained income	.38	.38	.43	.60	.54	.62	.50	.30	–.20	–.62
MEMO: Return on equity	18.59	15.72	15.74	17.24	17.03	15.54	13.48	14.05	9.16	–1.55

NOTE: Data are as of April 16, 2009.

1. Effective October 1, 2008, the Federal Reserve began paying interest on depository institutions' required and excess reserve balances. Beginning with the 2008:Q4 Call Report, balances due from Federal Reserve Banks are now reported under "Interest-earning assets" rather than "Noninterest-earning assets."

2. Includes allocated transfer risk reserve.

3. Measured as the sum of large time deposits in domestic offices, deposits booked in foreign offices, subordinated notes and debentures, federal funds purchased and securities sold under repurchase agreements, Federal Home Loan Bank advances, and other borrowed money.

4. Measured as the sum of construction and land development loans secured by real estate; real estate loans secured by nonfarm nonresidential properties or by multifamily residential properties; and loans to finance commercial real estate, construction, and land development activities not secured by real estate.

5. Other real estate owned is a component of other noninterest-earning assets.

6. When possible, based on the average of quarterly balance sheet data reported on schedule RC-K of the quarterly Call Report.

7. Includes provisions for allocated transfer risk.

* In absolute value, less than 0.005 percent.

n.a. Not available.

MMDA Money market deposit account.

RP Repurchase agreement.

MBS Mortgage-backed securities.

A.1. Portfolio composition, interest rates, and income and expense, U.S. banks, 1999–2008

D. Banks ranked 101 through 1,000 by assets

Item	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	Balance sheet items as a percentage of average net consolidated assets									
Interest-earning assets[1]	91.68	91.50	91.16	91.36	91.34	91.56	91.32	91.07	91.28	91.28
Loans and leases (net)	61.48	62.15	62.46	61.46	61.32	63.33	65.15	67.04	68.85	70.52
Commercial and industrial	12.66	12.95	13.03	12.38	11.50	11.52	11.78	11.68	12.07	12.58
U.S. addressees	12.34	12.60	12.65	12.06	11.20	11.21	11.48	11.45	11.80	12.31
Foreign addressees	.32	.36	.38	.31	.31	.31	.30	.23	.27	.27
Consumer	10.77	10.19	9.76	8.13	6.80	6.33	5.42	5.50	5.35	5.15
Credit card	3.37	3.27	3.65	2.63	1.82	1.91	1.24	1.63	1.88	1.76
Installment and other	7.40	6.92	6.11	5.50	4.98	4.42	4.18	3.87	3.46	3.39
Real estate	35.89	36.93	37.64	38.92	40.95	43.38	45.86	47.88	49.50	50.78
In domestic offices	35.87	36.91	37.62	38.89	40.90	43.32	45.78	47.78	49.41	50.78
Construction and land development	3.48	4.15	4.90	5.40	5.89	7.01	8.86	11.01	12.85	13.04
Farmland	.58	.65	.66	.73	.80	.91	.99	1.07	1.16	1.22
One- to four-family residential	18.26	17.17	16.18	15.39	15.71	15.33	15.17	14.76	14.08	14.16
Home equity	1.99	2.10	2.21	2.51	2.92	3.46	3.60	3.25	3.01	3.19
Other	16.26	15.06	13.97	12.88	12.79	11.87	11.57	11.51	11.07	10.97
Multifamily residential	1.44	1.58	1.69	1.83	2.00	2.24	2.37	2.32	2.33	2.41
Nonfarm nonresidential	12.12	13.36	14.18	15.55	16.51	17.82	18.39	18.63	18.99	19.95
In foreign offices	.02	.02	.02	.03	.05	.06	.08	.10	.09	*
To depository institutions and acceptances of other banks	.46	.37	.38	.37	.37	.25	.13	.14	.14	.27
Foreign governments	.03	.03	.03	.02	.02	.01	*	*	*	*
Agricultural production	.78	.82	.85	.86	.83	.82	.81	.84	.88	.90
Other loans	1.25	1.22	1.22	1.18	1.25	1.32	1.36	1.20	1.22	1.37
Lease-financing receivables	.78	.75	.74	.75	.67	.75	.75	.75	.65	.65
LESS: Unearned income on loans	–.08	–.08	–.07	–.06	–.06	–.06	–.06	–.06	–.06	–.06
LESS: Loss reserves[2]	–1.06	–1.04	–1.12	–1.10	–1.02	–.98	–.90	–.88	–.91	–1.12
Securities	25.18	24.34	22.81	23.86	24.36	23.59	21.57	19.55	18.30	16.96
Investment account	25.10	24.25	22.70	23.80	24.23	23.54	21.50	19.47	18.10	16.80
Debt	24.34	23.46	22.28	23.30	23.79	23.18	21.21	19.20	17.69	16.27
U.S. Treasury	2.53	1.81	1.32	1.22	1.00	1.02	.83	.59	.47	.36
U.S. government agency and corporation obligations	16.28	15.56	14.70	15.85	16.96	16.70	15.05	13.55	12.32	11.32
Government-backed mortgage pools	6.72	6.22	6.27	6.55	7.03	6.80	5.73	4.83	4.57	5.24
Collateralized mortgage obligations	3.52	3.04	3.08	3.69	3.69	3.41	3.16	2.81	2.60	2.42
Other	6.04	6.30	5.35	5.60	6.24	6.49	6.16	5.90	5.15	3.66
State and local government	2.90	2.91	2.90	2.89	2.95	2.92	2.78	2.74	2.77	2.73
Private mortgage-backed securities	1.03	.99	.94	.99	.87	1.08	1.17	1.08	1.01	.86
Other	1.60	2.19	2.42	2.34	2.01	1.46	1.37	1.24	1.12	1.00
Equity	.77	.79	.43	.50	.43	.36	.29	.27	.41	.53
Trading account	.08	.09	.11	.06	.14	.05	.08	.07	.20	.17
Gross federal funds sold and reverse RPs	3.35	3.40	4.20	4.15	3.85	2.95	2.83	2.81	2.57	2.01
Balances at depositories[1]	1.68	1.60	1.68	1.89	1.81	1.69	1.76	1.67	1.57	1.78
Noninterest-earning assets[1]	8.32	8.50	8.84	8.64	8.66	8.44	8.68	8.93	8.72	8.72
Revaluation gains held in trading accounts	.01	.02	.01	.01	*	*	*	.03	.04	.06
Other	8.31	8.49	8.84	8.64	8.66	8.44	8.68	8.90	8.67	8.66
Liabilities	90.90	90.95	90.32	89.93	89.68	89.18	89.10	89.01	88.87	89.23
Core deposits	62.48	60.80	60.33	61.26	61.30	60.39	59.03	58.04	59.68	58.91
Transaction deposits	13.93	12.29	11.48	11.37	11.50	11.77	11.15	9.82	8.43	7.74
Demand deposits	10.19	8.97	8.23	8.05	7.96	8.12	7.87	6.99	5.94	5.32
Other checkable deposits	3.74	3.32	3.25	3.32	3.54	3.64	3.28	2.83	2.49	2.42
Savings deposits (including MMDAs)	28.56	28.55	29.40	32.34	34.00	34.42	33.75	32.82	32.89	31.04
Small time deposits	19.98	19.96	19.46	17.55	15.80	14.21	14.13	15.41	18.36	20.13
Managed liabilities[3]	26.33	28.01	27.75	26.57	26.40	26.98	28.38	29.32	27.51	28.74
Large time deposits	10.29	11.98	12.60	12.17	11.92	12.12	13.64	15.21	14.42	14.15
Deposits booked in foreign offices	1.20	1.28	1.24	.88	.64	.65	.57	.52	.57	.72
Subordinated notes and debentures	.35	.30	.31	.34	.35	.35	.27	.24	.22	.21
Gross federal funds purchased and RPs	6.90	6.30	5.77	5.27	5.35	5.52	5.54	5.40	5.33	5.26
Other managed liabilities	7.58	8.15	7.84	7.90	8.13	8.34	8.35	7.94	6.97	8.39
Revaluation losses held in trading accounts	.01	*	.01	.01	*	*	*	.01	.01	.02
Other	2.09	2.13	2.23	2.08	1.98	1.81	1.69	1.64	1.66	1.57
Capital account	9.10	9.05	9.68	10.07	10.32	10.82	10.90	10.99	11.13	10.77
MEMO										
Commercial real estate loans[4]	17.27	19.32	21.03	23.05	24.62	27.28	29.84	32.22	34.52	35.86
Other real estate owned[5]	.08	.07	.08	.10	.11	.10	.08	.08	.11	.28
Mortgage-backed securities	11.27	10.25	10.29	11.24	11.59	11.29	10.06	8.72	8.18	8.52
Federal Home Loan Bank advances	n.a.	n.a.	5.27	5.71	6.29	6.46	6.42	6.11	5.53	7.04
Balances at the Federal Reserve[1]	.55	.57	.54	.52	.59	.55	.47	.36	.29	1.45
Interest-earning	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.14
Noninterest-earning	.55	.57	.54	.52	.59	.55	.47	.36	.29	.31
Interest-earning balances at depositories other than the Federal Reserve	1.68	1.60	1.68	1.89	1.81	1.69	1.76	1.67	1.57	1.55
Average net consolidated assets (billions of dollars)	974	986	1,002	1,022	1,072	1,080	1,152	1,249	1,267	1,278

A.1. Portfolio composition, interest rates, and income and expense, U.S. banks, 1999–2008—*Continued*

D. Banks ranked 101 through 1,000 by assets—*Continued*

Item	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	Effective interest rate (percent)[6]									
Rates earned										
Interest-earning assets	7.83	8.48	7.85	6.42	5.59	5.46	6.12	7.01	7.31	6.24
Taxable equivalent	7.92	8.56	7.94	6.50	5.67	5.53	6.19	7.08	7.38	6.30
Loans and leases, gross	8.74	9.42	8.76	7.31	6.56	6.25	6.90	7.79	8.02	6.72
Net of loss provisions	8.25	8.75	7.87	6.55	6.01	5.87	6.64	7.54	7.44	5.09
Securities	6.04	6.45	5.96	4.95	3.81	3.79	4.03	4.53	4.86	4.76
Taxable equivalent	6.29	6.71	6.24	5.21	4.06	4.04	4.28	4.80	5.14	5.01
Investment account	6.03	6.45	5.95	4.93	3.82	3.78	4.02	4.53	4.85	4.76
U.S. Treasury securities and U.S. government agency obligations (excluding MBS)	n.a.	n.a.	5.85	4.54	3.42	3.15	3.47	4.19	4.74	4.45
Mortgage-backed securities	n.a.	n.a.	6.33	5.38	3.95	4.01	4.23	4.64	4.96	5.09
Other	n.a.	n.a.	5.40	4.51	4.07	4.21	4.42	4.81	4.81	4.42
Trading account	7.18	9.30	6.60	14.05	3.07	10.30	6.59	4.92	5.25	4.44
Gross federal funds sold and reverse RPs	4.98	6.15	3.91	1.73	1.27	1.57	3.31	4.94	4.87	2.12
Interest-bearing balances at depositories[1]	5.07	5.76	3.93	1.79	1.26	1.47	3.29	4.58	4.56	2.21
Rates paid										
Interest-bearing liabilities	4.09	4.79	3.97	2.45	1.80	1.65	2.36	3.38	3.78	2.79
Interest-bearing deposits	3.84	4.46	3.81	2.28	1.61	1.44	2.09	3.11	3.59	2.72
In foreign offices	5.07	6.13	4.27	2.14	1.43	1.43	3.05	4.50	4.63	2.29
In domestic offices	3.82	4.43	3.81	2.28	1.61	1.44	2.08	3.10	3.58	2.73
Other checkable deposits	1.99	2.27	1.81	1.06	.74	.72	1.18	1.74	1.89	1.17
Savings deposits (including MMDAs)	2.65	3.07	2.22	1.17	.75	.74	1.27	2.06	2.38	1.39
Large time deposits	5.17	6.00	5.27	3.32	2.58	2.33	3.21	4.41	4.90	3.91
Other time deposits	5.11	5.74	5.51	3.77	2.86	2.51	3.10	4.19	4.83	4.03
Gross federal funds purchased and RPs	4.82	5.95	3.82	1.83	1.29	1.45	2.94	4.52	4.49	2.30
Other interest-bearing liabilities	5.47	6.46	5.32	4.22	3.57	3.37	4.02	4.75	5.04	3.66
	Income and expense as a percentage of average net consolidated assets									
Gross interest income	7.19	7.79	7.16	5.84	5.07	4.99	5.57	6.40	6.67	5.71
Taxable equivalent	7.27	7.86	7.23	5.91	5.15	5.06	5.64	6.46	6.74	5.76
Loans	5.47	5.96	5.59	4.56	4.07	4.01	4.55	5.29	5.58	4.80
Securities	1.51	1.58	1.33	1.15	.91	.88	.86	.89	.88	.80
Gross federal funds sold and reverse RPs	.17	.21	.16	.07	.05	.05	.09	.14	.12	.04
Other	.04	.04	.08	.06	.05	.05	.07	.09	.09	.06
Gross interest expense	3.20	3.79	3.14	1.92	1.41	1.29	1.84	2.67	3.00	2.24
Deposits	2.44	2.87	2.48	1.49	1.04	.92	1.34	2.04	2.41	1.81
Gross federal funds purchased and RPs	.34	.38	.22	.09	.07	.08	.16	.24	.24	.12
Other	.42	.54	.44	.34	.30	.29	.34	.39	.36	.31
Net interest income	3.99	4.00	4.02	3.92	3.67	3.70	3.73	3.73	3.67	3.47
Taxable equivalent	4.07	4.07	4.10	3.99	3.74	3.77	3.79	3.79	3.73	3.52
Loss provisions[7]	.39	.52	.65	.54	.40	.30	.24	.23	.47	1.22
Noninterest income	2.31	2.35	2.37	2.36	2.30	2.26	2.02	1.98	1.88	1.50
Service charges on deposits	.38	.36	.39	.41	.41	.39	.36	.35	.36	.36
Fiduciary activities	.38	.44	.40	.35	.34	.37	.35	.30	.31	.31
Trading revenue	.02	.01	*	*	.01	.01	.01	.01	.01	−.01
Interest rate exposures	.01	.01	−.01	*	.01	.01	.01	*	*	*
Foreign exchange rate exposures	*	*	*	*	*	*	*	*	*	*
Other commodity and equity exposures	*	*	*	*	*	*	*	*	*	−.01
Credit exposures	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	*	*
Other	1.53	1.55	1.58	1.60	1.54	1.49	1.30	1.32	1.20	.83
Noninterest expense	3.70	3.84	3.88	3.72	3.59	3.54	3.37	3.35	3.26	3.38
Salaries, wages, and employee benefits	1.56	1.59	1.61	1.64	1.64	1.64	1.61	1.59	1.57	1.46
Occupancy	.47	.47	.46	.45	.43	.43	.41	.40	.40	.39
Other	1.68	1.78	1.81	1.63	1.53	1.48	1.36	1.35	1.28	1.53
Net noninterest expense	1.39	1.48	1.52	1.35	1.29	1.29	1.35	1.36	1.38	1.88
Gains on investment account securities	−.01	−.04	.05	.04	.05	.02	−.01	−.01	−.01	−.21
Income before taxes and extraordinary items	2.19	1.96	1.90	2.07	2.02	2.13	2.13	2.12	1.81	.15
Taxes	.74	.67	.66	.67	.66	.68	.68	.69	.57	.14
Extraordinary items, net of income taxes	.01	*	.01	*	.03	*	*	*	*	*
Net income	1.46	1.29	1.25	1.39	1.39	1.45	1.45	1.43	1.23	.01
Cash dividends declared	1.06	.92	1.33	1.19	1.64	.78	.87	.89	.91	.57
Retained income	.40	.37	−.08	.20	−.25	.68	.58	.54	.32	−.56
Memo: Return on equity	16.10	14.21	12.93	13.83	13.46	13.42	13.33	13.03	11.08	.07

NOTE: Data are as of April 16, 2009.

1. Effective October 1, 2008, the Federal Reserve began paying interest on depository institutions' required and excess reserve balances. Beginning with the 2008:Q4 Call Report, balances due from Federal Reserve Banks are now reported under "Interest-earning assets" rather than "Noninterest-earning assets."

2. Includes allocated transfer risk reserve.

3. Measured as the sum of large time deposits in domestic offices, deposits booked in foreign offices, subordinated notes and debentures, federal funds purchased and securities sold under repurchase agreements, Federal Home Loan Bank advances, and other borrowed money.

4. Measured as the sum of construction and land development loans secured by real estate; real estate loans secured by nonfarm nonresidential properties or by multifamily residential properties; and loans to finance commercial real estate, construction, and land development activities not secured by real estate.

5. Other real estate owned is a component of other noninterest-earning assets.

6. When possible, based on the average of quarterly balance sheet data reported on schedule RC-K of the quarterly Call Report.

7. Includes provisions for allocated transfer risk.

* In absolute value, less than 0.005 percent.

n.a. Not available.

MMDA Money market deposit account.

RP Repurchase agreement.

MBS Mortgage-backed securities.

A.1. Portfolio composition, interest rates, and income and expense, U.S. banks, 1999–2008

E. Banks not ranked among the 1,000 largest by assets

Item	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	Balance sheet items as a percentage of average net consolidated assets									
Interest-earning assets[1]	92.55	92.52	92.30	92.27	92.16	92.34	92.29	92.36	92.39	92.15
Loans and leases (net)	59.76	62.31	62.67	62.72	62.32	63.80	65.43	66.65	67.29	67.82
Commercial and industrial	10.64	11.09	11.10	10.71	10.42	10.29	10.21	10.17	10.25	10.35
U.S. addressees	10.55	11.02	11.02	10.65	10.37	10.25	10.15	10.12	10.21	10.30
Foreign addressees	.08	.07	.07	.06	.05	.04	.05	.04	.04	.04
Consumer	8.16	7.98	7.42	6.77	6.16	5.45	4.97	4.63	4.36	4.07
Credit card	.69	.59	.59	.49	.51	.40	.36	.37	.37	.35
Installment and other	7.47	7.39	6.83	6.28	5.64	5.05	4.61	4.25	3.99	3.72
Real estate	36.84	39.29	40.30	41.52	42.30	44.75	46.97	48.54	49.28	50.09
In domestic offices	36.83	39.29	40.30	41.52	42.30	44.74	46.97	48.53	49.28	50.09
Construction and land development	3.28	3.70	4.23	4.51	4.99	6.01	7.46	9.10	10.01	9.63
Farmland	2.95	3.06	3.04	3.08	3.13	3.22	3.25	3.26	3.38	3.48
One- to four-family residential	17.66	18.43	18.24	17.91	17.08	17.17	17.12	16.69	16.31	16.63
Home equity	1.17	1.28	1.37	1.62	1.79	2.11	2.20	2.06	2.01	2.11
Other	16.49	17.15	16.87	16.29	15.29	15.06	14.93	14.63	14.30	14.52
Multifamily residential	.98	1.04	1.06	1.16	1.28	1.41	1.48	1.47	1.50	1.61
Nonfarm nonresidential	11.96	13.06	13.71	14.86	15.82	16.94	17.66	18.01	18.09	18.73
In foreign offices	*	*	*	*	*	*	*	*	*	*
To depository institutions and acceptances of other banks	.14	.12	.12	.10	.09	.07	.05	.05	.06	.06
Foreign governments	.01	.01	*	*	*	*	*	*	*	*
Agricultural production	4.06	3.85	3.76	3.64	3.40	3.26	3.21	3.22	3.26	3.24
Other loans	.67	.69	.67	.65	.66	.68	.70	.70	.70	.73
Lease-financing receivables	.26	.27	.27	.31	.26	.25	.24	.26	.27	.26
LESS: Unearned income on loans	–.15	–.11	–.09	–.07	–.06	–.06	–.05	–.05	–.04	–.04
LESS: Loss reserves[2]	–.87	–.88	–.88	–.90	–.92	–.89	–.87	–.87	–.87	–.93
Securities	26.91	25.40	22.80	23.34	23.47	23.34	21.92	20.54	19.65	19.20
Investment account	26.88	25.38	22.79	23.33	23.43	23.34	21.91	20.52	19.58	19.16
Debt	26.34	24.82	22.49	23.05	23.12	23.07	21.70	20.35	19.41	18.97
U.S. Treasury	3.34	2.12	1.33	1.04	.90	.81	.71	.61	.47	.33
U.S. government agency and corporation obligations	16.89	16.95	15.27	16.07	16.23	16.57	15.64	14.73	14.01	13.44
Government-backed mortgage pools	3.95	3.47	3.78	4.54	4.84	4.76	4.23	3.62	3.55	4.80
Collateralized mortgage obligations	2.00	1.70	1.94	2.30	2.20	1.96	1.71	1.50	1.55	1.76
Other	10.93	11.78	9.56	9.23	9.19	9.85	9.70	9.61	8.92	6.88
State and local government	4.96	4.64	4.51	4.56	4.73	4.67	4.49	4.30	4.20	4.24
Private mortgage-backed securities	.26	.23	.27	.26	.21	.19	.22	.24	.29	.47
Other	.89	.88	1.11	1.12	1.05	.83	.65	.48	.43	.49
Equity	.53	.56	.30	.27	.31	.26	.20	.17	.17	.19
Trading account	.03	.02	.01	.01	.04	.01	.02	.02	.07	.04
Gross federal funds sold and reverse RPs	4.17	3.22	5.01	4.26	4.27	3.33	3.24	3.53	3.92	3.29
Balances at depositories[1]	1.71	1.59	1.82	1.95	2.11	1.86	1.69	1.64	1.54	1.84
Noninterest-earning assets[1]	7.45	7.48	7.70	7.73	7.84	7.66	7.71	7.64	7.61	7.85
Revaluation gains held in trading accounts	*	*	*	*	*	*	*	*	*	*
Other	7.45	7.48	7.70	7.73	7.84	7.66	7.71	7.64	7.61	7.85
Liabilities	89.75	89.88	89.59	89.73	89.58	89.55	89.49	89.35	88.95	89.12
Core deposits	72.74	70.87	69.92	70.04	69.96	69.24	67.68	65.74	65.12	64.27
Transaction deposits	23.87	23.20	22.35	22.66	23.18	23.36	22.72	20.81	18.66	17.75
Demand deposits	12.80	12.64	12.16	12.24	12.58	12.77	12.77	11.97	10.73	10.06
Other checkable deposits	11.07	10.57	10.19	10.42	10.60	10.59	9.95	8.84	7.93	7.68
Savings deposits (including MMDAs)	19.77	19.19	19.38	21.32	22.43	23.24	22.98	22.66	22.68	22.56
Small time deposits	29.10	28.48	28.20	26.05	24.36	22.64	21.98	22.28	23.78	23.97
Managed liabilities[3]	16.09	18.08	18.67	18.79	18.78	19.57	21.04	22.76	22.92	24.02
Large time deposits	11.52	12.51	13.55	13.21	13.07	13.15	14.53	16.49	16.91	16.64
Deposits booked in foreign offices	.08	.05	.06	.07	.06	.07	.06	.06	.05	.06
Subordinated notes and debentures	.01	.02	.02	.04	.03	.04	.03	.03	.03	.03
Gross federal funds purchased and RPs	1.79	2.06	1.55	1.51	1.52	1.76	1.74	1.82	1.82	1.87
Other managed liabilities	2.69	3.44	3.49	3.96	4.09	4.54	4.68	4.36	4.11	5.41
Revaluation losses held in trading accounts	*	*	*	*	*	*	*	*	*	*
Other	.92	.93	1.00	.90	.84	.74	.77	.84	.91	.82
Capital account	10.25	10.12	10.41	10.27	10.42	10.45	10.51	10.65	11.05	10.88
MEMO										
Commercial real estate loans[4]	16.33	17.91	19.15	20.67	22.23	24.50	26.77	28.81	29.88	30.34
Other real estate owned[5]	.11	.11	.12	.14	.15	.14	.13	.12	.16	.35
Mortgage-backed securities	6.22	5.39	5.99	7.10	7.25	6.91	6.16	5.36	5.39	7.03
Federal Home Loan Bank advances	n.a.	n.a.	3.34	3.71	3.87	4.32	4.46	4.14	3.93	5.20
Balances at the Federal Reserve[1]	.93	.93	.76	.79	.87	.78	.70	.57	.45	1.26
Interest-earning	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	.82
Noninterest-earning	.93	.93	.76	.79	.87	.78	.70	.57	.45	.45
Interest-earning balances at depositories other than the Federal Reserve	1.71	1.59	1.82	1.95	2.11	1.86	1.69	1.64	1.54	1.71
Average net consolidated assets (billions of dollars)	652	655	675	704	742	768	805	840	862	882

A.1. Portfolio composition, interest rates, and income and expense, U.S. banks, 1999–2008—*Continued*

E. Banks not ranked among the 1,000 largest by assets—*Continued*

Item	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	Effective interest rate (percent)[6]									
Rates earned										
Interest-earning assets	8.04	8.44	7.92	6.79	5.94	5.73	6.23	7.01	7.26	6.34
Taxable equivalent	8.17	8.56	8.03	6.90	6.05	5.84	6.33	7.10	7.35	6.42
Loans and leases, gross	9.27	9.51	9.01	7.83	7.08	6.72	7.17	7.94	8.13	7.03
Net of loss provisions	8.89	9.14	8.60	7.39	6.72	6.45	6.94	7.74	7.81	6.18
Securities	5.88	6.15	5.86	5.03	3.87	3.74	3.87	4.28	4.68	4.70
Taxable equivalent	6.29	6.54	6.27	5.43	4.26	4.11	4.24	4.65	5.06	5.05
Investment account	5.88	6.15	5.86	5.02	3.87	3.73	3.86	4.28	4.68	4.70
U.S. Treasury securities and U.S. government agency obligations (excluding MBS)	n.a.	n.a.	5.97	4.80	3.74	3.38	3.53	4.12	4.69	4.62
Mortgage-backed securities	n.a.	n.a.	6.20	5.47	3.58	3.90	4.17	4.59	4.96	5.08
Other	n.a.	n.a.	5.29	4.87	4.43	4.18	4.16	4.25	4.33	4.28
Trading account	3.60	4.01	6.43	15.38	2.89	18.95	7.52	7.50	4.74	4.34
Gross federal funds sold and reverse RPs	4.96	6.24	3.82	1.63	1.08	1.32	3.21	4.95	5.05	2.17
Interest-bearing balances at depositories[1]	5.65	6.38	4.56	2.68	1.97	2.02	3.21	4.64	5.06	3.03
Rates paid										
Interest-bearing liabilities	4.32	4.84	4.43	2.93	2.14	1.88	2.44	3.42	3.91	3.06
Interest-bearing deposits	4.21	4.67	4.31	2.78	2.02	1.75	2.29	3.28	3.81	2.99
In foreign offices	4.12	5.13	3.97	1.67	.85	1.04	2.86	4.27	4.66	2.28
In domestic offices	4.21	4.67	4.31	2.78	2.02	1.75	2.29	3.28	3.80	2.99
Other checkable deposits	2.28	2.47	1.97	1.16	.78	.69	.99	1.45	1.62	1.11
Savings deposits (including MMDAs)	3.20	3.56	2.81	1.72	1.13	1.04	1.53	2.34	2.67	1.65
Large time deposits	5.21	5.89	5.52	3.61	2.79	2.47	3.21	4.37	4.90	4.03
Other time deposits	5.24	5.70	5.60	3.88	2.96	2.55	3.04	4.12	4.79	4.06
Gross federal funds purchased and RPs	4.73	5.69	3.92	1.85	1.31	1.45	2.89	4.37	4.46	2.35
Other interest-bearing liabilities	8.25	9.13	8.08	6.82	5.31	4.59	5.01	5.70	5.81	4.50
	Income and expense as a percentage of average net consolidated assets									
Gross interest income	7.48	7.83	7.33	6.31	5.46	5.32	5.78	6.49	6.73	5.87
Taxable equivalent	7.60	7.95	7.44	6.41	5.56	5.41	5.87	6.58	6.82	5.95
Loans	5.61	5.99	5.73	5.01	4.47	4.35	4.76	5.35	5.53	4.83
Securities	1.58	1.57	1.32	1.16	.89	.87	.85	.88	.92	.90
Gross federal funds sold and reverse RPs	.22	.21	.20	.07	.05	.05	.11	.18	.20	.07
Other	.06	.05	.08	.06	.06	.05	.06	.08	.08	.07
Gross interest expense	3.26	3.64	3.33	2.22	1.60	1.41	1.82	2.56	2.95	2.33
Deposits	3.02	3.30	3.07	1.98	1.41	1.22	1.58	2.27	2.67	2.08
Gross federal funds purchased and RPs	.08	.12	.06	.03	.02	.02	.05	.08	.08	.04
Other	.15	.21	.20	.21	.17	.17	.19	.21	.20	.21
Net interest income	4.22	4.20	4.00	4.08	3.86	3.91	3.96	3.94	3.79	3.54
Taxable equivalent	4.34	4.31	4.10	4.19	3.96	4.00	4.05	4.03	3.87	3.62
Loss provisions[7]	.31	.32	.33	.35	.29	.23	.21	.20	.28	.64
Noninterest income	1.44	1.31	1.30	1.39	1.47	1.38	1.33	1.31	1.33	1.19
Service charges on deposits	.42	.43	.44	.45	.43	.43	.40	.38	.37	.36
Fiduciary activities	.26	.20	.25	.27	.28	.31	.33	.36	.38	.32
Trading revenue	*	*	*	*	*	*	*	*	*	*
Interest rate exposures	*	*	*	*	*	*	*	*	*	*
Foreign exchange rate exposures	*	*	*	*	*	*	*	*	*	*
Other commodity and equity exposures	*	*	*	*	*	*	*	*	*	*
Credit exposures	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	*	*
Other	.75	.67	.61	.67	.76	.64	.61	.57	.58	.50
Noninterest expense	3.73	3.57	3.54	3.57	3.55	3.52	3.48	3.49	3.53	3.50
Salaries, wages, and employee benefits	1.82	1.78	1.79	1.82	1.82	1.81	1.79	1.82	1.84	1.76
Occupancy	.49	.47	.47	.46	.45	.45	.44	.44	.44	.44
Other	1.42	1.31	1.28	1.28	1.28	1.26	1.25	1.24	1.25	1.30
Net noninterest expense	2.29	2.26	2.24	2.18	2.09	2.14	2.15	2.18	2.19	2.32
Gains on investment account securities	*	−.01	.04	.05	.04	.01	*	−.01	*	−.09
Income before taxes and extraordinary items	1.62	1.61	1.46	1.60	1.53	1.55	1.60	1.55	1.31	.48
Taxes	.47	.45	.39	.41	.38	.37	.38	.36	.29	.10
Extraordinary items, net of income taxes	*	*	*	−.01	*	*	*	*	*	*
Net income	1.15	1.17	1.07	1.18	1.14	1.18	1.21	1.19	1.01	.38
Cash dividends declared	.70	.79	.64	.68	.67	.64	.67	.65	.67	.56
Retained income	.46	.38	.43	.50	.47	.54	.54	.53	.35	−.18
MEMO: Return on equity	11.26	11.52	10.28	11.49	10.97	11.25	11.54	11.14	9.18	3.53

NOTE: Data are as of April 16, 2009.

1. Effective October 1, 2008, the Federal Reserve began paying interest on depository institutions' required and excess reserve balances. Beginning with the 2008:Q4 Call Report, balances due from Federal Reserve Banks are now reported under "Interest-earning assets" rather than "Noninterest-earning assets."

2. Includes allocated transfer risk reserve.

3. Measured as the sum of large time deposits in domestic offices, deposits booked in foreign offices, subordinated notes and debentures, federal funds purchased and securities sold under repurchase agreements, Federal Home Loan Bank advances, and other borrowed money.

4. Measured as the sum of construction and land development loans secured by real estate; real estate loans secured by nonfarm nonresidential properties or by multifamily residential properties; and loans to finance commercial real estate, construction, and land development activities not secured by real estate.

5. Other real estate owned is a component of other noninterest-earning assets.

6. When possible, based on the average of quarterly balance sheet data reported on schedule RC-K of the quarterly Call Report.

7. Includes provisions for allocated transfer risk.

* In absolute value, less than 0.005 percent.

n.a. Not available.

MMDA Money market deposit account.

RP Repurchase agreement.

MBS Mortgage-backed securities.

A.2. Report of income, all U.S. banks, 1999–2008

Millions of dollars

Item	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Gross interest income	367,123	423,845	404,251	349,603	329,218	348,667	426,600	551,039	616,995	566,000
Taxable equivalent	369,758	426,479	406,937	352,351	332,000	351,651	429,556	554,295	620,456	568,685
Loans	279,217	326,804	311,539	269,397	257,697	269,408	328,088	421,879	464,879	426,181
Securities	62,415	67,666	63,061	59,311	53,316	58,577	65,864	78,913	82,710	81,548
Gross federal funds sold and reverse repurchase agreements	12,337	13,546	12,647	6,221	5,015	5,142	11,045	21,288	28,682	16,853
Other	13,157	15,829	17,006	14,672	13,189	15,538	21,602	28,959	40,723	41,418
Gross interest expense	175,397	222,161	188,746	118,741	94,123	98,541	162,501	263,372	310,412	227,066
Deposits	119,969	151,147	132,311	81,701	62,400	63,639	105,922	173,878	212,783	154,812
Gross federal funds purchased and repurchase agreements	21,210	26,860	19,583	9,920	7,590	8,842	19,161	33,775	37,715	19,755
Other	34,215	44,155	36,852	27,122	24,133	26,058	37,418	55,720	59,914	52,499
Net interest income	191,726	201,684	215,505	230,862	235,095	250,126	264,099	287,667	306,583	338,934
Taxable equivalent	194,361	204,318	218,191	233,610	237,877	253,110	267,055	290,923	310,044	341,619
Loss provisions	21,220	29,386	43,084	45,206	32,742	23,894	25,579	25,386	56,746	170,019
Noninterest income	144,800	153,101	160,902	168,236	183,792	188,999	201,768	222,887	218,554	207,880
Service charges on deposits	21,591	23,720	26,872	29,629	31,692	33,454	33,830	36,194	39,187	42,540
Fiduciary activities	20,519	22,202	21,988	21,404	22,453	25,088	26,381	28,312	32,962	32,907
Trading revenue	10,437	12,235	12,382	10,794	11,605	10,303	14,375	19,170	5,289	−2,336
Other	92,256	94,945	99,658	106,410	118,042	120,154	127,180	139,213	141,115	134,767
Noninterest expense	205,207	216,375	225,979	230,128	243,214	263,304	274,136	294,890	321,406	355,910
Salaries, wages, and employee benefits	86,396	89,016	94,196	100,447	108,446	115,254	124,038	135,868	144,700	147,595
Occupancy	25,945	26,762	27,939	29,311	31,314	33,253	35,051	36,393	38,531	40,909
Other	92,867	100,598	103,846	100,368	103,453	114,797	115,048	122,629	138,177	167,406
Net noninterest expense	60,407	63,274	65,077	61,892	59,422	74,305	72,368	72,003	102,852	148,030
Gains on investment account securities	246	−2,280	4,630	6,411	5,633	3,393	−220	−1,320	−649	−16,186
Income before taxes	110,345	106,741	111,971	130,176	148,563	155,322	165,933	188,960	146,335	4,698
Taxes	39,315	37,249	37,284	42,816	48,498	50,264	53,568	60,956	44,230	2,199
Extraordinary items, net of income taxes	169	−31	−324	−68	427	59	241	2,647	−1,672	5,388
Net income	**71,199**	**69,461**	**74,363**	**87,291**	**100,494**	**105,115**	**112,604**	**130,652**	**100,433**	**7,887**
Cash dividends declared	52,280	52,547	54,844	67,230	77,757	59,523	64,624	82,310	85,265	43,253
Retained income	18,919	16,915	19,519	20,062	22,738	45,591	47,981	48,340	15,168	−35,367

NOTE: Data are as of April 16, 2009.

July 2009

U.S. Households' Access to and Use of Electronic Banking, 1989–2007

Catherine J. Bell and Jeanne M. Hogarth, of the Board's Division of Consumer and Community Affairs, and Eric Robbins, of the Federal Reserve Bank of Kansas City, prepared this article.

Consumers are increasingly embracing electronic technology as a means of making payments and managing their personal finances. Data from the 2007 Federal Reserve Payments Study show a continuing shift away from paper-based transactions, such as payments by cash and check, and toward electronic transactions, in particular, automated deposits and payments and payments by debit card.[1] The number of debit card payments, for example, increased from 15.6 billion to 25.3 billion between 2003 and 2006, and the dollar value of debit card payments increased as well (see box "How Would You Like to Pay for That?"). (Payments by credit card, as a proportion of all payments, remained constant over the period.)

Managing their financial matters electronically offers consumers many potential benefits: they can, for example, arrange for timely payments at virtually any time of the day or night and can avoid overdrafts by reviewing their account balances throughout the month. Yet concern remains that some technologies are not available to consumers at all income levels.[2] There is also concern that data breaches in recent years have reduced consumers' willingness to use some technologies.[3]

This article examines changes over time in consumers' access to, adoption of, and attitudes toward various forms of electronic banking (e-banking), including the use of automated teller machines (ATMs), debit cards, direct deposit, preauthorized payments, phone banking, online banking, smart cards, and prepaid cards. The article also updates data on electronic banking reported earlier and looks at several emerging technologies.[4] The analyses are based on data from two sources: the Federal Reserve's triennial Survey of Consumer Finances (SCF) (surveys for 1989 through 2007) and questions included by the Federal Reserve in the University of Michigan Survey Research Center's Surveys of Consumers (surveys in 1999, 2003, and 2006). The two surveys are described in appendix A. Unless stated otherwise, all analyses were restricted to households that reported having an account with a bank, thrift institution, or credit union.

Accessibility of Banking Services

As the financial services industry has evolved, consumer access to financial services has increased, both in the number of brick-and-mortar bank branches and in the availability of e-banking services, such as ATMs and online banking. Despite a decline of almost 50 percent in the number of banks between

1. Federal Reserve System (2007), "The 2007 Federal Reserve Payments Study: Noncash Payment Trends in the United States: 2003–2006," www.frbservices.org/files/communications/pdf/research/2007_payments_study.pdf. Also see Geoffrey R. Gerdes (2008), "Recent Payment Trends in the United States," *Federal Reserve Bulletin*, vol. 94 (October), pp.75–106, www.federalreserve.gov/pubs/bulletin/2008/pdf/payments08.pdf; Geoffrey R. Gerdes, Jack K. Walton II, May X. Liu, and Darrel W. Parke (2005), "Trends in the Use of Payment Instruments in the United States," *Federal Reserve Bulletin*, vol. 91 (Spring), pp. 180–201, www.federalreserve.gov/pubs/bulletin/2005/spring05_payment.pdf; and Visa USA Research Services (2006), "VISA Payment Panel Study: 2006 Payment Trends Study."

2. Eun-Ju Lee and Jinkook Lee (2000), "Haven't Adopted Electronic Financial Services Yet? The Acceptance and Diffusion of Electronic Banking Technologies," *Financial Counseling and Planning*, vol. 11 (1), pp. 49–60; Jeanne M. Hogarth, Jane M. Kolodinsky, and Tatiana Gabor (2006), "Consumer Payment Choices: Paper, Plastic—or Electrons?" *Consumer Interests Annual* (Proceedings of the 2006 annual conference of the American Council on Consumer Interests), vol. 52, pp. 127–40, www.consumerinterests.org/files/public/Hogarth_ConsumerPaymentChoicesPaperPlasticorElectrons.pdf.

3. In a survey by the Princeton Research Group on behalf of Consumer Reports WebWatch, respondents reported having altered their use of credit cards because they were concerned about identity theft; see Consumer Reports WebWatch (2005), "Leap of Faith: Using the Internet Despite the Dangers" (October 26), www.consumerwebwatch.org/pdfs/princeton.pdf. Security concerns have also been cited as a barrier to consumer adoption of mobile banking; see Niina Mallat (2007), "Exploring Consumer Adoption of Mobile Payments: A Qualitative Study," *Journal of Strategic Information Systems*, vol. 16 (December), pp. 413–32.

4. Earlier data were reported in Christoslav E. Anguelov, Marianne A. Hilgert, and Jeanne M. Hogarth (2004), "U.S. Consumers and Electronic Banking, 1995–2003,"*Federal Reserve Bulletin*, vol. 90 (Winter), pp. 1–18, www.federalreserve.gov/pubs/bulletin/2004/winter04_ca.pdf. See that article for a comprehensive glossary of e-banking terms and a discussion of e-banking services.

How Would You Like to Pay for That?

As new payment technologies have developed, consumers have changed the way they pay for the goods and services they buy. Although the number and volume of consumers' cash transactions cannot be measured accurately, indirect evidence suggests that cash transactions have declined.[1] It is certain that the use of checks as a form of payment has declined substantially (table A). The decline between 2003 and 2006 was accompanied by an increase in the use of debit cards and the number of ACH payments (for example, preauthorized payments).

Several studies have looked at consumers' choices of form of payment under differing circumstances. One study found that French consumers make high-value payments by check, mid-value payments by cash or bank debit card, and low-value payments by cash.[2] Another study found that the nature of the transaction, the transaction value, the environment at the point of sale, the bill's frequency, and the variability of the transaction value affect consumers' decisions about which form of payment to use.[3] Similarly, the 2006 Visa Payment Panel Study showed that in 2005, U.S. consumers were more likely to use a credit card than another form of payment to pay for a meal at a high-priced restaurant, were likely to use cash or credit card to pay for a meal at a mid-priced restaurant,

1. Geoffrey R. Gerdes (2008), "Recent Payment Trends in the United States," *Federal Reserve Bulletin*, vol. 94 (October), pp.75–106, www.federalreserve.gov/pubs/bulletin/2008/pdf/payments08.pdf; Paul W. Bauer and Daniel Littman (2007), "Are Consumers Cashing Out?" Federal Reserve Bank of Cleveland Economic Commentary (October), www.clevelandfed.org/research/commentary/2007/100107.cfm.

2. David Bounie and Abel Francois (2006), "Cash, Check or Bank Card? The Effects of Transaction Characteristics on the Use of Payment Instruments," University of Paris Working Paper, www.bos.frb.org/economic/eprg/conferences/payments2006/papers/Bounie.pdf.

3. Fumiko Hayashi and Elizabeth Klee (2003), "Technology Adoption and Consumer Payments: Evidence from Survey Data," *Review of Network Economics*, vol. 2 (June), pp. 175–90.

A. Distribution of payments, by payment method, 2003 and 2006

Percent

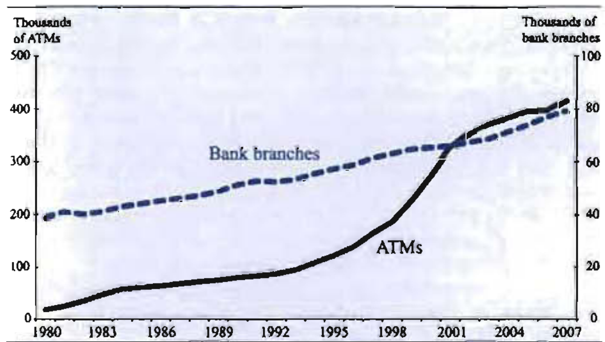
Payment method	2003		2006		Change, 2003 to 2006	
	Dollar value	Number of transactions	Dollar value	Number of transactions	Dollar value	Number of transactions
Checks	60.9	45.8	54.9	32.7	−9.8	−28.6
Cards						
Credit cards	2.5	23.3	2.8	23.3	12.0	.0
Debit cards	.9	19.2	1.3	27.1	44.4	41.1
ACH	35.7	10.7	40.9	15.7	14.6	46.7
Electronic benefit transfers	*	1.0	*	1.2	. . .	20.0

NOTE: Components may not sum to 100 percent because of rounding.
* In absolute value, less than .05 percent.
. . . Not applicable.
SOURCE: Gerdes, "Recent Payment Trends in the United States."

1980 and 2007 due to industry consolidation, the number of bank branches has climbed steadily, at a compound annual rate of growth of 2.7 percent.[5] Growth in the number of ATMs has been even more rapid, with a compound annual growth rate of 12.2 percent (figure 1). In particular, the growth of off-premises ATMs (ATMs not located within a bank branch) has allowed consumers greater access to their accounts.

5. One possible explanation for bank branch growth in an increasingly electronic world relates to the benefit of branch networks. Research by the Federal Deposit Insurance Corporation shows that banks with larger branch networks have greater deposit growth and higher returns on investment. See Gary Seale (2004), "Branching Continues to Thrive as the U.S. Banking System Consolidates," *FYI: An Update on Emerging Issues in Banking* (October 20), www.fdic.gov/bank/analytical/fyi/2004/102004fyi.html.

1. Number of bank branches and ATMs in the United States, 1980–2007



SOURCE: Summary of Deposits and American Bankers Association. The Summary of Deposits (SOD) is an annual survey conducted by the Federal Deposit Insurance Corporation (FDIC) of branch office deposits as of June 30 for all FDIC-insured commercial banks, FDIC-supervised savings banks, and insured branches of all foreign banks. Current and historical SOD data can be accessed through the FDIC's website, at www2.fdic.gov/sod.

and were likely to use cash at a quick-service restaurant (table B).[4]

Data from the 2006 Michigan Surveys of Consumers also reveal the tendencies of U.S. consumers to use different forms of payment for different types of transactions (table C). For Internet transactions, a small proportion of consumers use third-party payment systems (PayPal, for example), perhaps reflecting concerns about fraud and data security. Although these transactions are settled within the banking system, many third-party services operate outside the regulated banking industry.

4. Visa USA Research Services, "Visa Payment Panel Study."

B. Distribution of consumer payments at various locations, by payment method, 2005

Percent

Payment location	Payment method					
	Cash	Check	Credit card (general purpose)	Credit card (private label or proprietary)	Debit card	Other
Gas stations	20	4	35	8	30	1
Grocery stores	21	18	25	1	33	3
Department stores	9	13	33	26	17	3
Discount stores	16	17	26	3	37	2
Hotels	9	2	73	5	10	1
High-priced restaurants	20	3	59	1	12	5
Mid-priced restaurants	36	2	36	2	23	1
Quick-service restaurants	66	3	12	0	17	1

NOTE: Components may not sum to 100 percent because of rounding.

SOURCE: Visa USA Research Services, "VISA Payment Panel Study."

C. Method of payment, by transaction type, 2006

Percent

Transaction type	Payment method					
	Cash	Check	Credit card	Debit card	Prepaid card	Third party[1]
In store (under $25)	43	8	18	31	0	n.a.
In store (over $25)	16	16	35	33	0	n.a.
Internet	n.a.	1	71	20	0	7

NOTE: Components may not sum to 100 percent because of rounding.

1. For example, PayPal.

n.a. Not available.

SOURCE: Michigan Surveys of Consumers.

Growth in the number of bank branches and ATMs narrows the distance between consumers and their financial services providers. In the 1989 Survey of Consumer Finances, 36 percent of respondents reported living or working within one mile of the nearest branch or ATM of their primary financial institution; by 2007, the proportion had grown to 41 percent (and 86 percent lived or worked within five miles) (table 1).

Consumers' Banking Tendencies

The ubiquity of bank branches means that most consumers have convenient access to traditional banking channels, such as brick-and-mortar branches and ATMs. And the use of direct deposit and preauthorized payments, together with the availability of financial services via telephone and computer, means that consumers can initiate most transactions 24 hours a day, from remote locations.

As the adoption of e-banking grows, one might expect brick-and-mortar branches to lose importance. However, surveys continue to show that the majority

1. Distance of home or workplace from closest branch or ATM, 1989 and 2007

Percent of respondents

Year	Less than 1 mile	1–5 miles	6–10 miles	More than 10 miles
1989	36.3	47.8	9.3	6.2
2007	40.8[1]	45.4	7.7	4.6

NOTE: Percentages do not sum to 100 percent because table does not include respondents who reported "mail" or "telephone" as the distance from the closest branch.

1. Includes 37.6 percent reporting "within 1 mile" and 3.2 percent reporting "the Internet"; the Internet was not mentioned in 1989.

SOURCE: Survey of Consumer Finances.

2. Main way of doing business with primary financial institution, by demographic characteristic, 2006

Percent

Demographic characteristic	In person	Online	ATM	Phone	Direct deposit
All respondents	53.6	20.8	17.1	3.5	1.1
Respondents using online banking	30.9	44.5	19.1	3.2	1.1
Household income (by income percentile)[1]					
20% or less	68.6	3.1	17.0	4.6	.0
21%–40%	61.5	12.9	15.7	4.8	2.5
41%–60%	55.3	16.2	18.3	3.5	1.3
61%–80%	42.7	31.8	19.1	4.0	1.5
81%–100%	36.6	41.6	16.4	1.5	.4
Age of respondent (years)					
Younger than 35	37.0	33.8	22.7	3.3	2.5
35–44	44.4	32.2	17.9	4.7	.4
45–54	51.3	19.9	19.8	2.4	1.3
55–64	67.5	12.8	12.8	1.7	1.4
65 and older	70.0	4.5	11.9	4.9	.0
Education of respondent					
No high school diploma	80.4	2.8	4.7	2.3	.0
High school diploma	62.0	12.2	16.9	2.9	.7
Some college	56.9	15.1	20.3	2.8	1.6
Bachelor's degree	45.9	28.0	17.3	4.8	1.3
Postgraduate education	39.2	36.4	17.3	3.2	1.1
Race/ethnicity of respondent					
White	54.3	21.2	16.1	3.6	1.1
Black	52.4	15.7	21.8	4.4	1.0
Hispanic	47.9	22.1	22.1	2.3	1.9
Other[2]	51.0	27.5	14.8	2.7	.0
Marital status of respondent					
Married	49.1	26.8	15.6	3.2	1.0
Single female	58.6	10.4	20.9	5.1	.9
Single male	63.4	14.0	17.1	1.6	1.6
Homeownership status					
Own home	54.0	21.5	16.2	3.2	1.1
Do not own home	52.0	18.2	20.7	4.6	1.3
Gender of respondent					
Male	52.5	22.5	16.4	3.0	1.0
Female	54.6	19.4	17.8	3.9	1.1
Region					
West	48.5	25.3	19.8	3.6	1.5
Midwest	56.7	18.6	15.9	3.4	2.2
Northeast	52.1	18.3	22.4	3.7	.0
South	55.4	21.1	13.5	3.3	.7

NOTE: Percentages do not sum to 100 because of nonresponse.

1. Income percentiles are based on the income of all responding households. Thus, of respondents in the lowest 20 percent of the income distribution, 68.6 percent reported doing business with their primary financial institution mainly in person and 3.1 percent reported doing business mainly online.

2. Includes Asian, Pacific Islander, and Native American.

SOURCE: Michigan Surveys of Consumers.

of consumers still conduct their bank business mainly in person (table 2). In the 2006 Michigan Surveys of Consumers, 54 percent of respondents said that in-person interaction was their main way of doing business with their primary financial institution. In contrast, 21 percent reported conducting bank business mainly online, and 17 percent reported conducting transactions mainly using ATMs. These results differ from those of the Survey of Consumer Finances, which asks about the "main ways of conducting business" with their financial institution, thus allowing for multiple responses. In the 2004 SCF, 77 percent of respondents said they did their banking in person, 64 percent reported using ATMs, and 50 percent reported using the mail.[6]

Looking at just those respondents who bank online presents a far different picture. For example, a much smaller proportion of online bankers—only 31 percent—reported in-person interaction as their main way of doing business with their primary financial institution. A larger proportion—45 percent—reported online banking as their main means of conducting business.

Differences in practices also exist among demographic groups. For example, consumers in the top

6. Loretta J. Mester (2006), "Changes in the Use of Electronic Means of Payment: 1995–2004," Federal Reserve Bank of Philadelphia *Business Review* (2nd quarter), pp. 26–30, www.philadelphiafed.org/research-and-data/publications/business-review/2006/q2/br_q2-2006-4_changes-electronic-means.pdf.

3. Consumer access to Internet and use of Internet for online banking, by demographic characteristic, 2006

Percent

Demographic characteristic	Internet access at home: Have access	Distribution by type of connection: Dial-up	Distribution by type of connection: High-speed	Internet access at work: Have access	Distribution of online bankers by location most frequently used to access their financial institution: Home	Work	Both equally
All respondents	72.3	27.1	72.9	52.2	...	...	...
Respondents using online banking	95.1	18.7	81.3	75.5	78.2	14.4	7.4
Household income (by income percentile)[1]							
20% or less	36.6	41.0	59.0	17.2	89.1	10.9	.0
21%–40%	61.1	44.8	55.2	41.0	72.3	16.9	10.7
41%–60%	76.7	32.5	67.5	54.2	80.2	15.7	4.2
61%–80%	88.8	22.9	77.1	73.5	81.4	14.3	4.4
81%–100%	96.3	10.7	89.3	77.4	74.6	14.2	11.2
Age of respondent (years)							
Younger than 35	79.2	25.5	74.5	67.8	73.3	21.1	5.6
35–44	86.9	20.1	79.9	73.2	80.0	12.6	7.4
45–54	79.1	22.5	77.5	66.5	75.0	14.4	10.6
55–64	73.1	33.8	66.2	46.3	81.6	8.6	9.9
65 and older	45.9	42.5	57.5	9.8	95.0	5.0	.0
Education of respondent							
No high school diploma	21.8	57.5	42.6	11.6	50.0	.0	50.0
High school diploma	60.7	40.9	59.2	32.4	83.5	10.5	6.0
Some college	71.0	30.2	69.8	51.2	76.4	13.6	10.1
Bachelor's degree	84.6	21.2	78.8	66.8	78.3	13.1	8.6
Postgraduate education	89.7	16.2	83.8	74.1	77.3	20.8	2.0
Race/ethnicity of respondent							
White	75.1	27.3	72.7	52.5	78.3	13.9	7.8
Black	55.7	28.7	71.3	56.0	70.1	27.8	2.1
Hispanic	59.6	18.9	81.1	46.8	89.7	.0	10.3
Other[2]	79.4	22.7	77.3	52.3	73.9	23.1	3.1
Marital status of respondent							
Married	81.6	27.0	73.0	57.8	78.6	13.0	8.4
Single female	54.9	27.6	72.4	39.2	82.9	12.5	4.6
Single male	63.9	27.0	73.0	51.1	73.5	20.9	5.6
Homeownership status							
Own home	76.5	28.6	71.4	53.2	80.0	14.0	6.1
Do not own home	55.4	19.0	81.0	47.9	70.2	16.1	13.7
Gender of respondent							
Male	76.0	25.2	74.8	58.8	79.2	11.3	9.6
Female	69.2	28.9	71.1	46.5	77.3	17.3	5.4
Region							
West	78.0	23.2	76.8	53.0	83.0	11.7	5.3
Midwest	70.6	32.6	67.4	47.1	75.7	18.6	5.8
Northeast	73.4	22.2	77.8	54.9	75.4	17.7	6.9
South	69.6	28.8	71.2	53.7	78.2	11.3	10.4

NOTE: Some percentages do not sum to 100 because of rounding or nonresponse.

1. Income percentiles are based on the income of all responding households. Thus, of respondents in the lowest 20 percent of the income distribution, 36.6 percent reported having Internet access at home and, of that group, 41.0 percent reported having a dial-up connection.

2. Includes Asian, Pacific Islander, and Native American.

. . . Not applicable.

SOURCE: Michigan Surveys of Consumers.

fifth in terms of income tended to report using online banking as their main way of doing business with their primary financial institution (42 percent), whereas consumers with less income reported in-person banking as their main way of conducting bank business (perhaps in part because of a lack of access to the Internet). Compared with those over the age of 45, larger proportions of respondents under 45 reported using online banking or ATMs as their main way of doing business with their primary financial institution. Education level appears to be associated with online banking as well: larger proportions of respondents with a bachelor's degree or postgraduate education reported online banking as their main way of banking.

Extent of Consumer Access to the Internet

Nearly three-fourths of respondents to the 2006 Michigan Surveys of Consumers reported having Internet access at home (72 percent), and about half reported having access at work (52 percent). Most consumers with home access had a high-speed connection (73 percent) (table 3). For online bankers, the majority (78 percent) reported that they do their online banking most often from home.

Several demographic factors—including age, education, race and ethnicity, and income—seem to be associated with Internet access. The same groups less likely to cite online banking as their primary means of conducting bank business were also less likely to have Internet access at home. For example, respondents older than 65 were less likely to have Internet access at home and less likely to have a high-speed Internet connection. Similarly, only 22 percent of respondents without a high school diploma reported having Internet access at home, and only 12 percent reported having access at work. In addition, black and Hispanic respondents were less likely than white and "other" (predominantly Asian, Pacific Islander, and Native American) respondents to have Internet access at home—although those who had home access were just as likely as white and "other" respondents to have a high-speed connection. In a multivariate modeling of Internet access, black respondents were the only group statistically less likely to have access, either at work or at home (data not shown).

Between 2000 and 2006, access to computers and the Internet became more widespread across all income groups.[7] However, data from the 2006 Michigan Surveys of Consumers indicate that differences among households in different income groups remain. About 50 percent of low- and moderate-income households (those in the first and second income quintiles, the lower 40 percent of the income distribution) had Internet access at home, compared with nearly 90 percent of middle- and higher-income households (those in the upper 60 percent of the income distribution); similarly, about 30 percent in the lower income group reported having Internet access at work, compared with nearly 70 percent in the upper income group.[8]

Even for those with Internet access at home, the type of access varies by income, with higher proportions of lower income households accessing their home Internet service provider via a slower dial-up connection rather than a high-speed connection. This finding has implications for the use of online banking, as consumers may find online banking via a dial-up connection cumbersome and may believe that high-speed connections are more secure. As discussed later, consumers' perceptions of the convenience and security of e-banking products affect their willingness to adopt these products.

Trends in Consumer Adoption of E-Banking

Consumer adoption of some mature e-banking technologies seems to have reached saturation. For example, the proportion of households reporting that they use direct deposit for income or benefits payments was at 80 percent in 2007 (table 4). ATM use remained fairly stable, at 67 percent and 69 percent in 2003 and 2006, respectively (though a higher proportion reported using ATM cards in 2007).

Adoption of other, newer e-banking technologies has been growing. In particular, the use of debit cards has increased in recent years—although some consider debit cards a "mature" technology, given their widespread use.[9] (Debit cards have been around long enough and have been used in a sufficient number of transactions that a few problems are being recognized, among them account overdrafts; see box "Account Debits and Overdrafts.") Only 20 percent of respondents to the 1995 Survey of Consumer Finances had used a debit card; by 2007, the percentage had more than tripled, to 71 percent. The increase may have been due to several factors. In the mid-1990s, banks began to issue debit cards imprinted with the Visa or MasterCard logo, leading to acceptance by more merchants.[10] Also, the addition of national credit card networks enabled consumers to complete transactions with only a signature anywhere a merchant accepted the card—in contrast to the requirement, when debit cards were introduced, that they use a personal identification number (PIN). Wider merchant acceptance and the elimination in many instances of the PIN requirement resulted in a significant increase in debit transactions in general,

7. U.S. Census (2001), "Home Computers and Internet Use in the United States: August 2000" (September), www.census.gov/prod/2001pubs/p23-207.pdf; U.S. Census (2005), "Computer and Internet Use in the United States: 2003" (October), www.census.gov/prod/2005pubs/p23-208.pdf; 2008 Statistical Abstract of the United States, "Internet Access and Usage and Online Service Usage: 2006" (table 1127), www.census.gov/compendia/statab/2008/tables/08s1127.pdf.

8. Here and elsewhere in this article, "low income" refers to households in the first income quintile (lowest 20 percent of the income distribution), "moderate income" refers to those in the second quintile, "middle income" refers to those in the third quintile, and "higher income" generally refers to those in the upper two quintiles.

9. Julia S. Cheney (2007), "An Update on Trends in the Debit Card Market," Payment Cards Center Discussion Paper 07-07 (Philadelphia: Federal Reserve Bank of Philadelphia, June), www.philadelphiafed.org/payment-cards-center/publications/discussion-papers/2007/D2007JuneUpdateDebitCardMarketTrends.pdf.

10. Stan Sienkiewicz (2002), "The Evolution of EFT Networks from ATMs to New On-Line Debit Payment Products," Payment Cards Center Discussion Paper 02-04 (Philadelphia: Federal Reserve Bank of Philadelphia, April), www.philadelphiafed.org/pcc/papers/2002/EFTNetworks_042002.pdf.

4. Proportion of U.S. households that use various electronic banking technologies, selected years

Percent

Technology	Survey of Consumer Finances						Michigan Surveys of Consumers			
	1995	1998	2001	2004	2007	Change, 1995 to 2007	1999	2003	2006	Change, 1999 to 2006
Direct deposit	53	67	73	76	80	50	65	70	77	19
ATM card	35	55	58	66	76	116	59	67	69	16
Debit card	20	37	50	63	71	254	n.a.	54	62	...
Preauthorized payment	25	40	44	51	49	95	31	46	57	84
Automated phone system	n.a.	26	23	21	25	...	40	44	46	16
Online banking	4	7	21	35	53	1,228	10	32	51	411
Smart card	1	2	3	n.a.	n.a.	...	n.a.	6	12	...
Prepaid card	n.a.	n.a.	n.a.	n.a.	n.a.	...	n.a.	73	73	...

NOTE: The numbers in this table differ from those in Mester, "Changes in the Use of Electronic Means of Payment: 1995–2004," in that Mester's data include all households whereas the data in this table include only those households that have bank accounts, consistent with Anguelov, Hilgert, and Hogarth, "U.S. Consumers and Electronic Banking." In addition, for those households with ATM cards, this table includes only those households that use the product, whereas Mester (see note b to her table "Percent of U.S. Households that Use Each Instrument: 1995, 1998, 2001, and 2004") indicates that she included any household that reported owning an ATM card.

Calculations may not yield change shown because of rounding.

n.a. Not available.

. . . Not applicable.

SOURCE: Survey of Consumer Finances and Michigan Surveys of Consumers.

and in signature debit transactions (as opposed to PIN debit transactions) in particular.

The data indicate that consumers may be using some technologies as substitutes (using one or the other) and other technologies as complements (using both). For example, there is some evidence that consumers are using debit cards as substitutes for checks and cash and that those who are not using debit cards for transactions are using credit cards.[11] (The decision about which form of payment to use may be driven in part by the size and circumstances of the transaction; see box "How Would You Like to Pay for That?") Similarly, consumers may use either online or phone banking, rather than both. Or they may use preauthorized payments and phone or online banking as complementary means of paying bills.

In 2006, more than half of consumers reported using preauthorized payments, up from about one-fourth in the mid-1990s. Preauthorized payments allow consumers to have many types of bills paid automatically from their bank account—rent or mortgage, car payments, utility bills, or gym memberships, for example. Paying in this way helps consumers avoid late fees and maintain a sound credit record. While preauthorized payments can reduce consumers' costs in terms of their time and effort, they can also increase their "switching" costs, for example, the time it takes to change to a new financial institution, or the expense of stopping payment should the consumer wish to terminate his or her relationship with a current recipient of a preauthorized payment.

Online banking has clearly been the fastest growing e-banking technology over the past decade: fewer than 5 percent of consumers were banking online in 1995, compared with 53 percent in 2007. While most online bankers use the service to monitor their accounts or transfer funds, a significant proportion in 2006 were using online banking to pay bills (table 5). In 2003, only 32 percent of households reported banking online, and 55 percent of those online bankers were paying bills online; by 2006, of the 51 per-

5. Proportion of online bankers using various online banking services, 2003 and 2006

Percent

Service	2003	2006
Monitor accounts	95.4	97.7
Transfer funds between accounts	63.9	70.1
Pay bills	54.7	76.0
Open new accounts	n.a.	14.8
Apply for loans	n.a.	11.1
MEMO		
Proportion of respondents banking online	32	51

n.a. Not available.

SOURCE: Michigan Surveys of Consumers.

11. Ron Borzekowski, Elizabeth K. Kiser, and Shaista Ahmed (2006), "Consumers' Use of Debit Cards: Patterns, Preferences, and Price Response," Finance and Economics Discussion Series 2006-16 (Washington: Board of Governors of the Federal Reserve System, April), www.federalreserve.gov/pubs/feds/2006/200616/200616pap.pdf; Elizabeth Klee (2006), "Families' Use of Payment Instruments during a Decade of Change in the U.S. Payment System," Finance and Economics Discussion Series 2006-01 (Washington: Board of Governors of the Federal Reserve System, February), www.federalreserve.gov/pubs/feds/2006/200601/200601pap.pdf; Fumiko Hayashi and Elizabeth Klee (2003), "Technology Adoption and Consumer Payments: Evidence from Survey Data," *Review of Network Economics*, vol. 2 (June), pp 175–90; Elizabeth Klee, "How People Pay: Evidence from Grocery Store Data" (2008), *Journal of Monetary Economics*, vol. 55 (April), pp. 526–41; Marques Benton, Krista Blair, Marianne Crowe, and Scott Schuh (2007), "The Boston Fed Study of Consumer Behavior and Payment Choice: A Survey of Federal Reserve System Employees," Public Policy Discussion Papers No. 07-1 (Boston: Federal Reserve Bank of Boston, February), www.bos.frb.org/economic/ppdp/2007/ppdp0701.pdf.

Account Debits and Overdrafts

A 2007 study by PULSE EFT Association and Dove Consulting found that an increasing proportion of debit card programs authorize purchases "even when there are insufficient funds in the underlying demand deposit account at the time of the transaction, in essence allowing cardholders to overdraw their accounts."[1] In these cases, consumers may face an overdraft fee from their bank. Financial institutions contend that consumers may be willing to pay overdraft fees rather than have their transactions denied, while consumer advocates contend that consumers should be given the choice of canceling or continuing their transactions.

In December 2008, the Federal Reserve Board issued final rules that amend the Board's Regulation DD (Truth in Savings) to address depository institutions' disclosure practices related to overdrafts. The new rules take effect January 1, 2010.

- *Disclosure of aggregate overdraft fees.* All institutions must disclose on their periodic statements the aggregate dollar amounts charged for overdrafts and returned items, both for the statement period and for the year to date. (Previously, only institutions that promote or advertise the payment of overdrafts were required to disclose aggregate amounts.)
- *Disclosure of balance information.* Institutions that provide account balance information through an automated system must provide a balance that does not include additional funds that may be made available to cover overdrafts.

At the same time the Board issued these final rules, it also issued proposed rules for overdraft services. The proposed rules, which would amend the Board's Regulation E (Electronic Fund Transfers), provide certain consumer protections related to the assessment of overdraft fees.

- *Consumer choice regarding overdraft services.* The proposal solicits comment on two approaches to giving consumers a choice regarding the payment of ATM and one-time debit card overdrafts by their financial institution.
  - — Opt-out. Under one approach, an institution would be prohibited from imposing an overdraft fee unless (1) the consumer is given an initial notice and a reasonable opportunity to opt out of the institution's overdraft service and (2) the consumer does not opt out.
  - — Opt-in. Under the other approach, an institution would be prohibited from imposing an overdraft fee unless the consumer affirmatively consents ("opts in") to the institution's overdraft service.
- *Debit holds.* The proposed rules would prohibit institutions from imposing an overdraft fee when the account is overdrawn because of a hold on funds in the consumer's account that exceeds the actual transaction amount. For example, when a consumer uses a debit card to pay for gasoline, the initial authorization may place a hold for $50; the consumer may want to purchase only $20 worth of gas, but if he or she has only $40 in the account, the $50 hold may overdraw the account. The proposed rule is limited to debit card transactions in which the actual transaction amount generally can be determined within a short time after the transaction is authorized (for example, transactions at gas stations and restaurants).

For details and to track the progress of these proposals, visit www.federalreserve.gov/newsevents/press/bcreg/20081218a.htm. The comment period for these proposals closed on March 30, 2009.

1. The PULSE EFT Association and Dove Consulting study is described in Julia S. Cheney (2007), "An Update on Trends in the Debit Card Market," Payment Cards Center Discussion Paper 07-07 (Philadelphia: Federal Reserve Bank of Philadelphia, June), www.philadelphiafed.org/payment-cards-center/publications/discussion-papers/2007/D2007JuneUpdateDebitCardMarketTrends.pdf.

cent of households banking online, 76 percent were paying bills online.

Compared with online bill paying, other online banking services, such as opening new accounts, are used much less frequently (appendix table B.1). In 2006, only about 15 percent of online bankers used online banking to open a new account, and only 11 percent used online banking to apply for a loan. Because not all banks offer a full range of services online, some of these numbers may reflect the supply of, as well as the demand for, e-banking services.

Nearly three out of four respondents to the 2003 and 2006 Michigan Surveys of Consumers reported using some type of prepaid, or stored-value, card. Some of these cards may be closed-system, or single-vendor, cards (for example, gift cards from a particular store); others may be general-purpose cards that carry a Visa, MasterCard, or American Express logo. Some cards are designed for a single use, while others are reloadable; for example, some employers issue reloadable payroll cards to employees who do not have their pay deposited directly into a bank account.[12] Between 2004 and 2007, the number of transactions made via prepaid cards grew from 2.4 billion to 4.3 billion; the dollar volume grew in approximately the same proportion, from $64 billion to $113 billion. While the majority of these prepaid card transactions were made by closed-system cards, the share made by general-purpose cards grew from 20 percent to 28 percent over the period.[13] Consumer and community educators have advocated the use of these cards as a way to transition unbanked and underbanked households to the mainstream banking system. However, many of these cards are not associated with a bank account.

Users of E-Banking

In addition to the benefits of using e-banking products and services noted earlier, studies suggest that consumers who monitor their bank accounts electronically identify fraudulent transactions earlier than consumers who rely on paper statements.[14] If this is the case, then it is important to identify barriers to the adoption of e-banking technologies so that consumers can be encouraged to use these products for their own benefit.

Consumers' access to bank accounts and their use of e-banking products is correlated with demographic factors such as age, income, race and ethnicity, and education.[15] Given that the number of e-banking products used by consumers has increased, it may be instructive to look at how various demographic groups—some of which may be underrepresented among electronic bankers—have fared.

Income and E-Banking

Data from the Michigan Surveys of Consumers confirm that higher income households are more likely than those in other income groups to have a bank account and to use each of the electronic banking services covered in the surveys (table 6). However, low- and moderate-income households appear to be catching up: by 2006, 80 percent of low-income households and 94 percent of moderate-income households reported having a bank account. And while each income group has shown growth in the adoption of e-banking technologies, the growth has been especially noticeable among low- and moderate-income consumers. For example, the proportion of low- and moderate-income households using preauthorized payments more than doubled between 1999 and 2006. And low-income consumers reported an even larger increase in online banking, with the proportion rising tenfold, from 3 percent to 30 percent, between 1999 and 2006. Despite significant growth in the percentage of low-income consumers banking online, the difference between the lowest and highest income groups in the percentages banking online appears to have widened over time, from 19 percentage points in 1999 to 26 percentage points in 2003 to 40 percentage points in 2006. Finally, the proportion of low-income consumers banking by phone more than doubled from 1999 to 2006, perhaps an indication that phone banking is a substitute for online banking among lower-income households.

Does their increased use of online banking, phone banking, and preauthorized payments mean that low- and moderate-income consumers are better off? While this question cannot be answered definitively, it is possible that these consumers are better able to monitor their account activity and balances with these e-banking technologies. Interestingly, when attitudes and other demographic characteristics were controlled for in the 2006 data, income was not a significant determinant of whether a household banked online, banked by phone, or used preauthorized payment (data not shown).

12. James C. McGrath (2007), "General-Use Prepaid Cards: The Path to Gaining Mainstream Acceptance," Payment Cards Center Discussion Paper 07-03 (Philadelphia: Federal Reserve Bank of Philadelphia, March), www.philadelphiafed.org/pcc/papers/2007/D2007MarchGeneralUsePrepaidCards.pdf; Julia S. Cheney and Sherrie L.W. Rhine (2006), "Prepaid Cards: An Important Innovation in Financial Services," Payment Cards Center Discussion Paper 06-07 (Philadelphia: Federal Reserve Bank of Philadelphia, July), www.philadelphiafed.org/pcc/papers/2006/D2006JulyPrepaidCardsACCIcover.pdf; Julia S. Cheney (2007), "Payments, Credit, and Savings: The Experience for LMI Households," Summary of Payment Cards Center conference (Philadelphia: Federal Reserve Bank of Philadelphia), www.philadelphiafed.org/pcc/conferences/2007/C2007MayExperienceforLMI.pdf.

13. Aite Group (2007), "Prepaid Cards: The State of the Industry," Report 200707231 (July), www.aitegroup.com/reports/200707231.php; and ATM & Debit News and Prepaid Trends, New York: Source Media, September 27, 2007. Gerdes ("Recent Payment Trends in the United States") estimates that approximately 3.3 billion prepaid card payments, with a dollar volume of approximately $49.6 billion, were made in 2006.

14. Mary T. Monahan (2007), "Identify Fraud Is Dropping, Continued Vigilance Necessary," Javelin Strategy and Research 2007 Identity Fraud Survey Report (February).

15. Lee and Lee, "Haven't Adopted Electronic Financial Services Yet?"; Eun Ju Lee, Jinkook Lee, and David Eastwood (2003), "A Two-Step Estimation of Consumer Adoption of Technology-Based Service Innovations," *Journal of Consumer Affairs*, vol. 37 (December), pp. 256–82; Jane M. Kolodinsky, Jeanne M. Hogarth, and Marianne A. Hilgert (2004), "The Adoption of Electronic Banking Technologies by U.S. Consumers," *International Journal of Bank Marketing*, vol. 22 (4), pp. 238–59; Borzekowski, Kiser, and Ahmed, "Consumers' Use of Debit Cards"; Michal Polasik and Tomasz Piotr Wisniewski (2008), "Empirical Analysis of Internet Banking Adoption in Poland" (June 22), paper presented at the 21st Australasian Finance and Banking Conference, papers.ssrn.com/sol3/papers.cfm?abstract_id=1116760.

6. Use of e-banking products and services by consumers who have a bank account, by demographic characteristic, selected years

Percent

Demographic characteristic	Have a bank account			Product or service								
				ATM card			Debit card			Direct deposit		
	1999	2003	2006	1999	2003	2006	1999	2003	2006	1999	2003	2006
All respondents	89	86	92	60	67	69	n.a.	54	62	66	70	77
Household income (by income percentile)[1]												
20% or less	67	67	80	34	57	58	n.a.	49	50	63	59	71
21%–40%	89	82	94	47	71	66	n.a.	58	65	70	69	74
41%–60%	93	92	97	60	72	63	n.a.	60	61	60	68	79
61%–80%	98	92	98	68	68	79	n.a.	53	71	65	80	84
81%–100%	97	98	97	82	72	83	n.a.	55	69	72	73	81
Age of respondent (years)												
Younger than 35	87	81	88	79	84	89	n.a.	79	86	58	60	71
35–44	87	88	95	74	77	80	n.a.	64	76	67	70	78
45–54	91	90	95	58	62	76	n.a.	43	64	60	66	73
55–64	87	91	91	52	58	57	n.a.	39	52	57	76	75
65 and older	91	83	92	19	45	41	n.a.	30	32	89	83	89
Education of respondent												
No high school diploma	67	44	70	23	55	49	n.a.	42	44	61	47	62
High school diploma	88	81	88	45	60	57	n.a.	51	53	62	63	70
Some college	93	88	97	70	70	73	n.a.	61	72	64	71	79
Bachelor's degree	92	95	95	67	72	77	n.a.	58	65	72	75	83
Postgradnate education	97	97	99	85	71	75	n.a.	49	63	73	78	83
Race/ethnicity of respondent												
White	92	90	95	58	64	68	n.a.	50	61	65	70	78
Black	75	66	80	61	80	75	n.a.	68	70	71	71	83
Hispanic	71	69	81	79	90	76	n.a.	86	68	63	60	66
Other[2]	87	86	90	71	67	63	n.a.	67	63	74	86	74
Marital status of respondent												
Married	94	90	94	64	69	71	n.a.	57	64	66	75	78
Single female	83	79	88	51	64	64	n.a.	50	59	70	67	80
Single male	83	85	91	60	67	68	n.a.	53	59	59	55	69
Homeownership status												
Own home	93	91	95	56	63	67	n.a.	50	59	70	72	78
Do not own home	80	74	84	69	78	77	n.a.	67	73	57	64	75
Gender of respondent												
Male	91	87	93	62	68	71	n.a.	54	63	63	69	75
Female	87	85	92	58	67	67	n.a.	55	61	69	71	79
Region												
West	91	89	94	70	73	75	n.a.	65	67	69	66	80
Midwest	90	89	93	50	58	64	n.a.	47	58	62	71	74
Northeast	89	83	96	60	67	76	n.a.	44	61	60	67	74
South	86	84	89	60	70	64	n.a.	58	62	70	74	80

1. Income percentiles are based on the income of all responding households. Thus, of respondents in the lowest 20 percent of the income distribution, 67 percent had a bank account in 1999 and 2003 and 80 percent had a bank account in 2006.

2. Includes Asian, Pacific Islander, and Native American.

n.a. Not available.

SOURCE: Michigan Surveys of Consumers.

Age and E-Banking

Younger consumers (under age 35) are slightly less likely to have a bank account than consumers more typically in the workforce. However, among consumers with a bank account, the use of ATMs, debit cards, and online banking decreases consistently as age increases: younger households are much more likely than older households to use these services. The service that is the exception is direct deposit, the use of which generally increases with age. When considering changes over time, however, growth rates for adoption among older consumers (those 65 and above) have surpassed rates for other age groups. For example, the proportion of older consumers using ATMs and preauthorized payment doubled from 1999 to 2006, the proportion using phone banking tripled, and the proportion using online banking increased tenfold.

Education and E-Banking

Consumers who have no post-secondary education are less likely than their more-educated counterparts to have a bank account. And among less-educated consumers who have a bank account, smaller proportions use e-banking services. The most widely used service among those with no post-secondary education is direct deposit, followed by prepaid cards and ATMs.

6.—*Continued*

Percent

Product or service														
Preauthorized payment			Phone banking			Online banking			Smart card			Prepaid card		
1999	2003	2006	1999	2003	2006	1999	2003	2006	1999	2003	2006	1999	2003	2006
31	46	57	40	44	46	10.7	31.9	51.1	n.a.	6	12	n.a.	73	73
23	35	46	22	22	50	3	17	30	n.a.	4	9	n.a.	59	59
21	39	50	30	47	43	6	27	38	n.a.	6	12	n.a.	74	70
27	47	59	45	45	40	9	32	50	n.a.	5	10	n.a.	77	76
39	53	58	45	50	53	11	38	64	n.a.	8	15	n.a.	79	76
42	55	69	58	53	48	22	43	70	n.a.	7	13	n.a.	78	79
25	47	62	45	53	50	16	48	67	n.a.	8	21	n.a.	81	87
40	51	62	60	52	47	13	36	65	n.a.	6	8	n.a.	84	78
37	44	55	43	48	50	9	31	53	n.a.	7	11	n.a.	73	73
27	41	53	35	42	45	9	26	43	n.a.	6	12	n.a.	71	74
26	44	52	11	18	36	2	9	20	n.a.	1	7	n.a.	51	52
19	30	31	11	13	33	3	11	10	n.a.	3	3	n.a.	57	49
26	38	50	29	36	44	6	18	35	n.a.	4	8	n.a.	68	63
30	51	54	39	42	49	12	37	53	n.a.	5	14	n.a.	73	77
37	51	60	56	55	48	15	41	59	n.a.	9	14	n.a.	77	79
38	47	73	62	48	44	17	37	64	n.a.	7	14	n.a.	82	75
31	45	56	40	43	48	11	31	53	n.a.	6	12	n.a.	74	74
27	49	53	37	51	37	8	22	39	n.a.	5	7	n.a.	70	61
38	49	65	44	51	50	11	36	51	n.a.	4	12	n.a.	79	60
39	61	73	54	54	34	25	49	47	n.a.	16	12	n.a.	68	72
35	51	57	45	49	46	13	36	56	n.a.	6	13	n.a.	77	76
27	42	52	37	36	50	7	22	42	n.a.	5	7	n.a.	72	70
25	33	49	30	38	40	11	33	45	n.a.	8	15	n.a.	63	60
36	48	58	38	44	46	9	32	51	n.a.	6	10	n.a.	74	81
21	40	52	46	44	52	15	31	49	n.a.	7	16	n.a.	71	68
31	47	54	37	45	45	12	35	53	n.a.	5	14	n.a.	66	69
31	46	59	43	43	48	10	29	49	n.a.	7	9	n.a.	79	75
31	46	59	51	47	54	15	34	57	n.a.	6	8	n.a.	74	74
36	45	54	31	37	41	7	28	53	n.a.	7	11	n.a.	74	69
23	44	53	38	46	47	8	26	48	n.a.	3	12	n.a.	71	79
31	48	60	42	47	45	12	36	48	n.a.	7	14	n.a.	74	69

About one in ten of the least-educated consumers (those without a high school diploma) bank online. In 2006, 22 percent of respondents in this group had access to the Internet at home, and about 12 percent had access at work (table 3), hindering their ability to access and become familiar with online banking products. Thus, while an increasing percentage of less-educated consumers are using e-banking, their adoption of these services pales in comparison with consumers in other education groups. When controlling for attitudes and other demographic characteristics, education is a significant factor for the use of all e-banking technologies except phone banking.

With a few notable exceptions, between 1999 and 2006, the use of e-banking grew among most educational groups. It is interesting that respondents with the most education were less likely to report using ATMs in 2006 than in 1999 but were more likely to report using debit cards; it may be that these consumers were substituting debit card transactions for ATM transactions. Similarly, consumers with more education appear to have switched from phone banking to online banking over time, as might be expected, as access to the Internet is also greater for those with more education.

Race, Ethnicity, and E-Banking

Compared with white consumers, lower proportions of black and Hispanic consumers report having a bank account. Over time, however, the proportions of banked black and Hispanic consumers have increased, by 5 percentage points for black households and 10 percentage points for Hispanic households from

7. Proportion of consumers using e-banking technologies, by type of user, selected years

Percent

Technology	Minimal users			Limited users			Early adopters and heavy users		
	1999	2003	2006	1999	2003	2006	1999	2003	2006
ATM card	68	22	43	57	60	28	76	98	95
Debit card	n.a.	7	38	n.a.	44	51	n.a.	87	95
Direct deposit	31	63	51	100	62	83	34	80	86
Auto bill payment	57	35	12	40	17	68	93	71	67
Phone banking	18	34	11	58	17	38	57	67	59
Online banking	5	13	8	7	11	32	50	57	73
Prepaid card	n.a.	97	25	n.a.	18	90	n.a.	92	83
All respondents	37	29	22	48	26	26	15	45	51

NOTE: Components may not sum to 100 percent because of rounding.
n.a. Not available.

SOURCE: Michigan Surveys of Consumers.

1999 to 2006. Among those with a bank account, black consumers appear more likely to use debit cards than their white counterparts but are less likely to bank online.

Adoption of electronic banking products and services generally seems to have increased over time for all the racial and ethnic categories surveyed. A notable exception is the use of phone banking and preauthorized payments: a substantially smaller proportion of "other" consumers (predominantly Asians, Pacific Islanders, and Native Americans) reported banking by phone in 2006 compared with previous surveys, and a substantially larger proportion of this group reported using preauthorized payments.

Combinations of E-Banking Services Used by Consumers

As e-banking has become more popular, consumers have adopted various combinations of e-banking products and services. Cluster analysis makes it possible to look at those combinations and the characteristics of the users. In general, consumers can be sorted into several groups: early adopters and heavy users, who try everything; minimal users, who use very few, if any, e-banking services; and one or more limited-user groups "in the middle," who adopt different combinations of products and services.[16]

Minimal users seem to make use of direct deposit and ATM and debit services (debit cards and preauthorized payments), but little else (table 7). Limited users may add phone banking to these more basic services. Heavy users are just that—they make use of most e-banking services. While it is the case that about one out of five consumers did not make much use of electronic banking services in 2006, over time more than half of consumers have come to be classified as heavy users.

Consumer Attitudes toward Emerging Payment Technologies

The 2006 Michigan Surveys of Consumers asked about the use of emerging payment products, such as contactless cards and wireless payment devices. Contactless payment cards, which operate by transmitting a radio signal to a payment terminal or a handheld device (instead of by being swiped at a terminal), were not available in the United States until recently.[17] In fact, only 6.3 percent of survey respondents with a bank account reported having received a contactless payment card from their bank or credit card company (data not shown). Some consumers have been exposed to contactless payments through the use of electronic pass devices at toll booths and electronic tokens at gas pumps. The main selling points of contactless payment cards are greater speed and convenience: such payments may make for faster transactions, allowing consumers to maintain control over the card rather than hand it to a merchant.

Among all respondents, more than half (52 percent) said they would or might use contactless payment cards in the future (table 8). Among online bankers (recall that they make up about 51 percent of the full sample), nearly two-thirds (65 percent) said they would or might use this means of payment.

16. Hogarth, Kolodinsky, and Gabor, "Consumer Payment Choices: Paper, Plastic—or Electrons?"

17. The Smart Card Alliance, an industry association of payment system participants, estimates that 21 million contactless cards had been issued in the United States by April 2007. See Smart Card Alliance (2007), "Proximity Mobile Payments: Leveraging NFC and the Contactless Financial Payments Infrastructure," Smart Card Alliance Contactless Payments Council white paper (September), www.smartcardalliance.org/pages/publications-proximity-mobile-payments.

8. Consumers' expectations regarding the use of emerging payment technologies in the future, 2006

Percent

Expectation	All respondents			Respondents who bank online		
	Yes	Maybe	No	Yes	Maybe	No
Use contactless payments in future	37.8	14.7	47.5	51.6	13.8	34.6
Use wireless payments in future	16.3	7.2	76.5	24.0	7.7	68.2

NOTE: Components may not sum to 100 because of rounding.

SOURCE: Michigan Surveys of Consumers.

The future success of contactless payments may be tied to the same demographic characteristics that appear to influence adoption of other electronic banking products. Income, age, education, and race and ethnicity, for example, appear to be associated with the adoption of electronic banking products. Similarly, consumers with higher income and more education, and younger households, were more likely to indicate a willingness to use contactless payment products in the future (see appendix table B.2).

Wireless payment devices were described in the survey as cellular phones and PDAs that can be equipped with a computer chip that allows users to charge items to their phone bill using the device instead of to a credit or debit card. Applications are also being developed, in a partnership between banks and telecommunications companies, that will debit users' bank account or bill their credit card account rather than charge their phone bill.

Compared with contactless payments, the potential success of other types of wireless payment devices is much less clear. The majority of respondents to the 2006 Michigan Surveys of Consumers (77 percent) said they were unlikely to use wireless payments in the future, and consumers who reported banking online were only slightly more likely to say they would likely adopt wireless payment technology.

What accounts for this difference between consumers' willingness to use contactless and wireless payments? Some researchers suggest that consumers do not necessarily see a need for wireless products.[18] Moreover, as is the case with contactless cards, familiarity with these products is directly related to their availability, and the infrastructure enabling merchant acceptance of contactless and wireless cards is still developing in the United States. To date, wireless payments systems have been deployed in parts of Europe and Asia but still face significant technological and infrastructural barriers in the United States.

Mobile banking and payments, via such devices as mobile (or "cell") phones and PDAs, have gained attention in recent years (see box "Mobile Banking and Payments"). Access to mobile technology is now widespread in the United States; an estimated 80 percent of the population have access to mobile phones, and some industry analysts predict that mobile phone use in the United States will approach 100 percent in a few years.[19] As of early 2009, all the major financial institutions in the United States offer mobile banking services that provide account access via mobile phones and PDAs, and many smaller banks are adding technologies to provide mobile banking services.[20] These services generally allow consumers to transfer funds between accounts, schedule online payments, and conduct other online banking transactions using their mobile device, but most do not allow consumers to use their mobile device to make payments at the point of sale. Third-party providers are beginning to offer mobile payment options using short message service (SMS) technology, and niche markets, such as the Metropolitan Transit Authority in New York City, are using near-field communication (NFC) chip technology to enable payments.[21]

Before mobile payments can become more widespread and accepted by both merchants and consumers, financial institutions, mobile carriers, mobile hardware producers, and other stakeholders must cooperate to develop standards that will allow interoperability among mobile devices and bank technology networks. Although adoption has already occurred in Asia and Europe, most industry insiders believe it will take several years, perhaps until 2012, for mobile payments to become widespread in the United States.[22] However, the recent rapid adop-

18. Dan Schatt (2007), *US Mobile Banking: Beyond the Buzz* (Boston: Celent).

19. Joseph Salesky (2007), "Mobile-Phone Banking: Coming to a Bank Near You," *U.S. Banker* (July), www.americanbanker.com/usb_article.html?id=20070626A2K9LH3P.

20. Marianne Crowe (2008), *Emerging Payments—The Changing Landscape*, Presentation to Maine Association of Community Banks and New Hampshire Community Bankers Association (Boston: Federal Reserve Bank of Boston, April), www.bos.frb.org/economic/eprg/presentations/2008/crowe04151708.pdf.

21. Nasreen Quibria (2008), *The Contactless Wave: A Case Study in Transit Payments*, Emerging Payments Industry Briefing (Boston: Federal Reserve Bank of Boston, June), www.bos.frb.org/economic/eprg/papers/briefings/transit.pdf.

22. According to the 2007 Mobile Financial Services Study, 51 percent of survey respondents believe mobile payments will be a reality in five to ten years, while 20 percent expect it to take more than ten years.

Mobile Banking and Payments

In Zagreb, Croatia, consumers can board the local streetcar and pay their fare via their mobile phone. In Kuala Lumpur, Malaysia, consumers can use their mobile phone to pay for parking and restaurant meals. In Stockholm, Sweden, consumers can buy a cup of coffee using their mobile phone.

Technologies using mobile (or "cell") phones, PDAs, and other wireless handheld devices are also making an appearance in the U.S. financial services market, initially as mobile banking. The recent implementation of programs at major U.S. financial institutions, coupled with the emergence of pilot programs at many regional and local banks, indicates that mobile banking is about to become a widely accepted banking medium. Industry experts believe that the evolution in mobile technology, together with consumer demand for more-convenient access to their banks' products and services, especially among younger generations, will create a viable market for mobile banking.

Mobile banking is a logical extension of online banking and thus may be a comfortable next step for online bankers. But extending the use of mobile devices beyond banking transactions to point-of-sale and person-to-person fund transfers may require innovations in merchant, telecommunication, and financial services infrastructure as well as consumer willingness to try new payment technologies.

Technology behind Mobile Banking and Payments

Currently, mobile banking and transactions rely on one of several basic technologies:

- web access protocol (WAP)—a technology generally used for mobile banking; has the familiar look and feel of online banking
- downloadable application—a technology that allows users to download the platform needed for a transaction; look and feel of platforms similar to online banking
- short message service (SMS)—a technology that leverages text messaging to monitor account balances and authorize and track payments; widely considered to be the fastest growing and most popular platform at present
- near-field communication (NFC) chip—a computer chip similar to those found in contactless payment cards. In 2006, New York's Metropolitan Transit Authority (MTA) implemented a pilot program for using contactless cards to pay fares and, a few months into the trial, added NFC-enabled mobile phone payments as an alternative to card payments. The early response was positive, with the MTA reporting that customer acceptance was good, there were no consumer complaints about MTA charges, no instances in which the MTA had to return funds to a consumer, and no fraud.[1]

Companies adopting mobile payment technology now include nontraditional banking institutions and third-party payment providers such as PayPal, Obopay, and Amazon. The industry is also looking at GPS technology in mobile phones to allow customers to locate financial products and services (such as ATMs) and to identify targeted promotions when they are within a reasonable distance of products and services that might be of interest to them.

The "electronic wallet" (stored, encrypted credit card or bank account information that can be used to make electronic payments without entering the information for each transaction), which was developed for online transactions, is also being adapted for mobile devices and dubbed the "m-wallet." The m-wallet will include downloadable applications to enable customers to manage routine financial transactions, including both debit and

1. Nasreen Quibria (2008), *The Contactless Wave: A Case Study in Transit Payments*, Emerging Payments Industry Briefing (Boston: Federal Reserve Bank of Boston, June), www.bos.frb.org/economic/eprg/papers/briefings/transit.pdf.

tion of smartphone technology may serve to expedite the process (a smartphone is a mobile phone with advanced features, often with PC-like functionality).

Insights provided by the Diffusion of Innovation model and the Technology Acceptance Model (described in the next section) suggest that consumers' familiarity with mobile devices, along with additional experience with text messaging technology (SMS), contactless payment cards, and wireless Internet, will speed the adoption of a variety of mobile banking technologies. Online banking and contactless payments may be the building blocks for further adoption.[23]

See Edgar, Dunn & Company (2007), *2007 Mobile Financial Services Study: Key Findings Report* (San Francisco: Edgar, Dunn & Company, February).

23. Julia S. Cheney (2008), "An Examination of Mobile Banking and Mobile Payments: Building Adoption as Experience Goods?" Payment Cards Center Discussion Paper 08-06 (Philadelphia: Federal

credit transactions, and conduct routine banking functions. One vendor promotes an m-wallet product that includes bill payment, prepaid airtime replenishment, prepaid shopping cards, money orders, money transfers, coupons, person-to-person transactions, gift/loyalty cards, ticketing, and point-of-sale transactions.[2] The evolution and adoption of "smartphone" technology has provided a solid platform for developing, launching, and marketing applications for those functions.

Anticipated Adoption

Market reports indicate that despite earlier failures in introducing mobile banking products and services, demand may finally be sufficient to support mobile commerce. One report predicts that 30 percent of online banking households will use mobile banking by the end of 2010.[3] In a survey described in the report, 50 percent of the Generation Y cohort (defined as persons age 18–25) indicated that they considered the availability of mobile banking a "very important" or "somewhat important" factor when choosing a financial institution; 84 percent of this group (the early adopters of mobile banking technology) said they already use their mobile phone for functions other than making calls.

The features of mobile commerce that are attractive to consumers are similar to those of online banking, namely, convenience and ease of use. In addition, mobile commerce enables consumers to access their accounts from almost anywhere at almost any time. Immediate access to account balances and overdraft alerts have the potential to enable consumers to exercise responsible control over their finances. In a recent consumer trial of mobile banking products, 75 percent of participants thought that mobile banking allowed them to make better-informed spending decisions, and more than 50 percent reported an increase in the amount of control they had over their finances.[4]

Businesses providing these services may be able to capture the unmet demand for banking products and services among the unbanked and underbanked—groups that, according to the Center for Financial Services Innovations (CFSI), account for nearly 40 percent of U.S. households. CFSI believes that widespread use of alternative service providers (such as payday lenders and check cashers) and the fact that approximately 65 percent of Americans own a mobile phone are indications of potential demand.[5]

Barriers to Adoption: Infrastructure and Security

Among the factors hindering adoption of mobile banking and commerce is the lack of infrastructure that can optimize the functionality of these products. Key challenges to service providers lie in providing ease of use and interoperability—features crucial to widespread adoption. The current generation of mobile products and services appears to be functioning efficiently without set standards for interoperability. SMS technology is leading the way. However, the next generation, which is expected to rely on a combination of SMS technology and downloadable applications (in many cases relying heavily on the adoption of smartphone technology), has greater infrastructure requirements. Service providers also face the challenge of persuading potential customers that their products and services are safe and secure. The data on online banking analyzed for this article indicate that a perception of safety is an important consideration in adoption. Consumer concerns include customer authentication (verification that the user is in fact the authorized user), the interception of private data, and the loss of sensitive information if the mobile device is lost or stolen.

2. Motorola, Inc. (2008), "Motorola M-Wallet Solution: New Transaction Options for Subscribers, New Revenue Opportunities for You" (brochure), www.motorola.com/staticfiles/Business/_Documents/static%20files/M-Wallet_BRO_0608_cbv2.pdf.

3. Dan Schatt (2007), *US Mobile Banking: Beyond the Buzz* (Boston: Celent).

4. Michael Lindsey (2008), "Mobile Banking Case Study: Lessons Learned from a Pilot Rollout," NACHA Teleseminar: Case Studies from Bank Mobile Implementations.

5. Caroline Boyd and Katy Jacob (2007), *Mobile Financial Services and the Underbanked: Opportunities and Challenges for Mbanking and Mpayments* (Chicago: Center for Financial Services Innovation, April), www.cfsinnovation.com/document/mbanking.pdf.

In addition to issues of access, availability, and familiarity, there are concerns about the security and privacy of financial information related to contactless card, wireless, and mobile transactions. These concerns may be the greatest impediments to the success of mobile banking, wireless, and contactless payments. A 2007 report noted that 82 percent of surveyed banks thought resolving security issues was "important or very important to resolve for successful mobile banking."[24]

Reserve Bank of Philadelphia, June), www.philadelphiafed.org/pcc/papers/2008/D2008MobileBanking.pdf.

24. Aite Group (2007), "Mobile Banking Security: The Black Cloud Attached to the Silver Lining," Report 200710241 (October), www.aitegroup.com/reports/200710241.php.

9. Consumers' perceptions of e-banking, selected years

Perception	Mean of responses[1]			Percent who agree or strongly agree		
	1999	2003	2006	1999	2003	2006
Convenience						
Electronic banking is convenient	3.8	3.9	4.0	76	81	80
There are enough advantages of electronic banking for me to consider using it	3.1	3.4	3.4	46	58	56
Electronic banking helps me to better manage my personal finances	3.0	3.3	3.3	37	48	50
It bothers me to use a machine for banking transactions when I could talk with a person instead	3.2	3.1	2.9	53	46	42
Electronic banking products will reduce the need for having traditional bank accounts in the future	n.a.	n.a.	3.4	n.a.	n.a.	53
Familiarity and ease of use						
Electronic banking is the wave of the future	3.8	4.0	3.9	72	82	74
Electronic banking services are used by many people	3.7	3.9	3.9	70	83	80
I have the opportunity to try various electronic banking services	3.1	3.6	3.5	49	70	64
I have seen how others use electronic banking	3.0	3.5	3.4	41	64	57
I need to familiarize myself with electronic banking technology	3.5	3.3	3.4	63	53	57
Electronic banking is difficult to use	2.6	2.5	2.3	21	17	15
My use of electronic banking keeps me from switching to other financial service providers	n.a.	n.a.	2.8	n.a.	n.a.	28
Security and privacy						
When I use electronic banking, my money is as safe as when I use other banking services	3.2	3.3	3.4	49	55	54
Mistakes are more likely to occur with electronic banking than with regular banking	3.0	2.9	2.9	41	36	31
Mistakes with electronic banking are more difficult to get corrected than with regular banking	3.3	3.3	3.2	50	49	45
I feel comfortable providing my personal information through electronic banking systems	2.7	2.9	2.9	35	41	40
I worry about the privacy of my information when using electronic banking systems	n.a.	3.5	n.a.	n.a.	63	n.a.
I worry that electronic banking systems are not secure enough to protect my personal financial information	n.a.	3.2	3.3	n.a.	52	52
I worry that electronic banking systems are not secure enough and I could lose my money	n.a.	3.0	3.1	n.a.	40	46
Electronic banking increases the likelihood that I will become a victim of identity theft	n.a.	n.a.	3.5	n.a.	n.a.	60

1. On a scale of 1 to 5, with 1 being "strongly disagree," 3 "neutral," and 5 "strongly agree."

n.a. Not available.

SOURCE: Michigan Surveys of Consumers.

Changes in Consumer Attitudes toward E-Banking over Time

Two theories have emerged to explain why and how consumers adopt new technologies. Both are relevant to an evolving payment system: the Diffusion of Innovation model and the Technology Acceptance Model (TAM).[25] Both models incorporate, among other characteristics of new technologies, the idea of relative advantage, which prompts consumers both to try out and to adopt the technology. In the Diffusion of Innovation model, relative advantage is characterized as the degree to which consumers perceive a new product or service as different from, and better than, its substitutes. The counterpart to relative advantage in the TAM is perceived usefulness. In the case of electronic payments, convenience and savings of time and money have been cited as relative advantages, and privacy concerns as a relative disadvantage. Empirical research on the diffusion of technologies based on the TAM and its extensions has found consistently positive relationships between usefulness, and to a lesser extent ease of use, and the adoption of a variety of technologies, including computer software and e-mail.[26]

Convenience

Overall, research indicates that the more observable, compatible, simple, and useful a technology is and the more advantages it offers, the more likely consumers are to adopt it. Consumers continue to recognize the convenience of electronic banking services (table 9).[27] As measured by the 1999, 2003, and 2006 Michigan Surveys of Consumers, growing proportions of consumers report that e-banking helps them better manage their personal finances, and smaller proportions report being bothered by not interacting

25. Everett M. Rogers (1962), *The Diffusion of Innovation* (New York: Free Press); Frederick D. Davis (1989), "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," *MIS Quarterly*, vol. 13, pp. 319–40.

26. Hogarth, Kolodinsky, and Gabor, "Consumer Payment Choices: Paper, Plastic—or Electrons?"

27. In a 2007 study by the Federal Reserve Bank of Boston, both users and nonusers recognized the convenience of e-banking services (Benton, Blair, Crowe, and Schuh, "The Boston Fed Study of Consumer Behavior and Payment Choice").

with people in their banking transactions. A new question in the 2006 survey asked about the need for traditional bank accounts; more than half of respondents (53 percent) said that e-banking products will reduce the need.

Familiarity and Ease of Use

Consumers' perceptions regarding familiarity and ease of use of e-banking technology, as reported in the 2006 Michigan Surveys of Consumers, reveal an interesting dichotomy (table 9). On the one hand, the majority reported that e-banking is widely used (80 percent) and that they have seen how others use it (57 percent). On the other hand, nearly three out of five (57 percent) felt that they need to become more familiar with e-banking services. Clearly there is a need for bankers and community educators to find out which aspects of e-banking are unfamiliar to consumers and to craft outreach and education opportunities to address information gaps.

E-banking can be perceived as a set of services that engenders loyalty in a customer base. Once consumers have signed up for direct deposit, online banking, or preauthorized payment, they may perceive the transition costs involved in switching banks—in terms of both time and mental energy—as quite high. However, only about one-fourth (28 percent) of survey respondents felt that their use of electronic banking keeps them from switching to another financial services provider. The message to financial institutions is clear—even e-bankers feel empowered to vote with their feet.

Security and Privacy

Consumers also report disparate perceptions with respect to security and privacy. Over time, the proportions of consumers expressing concern about mistakes connected with e-banking and about difficulty in resolving errors have declined. In addition, more than half the respondents to the 2006 Michigan Surveys of Consumers (54 percent) reported feeling that e-banking was "as safe as when I use other banking services." However, more than half (52 percent) were concerned that e-banking systems were not secure enough to protect their personal financial information, and three out of five (60 percent) agreed or strongly agreed that e-banking would increase the likelihood of their becoming a victim of identity theft (table 9).

These results are consistent with related findings from other studies. For example, between 2005 and 2007 consumers' concerns about online security decreased and the percentage of consumers paying their bills online increased, yet data on Internet transactions by payment type show that the proportion of credit card payments declined over the same period.[28] One interpretation is that the decline in Internet credit card transactions reflects consumers' concerns about security. Analysis of the adoption of Internet banking in Poland found a relationship between the decision to open an online account and the perceived level of security of Internet transactions: a 1 percentage point decrease in perceived security was associated with a drop of almost 29 percent in the probability of opening an online account.[29] A 2007 study by the Boston Federal Reserve Bank also found that the main barriers to using online bill payment were concerns about privacy and identity theft.[30]

Increasingly, consumers are targeted with computer viruses, spam, and phishing e-mail messages that attempt to steal their personal information. Data security requires providing security for data at rest (data residing on computers within organizations), data in transit (data moving over networks), and data "on travel" (data on laptops or other portable devices).[31] Reports of data breaches involving consumers' names, account numbers, and other information have received attention from state and federal lawmakers. In mid-2003, California became the first state to require businesses to notify consumers of data breaches that result in the loss of their personal information.[32] Since then, all but six states have enacted laws requiring notification of data breaches.[33] Before these notification laws took effect, news reports of breaches were infrequent; after 2003, public announcements became much more frequent (figure 2).[34]

---

28. Crowe, *Emerging Payments—The Changing Landscape*.

29. Polasik and Wisniewski, "Empirical Analysis of Internet Banking Adoption in Poland."

30. Benton, Blair, Crowe, and Schuh, "The Boston Fed Study of Consumer Behavior and Payment Choice."

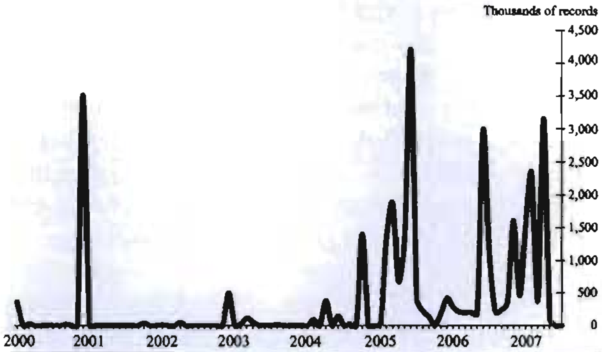
31. Bruce Summers, cited in James C. McGrath and Ann Kjos (2006), "Information Security, Data Breaches, and Protecting Cardholder Information: Facing Up to the Challenges," Summary of Payment Cards Center and Electronic Funds Transfer Association conference, September 2006 (Philadelphia: Federal Reserve Bank of Philadelphia), www.philadelphiafed.org/pcc/conferences/2007/C2006SeptInfoSecuritySummary.pdf.

32. California implemented the law in 2003. See the California civil code, section 1798.80–1798.84.

33. National Conference of State Legislatures, "State Security Breach Notification Laws," December 16, 2008, www.ncsl.org/programs/lis/cip/priv/breachlaws.htm.

34. Several very large data breaches (not included in figure 2) came to light as a result of the notification laws, including the loss of 40 million records by MasterCard reported in 2005; 26.5 million records by the Veterans Administration reported in 2006; and more

2. Number of consumer data records reported lost per month, 2000–2007



NOTE: Excludes data losses exceeding 4 million records, including a loss of 40 million records reported in 2005 by MasterCard; a loss of 26.5 million records reported in 2006 by the Veterans Administration; and a loss of more than 94 million records exposed in a data breach at the TJMaxx parent company reported in 2007.

SOURCE: Rita Tehan (2007), "Data Security Breaches: Context and Index Summaries," Congressional Research Service Report RL33199 (May 7), www.fas.org/sgp/crs/misc/RL33199.pdf.

Some observers claim that a very small percentage of data breaches actually result in fraud.[35] Nevertheless, notification may make consumers better off, because they are better able to protect themselves against fraudulent use of their personal financial information. In some instances, consumers whose data have been breached are provided with credit monitoring services, whereby one of the credit reporting agencies alerts them whenever their credit file is accessed. Consumers may also be able to place a fraud alert on their credit file or freeze their credit file altogether, preventing anyone but themselves from using their personal financial information to obtain credit. (See box "Reducing the Risks from Identity Theft.")

Despite indications that the number of identity theft incidents is declining, the media continue to pay significant attention to data losses—possibly increasing consumer concern about security and privacy.[36] Studies by the Congressional Research Service estimate total data losses between 2000 and 2007 to have been 100 million records, not including losses exceeding 4 million records or incidents in which the number of losses is unknown (figure 2). The Privacy Rights Clearinghouse identified incidents occurring between January 2005 and April 2009 that resulted in more than 253 million lost or stolen records.[37]

10. Probability of being a heavy user of e-banking technologies, by consumer attitude toward aspects of e-banking, 2003

Aspect	Attitude		
	Highly positive	Middle of the road	Highly negative
Security and privacy	.80	.70	.45
Convenience	.84	.57	.35
Familiarity and ease of use	.77	.56	.26

SOURCE: Hogarth, Kolodinsky, and Gabor, "Consumer Payment Choices: Paper, Plastic—or Electrons?" (based on 2003 Michigan Surveys of Consumers data).

In 2003, three out of five consumers (63 percent) reported being worried about the privacy of their consumer information when banking electronically, and in 2006 about the same proportion (60 percent) felt that e-banking would increase the likelihood of their becoming an identity theft victim (table 9). The large number of data losses—whether or not they result in fraud—may be contributing to consumers' concerns. Looking to the future, some research suggests that improvements to hardware and to software authentication techniques could be effective in reducing identity theft, augmenting the current practice of relying on fixed passwords, which most banks use for their online services.

The Importance of Attitudes

When other key variables—such as income, age, education, marital status, race and ethnicity, gender, and region—are held constant, attitudes become important predictors of consumers' adoption of e-banking technologies. It appears, for example, that increasing consumer confidence in the security and privacy of various technologies could bring about a large increase in their use: in the 2003 Michigan Surveys of Consumers, respondents with highly positive perceptions of e-banking's security and privacy had an 80 percent probability of using a full range of the technologies, compared with a 45 percent probability for those with highly negative perceptions (table 10). To improve consumer attitudes, financial institutions may want to consider ways of providing evidence of the security and privacy of their electronic payment services, although changing consumers' perceptions may be a challenge when phishing and identity theft continue to be in the news.

than 94 million records by TJX, parent company of TJMaxx and Marshalls, reported in 2007.

35. A Javelin Strategy and Research study showed that fewer than 1 percent of lost data records result in fraudulent activities (Mary T. Monahan (2006), "Data Breaches and Identity Fraud: Misunderstanding Could Fail Consumers and Burden Businesses" (August)).

36. The number of identity theft victims declined from an estimated 8.9 million adults in 2005 to an estimated 8.4 million adults in 2006 (Javelin Strategy and Research, 2007 Identity Fraud Survey Report (February 2007), as cited on the Privacy Rights Clearinghouse website, www.privacyrights.org/ar/idtheftsurveys.htm#Jav2007).

37. Privacy Rights Clearinghouse, "A Chronology of Data Breaches," updated April 9, 2009, www.privacyrights.org/ar/ChronDataBreaches.htm.

Reducing the Risks from Identity Theft

Technology offers some help to consumers in reducing the consequences of identity theft. For example, electronic banking technologies allow them to monitor their account activity, thereby helping them identify fraudulent activities sooner than they otherwise might. The financial industry also benefits from technological innovations, for example, modeling techniques that monitor account activity and identify anomalies associated with potentially fraudulent transactions.

Consumer liability in the event of identity theft (as well as credit card theft) is limited both by state and federal regulations that protect consumers and by industry rules. Credit card users in particular are protected by the Truth in Lending Act and the Federal Reserve Board's Regulation Z, which limit their liability for unauthorized transactions to $50. In addition, the Electronic Fund Transfer Act and the Board's Regulation E specify liability limits for unauthorized electronic transactions and set forth procedures for recouping funds stolen from consumers' bank accounts. The limits are $50 if the consumer notifies the bank within 2 days of learning of the loss or theft of a debit card and up to $500 if the consumer notifies the bank after 2 days but within 60 days after the bank sends a statement containing an unauthorized transfer or transaction. Consumers who do not report an unauthorized transfer appearing on a statement within 60 days after the statement is sent risk unlimited loss on their account plus the maximum amount of their overdraft line of credit, if any. Some debit and credit card issuers guarantee that a consumer will not be held responsible for fraudulent charges incurred with the consumer's card or account information.

Consumers who are victims of identity theft should take the following steps, as laid out on the Federal Trade Commission's website:

1. *Contact the credit reporting companies, place a fraud alert on your credit reports, and review your credit reports.*
   - Equifax. 1-800-525-6285; www.equifax.com; P.O. Box 740241, Atlanta, GA 30374-0241
   - Experian. 1-888-EXPERIAN (1-888-397-3742); www.experian.com; P.O. Box 9532, Allen, TX 75013
   - TransUnion. 1-800-680-7289; www.transunion.com; Fraud Victim Assistance Division, P.O. Box 6790, Fullerton, CA 92834-6790
2. *Close the accounts that you know, or believe, have been tampered with or opened fraudulently.*
3. *File a complaint with the Federal Trade Commission.* Use the FTC's online complaint form (www.ftccomplaintassistant.gov/); or call the FTC's Identity Theft Hotline, toll-free, at 1-877-ID-THEFT (1-877-438-4338); TTY: 1-866-653-4261; or write to the Identity Theft Clearinghouse, Federal Trade Commission, 600 Pennsylvania Avenue NW, Washington, DC 20580.
4. *File a report with your local police or the police in the community where the identity theft took place.* If the police are reluctant to take your report, ask to file a "miscellaneous incident" report, or try another authority, such as your state police. You can also check with your state attorney general's office to find out if state law requires the police to take reports for identity theft. Check the Blue Pages of your telephone directory for the phone number, or check www.naag.org for a list of state attorneys general.

The FTC encourages consumers to take the following precautions to guard against identity theft:

- Deter identity thieves by safeguarding your information, including your social security number and account numbers.
- Detect suspicious activity by routinely monitoring your financial accounts, billing statements, and credit reports.
- Defend against identity theft as soon as you suspect it by taking the four steps listed above.

For more information, visit www.ftc.gov/bcp/edu/microsites/idtheft/ and www.bos.frb.org/consumer/identity/index.htm.

Similarly, changing consumer attitudes about the convenience of e-banking technologies could bolster their use. In the 2003 survey, consumers with highly positive perceptions of the convenience of e-banking were more than twice as likely as those with negative perceptions to adopt a wider range of e-banking services. Both financial institutions and community-based educators can help consumers identify ways in which payment technologies can make bill paying more convenient. For example, they might point out that using preauthorized payments ensures that bills are paid on time, thus eliminating late fees.

Increasing familiarity and ease of use may offer the greatest potential for increasing adoption of e-banking technologies. The data reviewed in this article indicate that helping people access and become more familiar with these technologies and demonstrating their ease of use could lead to as much as a 51 per-

Policy Challenges and Opportunities

Policymakers face several challenges in the e-banking market, including providing data security and consumer protection and regulating the involved entities.

Federal, state, and local laws set the basic parameters for data security; industry best practices and individual firms' policies also require certain data security safeguards. However, as new products and services evolve, laws, regulations, and policies often struggle to keep up with the evolving risks. Also, the once-clear definition of who is a financial services provider has become blurred as nonbank providers such as telecommunications firms and other third parties have moved into the market and are now providing payment services and financial transfers. Multiple regulators and regulations may be involved in a single transaction.

Related to the blurring of regulatory lines are the matters of consumer protection and avenues of recourse. Although it is possible for consumers to receive disclosures via a handheld device—a PDA or mobile phone—questions remain. Is the screen large enough for consumers to see the required disclosures "clearly and conspicuously"? Can financial services providers group the required information together on a small screen so that consumers can take in the meaning? What is a consumer's recourse if a mobile transaction goes awry? Does the consumer contact the mobile provider or the financial institution, or both?

The entry of nonbank providers into the financial services market presents another set of challenges. Some legislation, such as the Truth in Lending Act, makes it clear that the law and associated regulations cover nonbank entities. But coverage under other laws and regulations is less clear. Some have argued that the regulatory environment needs to be updated to reflect new and emerging technologies and relationships.[1]

1. Gail Hillebrand (2008). "Before the Grand Rethinking: Five Things to Do Today with Payments Law and Ten Principles to Guide New Payments Products and New Payments Law." *Chicago-Kent Law Review*, vol. 83 (2), pp. 769–811.

centage point increase (from 26 percent to 77 percent) in the probability of adopting more of these technologies.

Expansion of E-Banking

Expansion of e-banking is a matter of both supply and demand. On the supply side, merchant acceptance seems to be key to expanding from magnetic stripe technologies to radio-frequency, smart-card, and other chip-based technologies. Fee structures and payment streams for issuers, merchants, and consumers are also important.[38] On the demand side, consumer access—a payment infrastructure that provides e-banking services and broad consumer ability to bank electronically—and positive consumer attitudes are essential to wider adoption of e-banking.

Expanding access through improved infrastructure does not have to rely on extreme technological solutions. A first step may be to continue to reduce the persistent digital divide between upper- and lower-income households. One approach is to increase access to high-speed Internet connections. Another is to expand the availability of phone banking, both through improved and expanded automated systems that can act as substitutes for online banking and through improved web access protocols for mobile phone banking. These are natural extensions of current trends; financial institutions may want to do even more to provide and promote alternative ways of banking.

However, expanding e-banking may not be a case of "if you build it, they will come." While the proportion of heavy users of e-banking has increased over time, more than one out of five survey respondents in 2006 (22 percent) were classified as minimal users, making use of only direct deposit and ATM or debit cards. The data suggest that attitudes may play an important role in expanding adoption. Consumers need to perceive that e-banking is safe and that their information is secure. Both financial institutions and policymakers have a role in ensuring a safe data environment for e-banking (see box "Policy Challenges and Opportunities"). Beyond safety, consumers need to perceive that e-banking is convenient and easy to use. As policymakers and financial institutions continue to address the issues of access and attitudes, consumers can fully realize the potential of e-banking to help them manage their payments and increase their financial security.

Appendix A: Sources of Data

The data on which this article is based come from two nationally representative surveys—the triennial Sur-

38. Margaret Carten, Dan Littman, Scott Schuh, and Joanna Stavins (2007), "Consumer Behavior and Payment Choice: 2006 Conference Summary," Public Policy Discussion Paper 07-4 (Boston: Federal Reserve Bank of Boston), www.bos.frb.org/economic/ppdp/2007/ppdp0704.pdf.

vey of Consumer Finances and the monthly Michigan Surveys of Consumers. Although the surveys have different sampling schemes and differ in some other ways, the data from the two are sufficiently comparable to give a general picture of consumer use and perceptions of electronic banking technologies. Data from the two surveys were not combined for analysis; rather, a separate analysis was carried out on each data set, and the results in some discussions were viewed together to extend the period of analysis and thus get a better idea about trends.

In general, the terms *households*, *consumers*, *families*, and *respondents* are used interchangeably in discussions of the data and elsewhere in the article. To be specific, however, data from the Survey of Consumer Finances are for what was referred to as the *primary economic unit*, defined as an economically dominant single individual or couple (married or living as partners) in a household and all other individuals in the household who are financially dependent on that individual or couple. For example, in the case of a household composed of a married couple who own their home, a minor child, a dependent adult child, and a financially independent parent of one of the members of the couple, the primary economic unit would be the couple and the two children. Data from the Michigan Surveys of Consumers are for *families*, defined as any group of persons living together who are related by marriage, blood, or adoption or any individual living alone or with a person or persons to whom the individual is not related.

Survey of Consumer Finances

The Survey of Consumer Finances (SCF) is a triennial survey of U.S. families (defined as primary economic units, as described above) sponsored by the Federal Reserve, in cooperation with the Statistics of Income Division of the Internal Revenue Service, and conducted by NORC, a national organization for research at the University of Chicago.[39] The survey provides detailed information on U.S. families' balance sheets, use of financial services, demographics, and labor force participation. The great majority of interviews were conducted in person, although interviewers were allowed to conduct telephone interviews if that was more convenient for the respondent. Interviewers used a program running on laptop computers to administer the survey and collect the data. Respondents were encouraged to consult their records as necessary during the interviews.

To gather information that is both representative of the U.S. population and reliable for those assets concentrated in affluent households, the SCF employs a dual-frame sample design consisting of a standard, geographically based random sample and an oversample of affluent households. Weights are used to combine data from the two samples so that the data from the sample families represent the population of all families.[40] A total of 4,299 households (representing 99.0 million families) were interviewed for the 1995 survey; 4,309 households (representing 102.6 million families) for the 1998 survey; 4,449 households (representing 106.5 million families) for the 2001 survey; 4,522 households (representing 112.1 million families) for the 2004 survey; and 4,422 households (representing 116.1 million families) for the 2007 survey. Missing data—missing because of lack of response to individual interview questions, for example—are imputed by making multiple estimates of the missing data to allow for an estimate of uncertainty.

The analysis was restricted to those households that reported having an account with a bank, thrift institution, or credit union. For the 1995 survey, this group constituted 87.6 percent of households; for the 1998 survey, 90.5 percent; for the 2001 survey, 90.9 percent; for the 2004 survey, 91.3 percent; and for the 2007 survey, 92.1 percent.

University of Michigan Surveys of Consumers

The Surveys of Consumers, initiated in the late 1940s by the Survey Research Center at the University of Michigan, measure changes in consumer attitudes and expectations with regard to consumer finance decisions.[41] Each monthly survey of about 500 households includes a set of core questions. For the October and November 1999, June and July 2003, and November and December 2006 surveys, the Federal Reserve Board commissioned additional questions concerning households' use and perceptions of electronic bank-

39. See Arthur B. Kennickell (2000), "Wealth Measurement in the Survey of Consumer Finances: Methodology and Directions for Future Research" (paper prepared for the annual meetings of the American Association for Public Opinion Research, Portland, Oregon, May 2000) (www.federalreserve.gov/pubs/oss/oss2/papers/measurement.pdf and references cited therein).

40. See Arthur B. Kennickell (1999), "Revisions to the SCF Weighting Methodology: Accounting for Race/Ethnicity and Homeownership" (Board of Governors of the Federal Reserve System, January), www.federalreserve.gov/pubs/oss/oss2/papers/weight.revision.pdf.

41. For more information on sample design, questionnaire development, and interviewing protocols, refer to the Surveys of Consumers website, at www.sca.isr.umich.edu/main.php.

ing technologies. Some of these additional questions were based on questions in the Survey of Consumer Finances to allow for comparison of responses to the two surveys.

Interviews were conducted by telephone, with telephone numbers drawn from a cluster sample of residential numbers. The sample was chosen to be broadly representative of the four main regions of the country—Northeast, Midwest, South, and West—in proportion to their populations. Alaska and Hawaii were not included. For each telephone number drawn, an adult in the family (as previously defined) was randomly selected as the respondent. The surveys yielded data from 1,000 respondents in 1999 (October and November surveys combined), 1,002 respondents in 2003 (June and July surveys combined), and 1,002 respondents in 2006 (November and December surveys combined). The collected data were weighted to be representative of the population as a whole, thereby correcting for differences among families in the probability of their being selected as survey respondents. All survey data in the tables are based on weighted observations.

As with the Survey of Consumer Finances, the analysis was restricted to those households that reported having an account with a bank, thrift institution, or credit union. For the 1999 survey, this group constituted 89 percent of households; for the 2003 survey, 86 percent; and for the 2006 survey, 92 percent. □

B.1. Proportion of consumers who bank online and reasons for banking online, by demographic characteristic, selected years

Percent

Demographic characteristic	Bank online			Reason for banking online			
				Pay bills		Open new accounts	Apply for loans
	1999	2003	2006	2003	2006	2006	2006
All respondents	10.7	31.9	51.1	54.7	76.0	14.6	11.1
Household income (by income percentile)[1]							
20% or less	2.6	16.8	30.4	38.1	71.5	4.6	6.2
21%–40%	6.4	26.7	38.4	50.9	69.1	9.9	8.3
41%–60%	9.2	31.9	49.7	55.2	79.7	13.0	18.7
61%–80%	10.6	38.4	64.2	55.4	75.6	15.6	11.0
81%–100%	21.8	43.4	70.1	58.9	79.7	20.2	9.1
Age of respondent (years)							
Younger than 35	16.1	47.6	67.3	51.4	80.0	16.9	12.6
35–44	13.4	36.4	65.2	59.2	81.1	16.9	14.2
45–54	9.2	30.6	52.7	59.1	70.1	12.7	9.7
55–64	8.7	25.7	43.2	46.3	70.9	9.4	10.2
65 and older	2.0	8.5	20.3	54.0	68.9	16.0	.0
Education of respondent							
No high school diploma	3.0	47.6	10.4	66.6	100.0	.0	.0
High school diploma	5.9	36.4	35.3	52.4	67.2	6.6	5.2
Some college	11.9	30.6	53.5	50.9	71.9	13.2	15.8
Bachelor's degree	14.7	25.7	58.6	56.7	78.2	17.6	9.1
Postgraduate education	17.0	8.5	63.6	56.8	82.9	18.8	14.0
Race/ethnicity of respondent							
White	10.5	11.1	52.7	50.6	74.4	13.9	12.6
Black	8.5	18.2	38.8	81.6	80.4	18.6	8.3
Hispanic	10.6	37.4	51.3	57.9	81.9	16.4	2.6
Other[2]	24.6	41.0	47.0	73.3	90.0	28.8	2.9

1. Income percentiles are based on the income of all responding households. Thus, of respondents in the lowest 20 percent of the income distribution, 2.6 percent banked online in 1999 and 30.4 percent banked online in 2006.

2. Includes Asian, Pacific Islander, and Native American.

SOURCE: Michigan Surveys of Consumers.

B.2. Proportion of consumers who would use contactless or wireless payments in the future, by demographic characteristic, 2006

Percent

Demographic characteristic	Contactless payments							Wireless payments					
	Have used	All respondents			Online bankers			All respondents			Online bankers		
		Yes	Maybe	No	Yes	Maybe	No	Likely	Even	Unlikely	Likely	Even	Unlikely
All respondents	19.4	37.8	14.7	47.5	51.6	13.8	34.6	16.3	7.2	76.5	24.0	7.7	68.2
Household income (by income percentile)[1]													
20% or less	2.6	30.2	12.5	57.3	59.7	7.6	32.8	13.8	6.8	79.4	18.6	1.6	79.8
21%–40%	11.1	27.6	13.8	58.7	43.4	10.4	46.2	16.8	5.5	77.7	30.2	8.3	61.6
41%–60%	14.8	35.7	16.3	48.0	42.5	19.5	38.0	12.0	5.2	82.9	19.9	7.2	73.0
61%–80%	25.9	46.1	15.1	38.8	48.9	14.9	36.2	16.8	7.5	75.7	18.8	8.0	73.3
81%–100%	39.7	55.5	13.3	31.2	63.1	9.6	27.3	23.8	10.5	65.7	28.5	9.6	62.0
Age of respondent (years)													
Younger than 35	22.7	50.5	9.7	39.8	56.5	5.7	37.8	27.6	10.4	62.1	32.4	6.3	61.4
35–44	28.5	44.6	17.2	38.2	57.0	14.1	28.9	24.0	7.9	68.1	30.9	7.4	61.8
45–54	20.3	40.6	15.2	44.2	44.4	16.1	39.5	13.1	9.3	77.6	18.9	11.1	70.1
55–64	15.3	37.3	17.3	45.5	50.2	20.3	29.5	10.6	6.0	83.4	8.0	8.0	83.9
65 and older	10.0	16.8	14.5	68.7	37.0	24.1	38.9	6.3	2.5	91.1	10.9	4.2	84.9
Education of respondent													
No high school diploma	2.8	8.2	21.2	70.7	50.0	.0	50.0	8.8	5.6	85.7	.0	.0	100.0
High school diploma	10.4	27.2	10.1	62.8	43.3	9.2	47.5	18.3	4.9	76.8	35.4	1.2	63.5
Some college	13.2	35.5	17.7	46.9	43.8	19.1	37.2	11.9	6.0	82.1	15.4	5.5	79.1
Bachelor's degree	28.0	47.2	15.6	37.2	54.2	14.2	31.6	18.3	7.2	74.5	24.8	8.5	66.7
Postgraduate education	33.3	53.2	13.7	33.1	63.7	10.2	26.1	18.9	13.2	67.9	25.4	14.2	60.4
Race/ethnicity of respondent													
White	19.7	38.1	14.5	47.3	52.4	13.6	34.0	14.5	7.1	78.4	22.9	7.4	69.8
Black	12.3	37.8	7.6	54.7	43.2	9.9	46.9	23.5	4.6	72.0	22.7	11.3	66.0
Hispanic	19.5	39.4	27.7	32.9	68.0	17.5	14.4	23.5	7.2	69.3	28.3	4.4	67.3
Other[2]	29.4	32.4	12.6	55.0	5.4	16.2	78.4	24.1	14.5	61.4	37.5	17.2	45.3

NOTE: Components may not sum to 100 percent because of rounding.

1. Income percentiles are based on the income of all responding households. Thus, of respondents in the lowest 20 percent of the income distribution, 2.6 percent had used a contactless payment device in 2006 and 30.2 percent said they would use contactless payments in the future.

2. Includes Asian, Pacific Islander, and Native American.

SOURCE: Michigan Surveys of Consumers.

August 2009

Industrial Production and Capacity Utilization: The 2009 Annual Revision

Anne Hall, of the Board's Division of Research and Statistics, prepared this article. Deepti Iyer provided research assistance.

On March 27, 2009, the Federal Reserve published revisions to its index of industrial production (IP) and the related measures of capacity and capacity utilization. Although the revision affected the data from January 1972 through February 2009, most of the changes were for the period beginning in 2004.[1] The overall contour of total IP is little changed by the revision. Industrial output rose steadily at an average annual rate of 2.3 percent from 2004 through 2007, then fell sharply in 2008 at a rate of negative 6.7 percent (table 1). Measured from fourth quarter to fourth quarter, the increase in total IP in 2007 is now reported to have been 0.3 percentage point less, and the decrease in total IP in 2008 is now reported to have been 0.6 percentage point more, than earlier estimates.[2]

The revision shows that the rates of capacity utilization for total industry in the fourth quarters of 2007 and 2008 were both about ½ percentage point lower than previously estimated. Utilization in 2007 was 80.4 percent, about ½ percentage point below its long-run (1972 through 2008) average, and, in 2008, it was 74.2 percent, 6.7 percentage points below its long-run average. The operating rate for manufacturing was revised down 0.6 percentage point in 2007 and 0.8 percentage point in 2008; for the fourth quarter of 2008, the factory operating rate stood at 70.9 percent, 8¾ percentage points below its long-run average.[3] The utilization rate for mines was revised down about ½ percentage point in 2006 but was little revised in other years; at the end of 2008, it stood at 89.6 percent, about 2 percentage points above its long-run average. The operating rate for utilities was revised down 0.7 percentage point in both 2006 and 2007; in 2008, it was revised down 0.6 percentage point, to 83.6 percent, and was 3.2 percentage points below its long-run average.

Compared with the previous estimates, total industrial capacity is now reported to have risen 0.4 percentage point less in 2008 and is expected to fall 0.6 percentage point more in 2009. The smaller increase in 2008 reflected a substantial downward revision to capacity in the high-technology manufacturing industries; the capacity indexes for mining, for utilities, and for manufacturing outside of the high-technology industries are all now reported to have been higher in 2008 than stated previously. The larger decrease in total industrial capacity in 2009 reflects downward revisions to the indexes for both durable and nondurable manufacturing and for mining; the capacity indexes for other manufacturing (logging and publishing) and utilities were little changed from their previous estimates.

Although comprehensive benchmark production data for manufacturing for 2007 are not yet available, the updated measures of production incorporate several newly available sources of data. Estimates of manufacturing (NAICS) production were updated with data from selected 2007 Current Industrial Reports (CIRs) from the U.S. Census Bureau. Estimates of other manufacturing (logging and publishing) were updated with annual data on logging for 2007 from the U.S. Forest Service and with annual data on the publishing industry from the Census Bureau's Service Annual Survey. The index for min-

NOTE: Charles Gilbert directed the 2009 revision and, with Kimberly Bayard, David Byrne, Norman Morin, and Daniel Vine, prepared the revised estimates of industrial production. Norman Morin and Daniel Vine prepared the revised estimates of capacity and capacity utilization.

1. When necessary to maintain consistency with any revisions to the data for 1972 and subsequent years, the levels of the production and capacity indexes for the years before 1972 were multiplied by a constant. However, utilization rates and rates of change in IP for the years before 1972 were not revised.

2. Revised data reported in this article were published in Board of Governors of the Federal Reserve System (2009), Statistical Release G.17, "Industrial Production and Capacity Utilization" (July 15), www.federalreserve.gov/releases/g17/releases_2009.htm. Data referred to in this article as "previous" appeared in the G.17 release issued on March 16, 2009. That release was the last G.17 published before the annual revision was issued on March 27.

3. Manufacturing consists of those industries in the North American Industry Classification System, or NAICS, definition of manufacturing plus those industries—logging and newspaper, periodical, book, and directory publishing—that traditionally have been considered to be manufacturing.

1. Revised rates of change in industrial production and capacity, revised rates of capacity utilization, and the difference between revised and previously reported rates, 2004–08

Item	MEMO: 2007 proportion	Revised rate (percent)						Difference between rates (revised minus previous, percentage points)					
		2004–08 avg.	2004	2005	2006	2007	2008	2004–08 avg.	2004	2005	2006	2007	2008
Production													
Total index	100.0	.5	3.0	2.6	1.8	1.8	–6.7	–.2	–.1	.0	.1	–.3	–.6
Manufacturing	78.6	.3	3.6	3.8	1.2	1.9	–8.7	–.2	–.1	.1	.1	–.4	–.8
Excluding selected high-tech industries[1]	74.4	–.4	3.2	2.5	.4	.9	–8.9	–.1	–.1	.1	.3	–.2	–.4
Selected high-tech industries	4.2	11.1	8.6	22.6	13.1	18.2	–6.9	–3.1	–.7	.2	–4.2	–4.1	–6.4
Mining and utilities	21.4	1.1	.6	–1.6	4.2	1.6	.6	.1	.0	.0	.3	.1	.2
Capacity													
Total index	100.0	1.1	–.1	.8	1.5	2.0	1.1	–.1	–.3	.0	.2	.2	–.4
Manufacturing	80.9	1.2	–.1	1.3	1.4	2.2	1.3	–.1	–.3	–.1	.1	.3	–.5
Excluding selected high-tech industries[1]	76.2	.7	–.2	.6	1.1	1.0	1.0	.1	.0	.0	.3	.3	.2
Selected high-tech industries	4.7	9.7	1.7	11.9	5.7	22.9	6.3	–3.9	–3.8	–1.2	–4.7	1.5	–11.2
Mining and utilities	19.1	1.0	.4	.0	1.9	1.2	1.4	.1	–.4	.4	.8	–.3	.0
Capacity utilization													
Total index	100.0	78.9	79.0	80.4	80.6	80.4	74.2	–.3	–.1	.0	–.1	–.5	–.7
Manufacturing	80.9	77.0	77.3	79.2	79.0	78.7	70.9	–.3	–.1	.0	.0	–.6	–.8
Excluding selected high-tech industries[1]	76.2	77.1	77.8	79.3	78.8	78.7	71.0	–.4	–.2	–.2	–.2	–.5	–1.0
Selected high-tech industries	4.7	76.1	70.7	77.4	82.8	79.6	69.8	1.3	1.1	2.2	2.9	–.9	1.5
Mining and utilities	19.1	86.8	86.8	85.4	87.3	87.7	86.9	–.2	.1	–.2	–.6	–.3	–.2

NOTE: For production and capacity, the revised rates of change are from the fourth quarter of the previous year to the fourth quarter of the year indicated; the differences between revised and previously reported production are also calculated from Q4-to-Q4 rates.

Capacity utilization rates are for the fourth quarter of the year indicated; differences between revised and previously reported capacity utilization are also calculated from Q4 rates.

1. Manufacturing excluding semiconductors and related electronic components, computers and peripheral equipment, and communications equipment.

ing was updated with new annual data on mineral extraction for 2006 and 2007 from the U.S. Geological Survey (USGS). The weights that allocate individual production indexes into multiple market groups were previously derived from the benchmark input-output accounts for 1997 from the Bureau of Economic Analysis (BEA); with this revision, these weights were updated using data from the benchmark input-output accounts for 2002.[4] Updated price deflators from the BEA were used in the construction of the revised production estimates. Finally, the new monthly production estimates also reflect the incorporation of updated seasonal factors and monthly source data that became available (or were revised) after the closing of the reporting window. The results of both the 2007 Census of Manufactures and the 2008 Annual Survey of Manufactures (both from the Census Bureau) should be available for the 2010 revision to the IP indexes.

Results from the Census Bureau's Quarterly Survey of Plant Capacity for the fourth quarters of 2007 and 2008 were used to update the capacity indexes and capacity utilization rates. In addition, the revisions to the capacity indexes and capacity utilization rates incorporate the revised production indexes and newly available data on industrial capacity from the USGS, the Energy Information Administration of the U.S. Department of Energy (DOE), and other organizations.

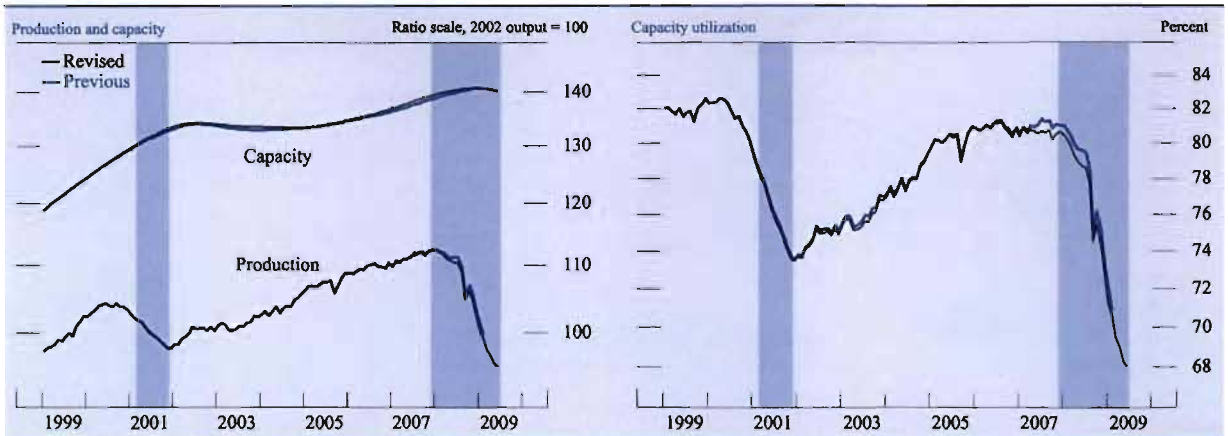
Results of the Revision

As revised, total IP for the fourth quarter of 2008 was 104.4 percent of output in 2002, and capacity stood at 140.7 percent of output in 2002. Both indexes are lower than reported previously. The capacity utilization rate for total industry in the fourth quarter of 2008 was 74.2 percent, 0.7 percentage point below what was stated earlier. Detailed results of the revision can be found in the appendix tables.[5]

4. The updated weights are based on the original release of the benchmark input-output accounts from September 2007, not on the revised version of the accounts released in January 2008.

5. Table A.1 shows the revised data for total IP, and table A.2 shows the revised data for capacity and capacity utilization for total industry. Tables A.3 and A.4 show the revised rates of change (fourth quarter to fourth quarter) of IP for market groups, industry groups, special aggregates, and selected detail for the years 2004 through 2008. Table A.5 shows the revised rates of change of annual IP indexes for market and industry groups for the years 2004 through 2008. Tables A.6 and A.7 show the revised figures for capacity and capacity utilization. Table A.8 shows the annual proportions of market groups and industry groups in total IP. Tables A.3, A.4, A.5, and A.6 also show the difference between the revised and previous rates of change. Table A.7 shows the difference between the revised and previous rates of capacity utilization for the final quarter of the year. Table A.9 shows

1. Industrial production, capacity, and capacity utilization: Total industry, January 1999–June 2009



NOTE: Here and in the following figures, the shaded areas are periods of business recession as defined by the National Bureau of Economic Research (NBER). The last shaded area begins with the peak as defined by the NBER and ends at the trough of a three-month moving average of manufacturing IP.

Data labeled "revised" correspond to the data in the Federal Reserve's Statistical Release G.17, "Industrial Production and Capacity Utilization," published on July 15, 2009. Data labeled "previous" are those published before the March 27, 2009, annual revision.

Industrial Production

The overall contour of IP in this revision is similar to that reported previously (figure 1). The total index rose modestly each year from 2004 through 2007 and then dropped in 2008. Relative to the previous estimates, total IP increased 0.3 percentage point less in 2007 and fell 0.6 percentage point more in 2008. Revisions to the changes in other recent years were smaller. The change in total IP was revised down 0.1 percentage point in 2004 and was revised up 0.1 percentage point in 2006; it was not revised noticeably in 2005.

Market Groups

Although the aggregate index for IP was little revised before 2007, revisions to the indexes for some market groups were significant. These revisions largely resulted from the incorporation of the 2002 benchmark input-output accounts from the BEA, which, as discussed further in the section on technical aspects of the revision, updated the weights used to allocate individual production indexes to multiple market groups.

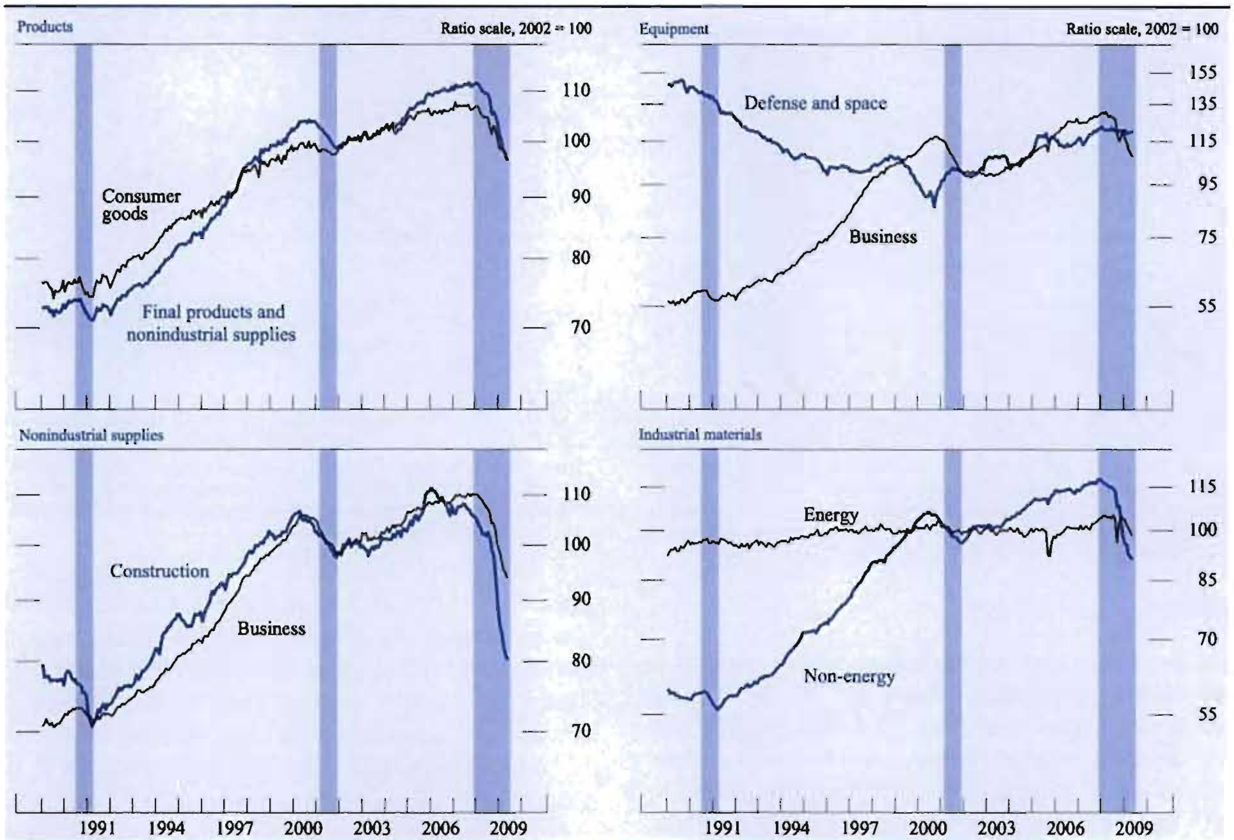
The production index for final products and nonindustrial supplies follows an output path similar to that for total IP; moderate gains in 2004 through 2007 were followed by a drop in 2008 (figure 2 and table A.3). Compared with the previous estimates, the index for final products and nonindustrial supplies is now reported to have advanced 0.5 percentage point less in 2007 and to have decreased 0.4 percentage point more in 2008. Overall changes to the rates of increase in other years were minimal; the change in the index was revised down 0.1 percentage point in 2004 and was essentially unrevised in 2005 and 2006.

The change in the output of consumer goods was revised down 1 percentage point in 2007; revisions to other years were small. The output of durable consumer goods declined in 2004 and 2006, rose slightly in 2005 and 2007, and dropped sharply in 2008. The rates of change are now higher than earlier estimates suggested in 2004 and in 2006 through 2008, and they are a touch lower in 2005 than previously reported. Among durable consumer goods, the most significant revisions were in the index for home electronics, which now is estimated to have increased less rapidly in 2005 and 2006, to have increased more rapidly in 2004 and 2007, and to have posted an advance instead of a decline in 2008. Elsewhere within durable consumer goods, the index for miscellaneous durable consumer goods is now estimated to have increased less rapidly in 2005, and to have decreased less rapidly in 2006, than previously reported. Revisions to the indexes for the other major categories of durable consumer goods were smaller.

The index for consumer nondurables shows moderate gains in output in 2004 through 2006, but, with this revision, it now posts a decline instead of an advance in 2007. The index also drops slightly in 2008. Revisions in recent years besides 2007 were small. Among consumer nondurables, the changes in the index for clothing were revised down for 2004

the annual production and price indexes for selected categories of communications equipment, and table A.10 shows the quarterly production and price indexes for some of the same categories of communications equipment. Table A.11 shows the quarterly price indexes for selected categories of semiconductors.

2. Industrial production: Market groups, January 1989–June 2009



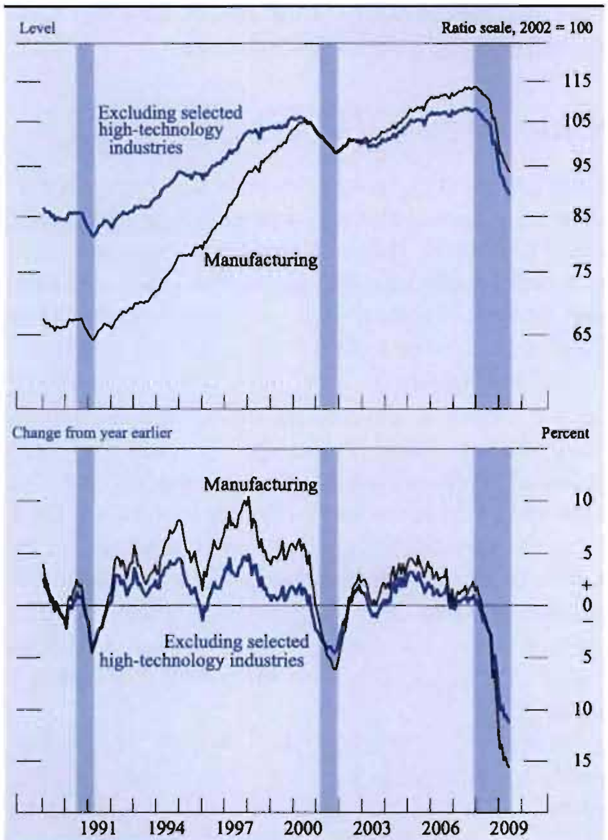
through 2006 and revised up for 2007 and 2008. The index for chemical products, which was previously flat in 2007 and declined slightly in 2008, now moves down significantly in both years. The index for paper products was revised up for 2005 and 2006, revised down for 2004 and 2007, and stood below its previous level for the fourth quarter of 2008. The index for consumer energy products was revised up in 2008 and posted moderate increases, on net, over the past few years.

The production of business equipment increased solidly from 2004 through 2006, rose slightly in 2007, and then fell in 2008. Relative to previous estimates, the rates of change in the index were noticeably lower in 2005 and 2007; the revisions to the data for other recent years were smaller. For transit equipment, output rose substantially, on net, from 2004 through 2006 and decreased in 2007; the index plummeted in 2008, partly because of weakness in the motor vehicle industry and partly because of a strike at a major aircraft producer in the second half of the year. Although the rates of change in the index for transit equipment were revised down in 2004, 2005, and 2008 and were revised up in 2007, the level of output at the end of 2008 was nearly the same as reported previously. The production of information processing equipment is now estimated to have expanded less rapidly over the past few years than reported earlier, and the production of industrial and other equipment in 2007 and 2008 appears slightly weaker. The production of defense and space equipment is now higher than estimated previously in 2005 through 2008.

After posting gains in 2004 and 2005, the output of construction supplies decreased moderately in 2006 and 2007 and then dropped sharply in 2008. The revisions to this index were relatively small, and its level in the fourth quarter of 2008 is nearly the same as reported earlier. The production of business supplies rose modestly from 2004 through 2007 and then slumped in 2008; the rates of change are higher than reported earlier for 2005 through 2007 but are lower for 2004 and 2008.

The production of materials expanded over the years 2004 through 2007, then fell markedly in 2008; the rates of change for this index are little revised before 2008, but the drop in 2008 is larger than estimated previously. The indexes for durable and nondurable materials both fell more than 10 percent in 2008 after having increased moderately, on net,

3. Industrial production: Manufacturing, and manufacturing excluding selected high-technology industries, January 1989–June 2009



NOTE: For definition of manufacturing, see text note 3.
The selected high-technology industries are semiconductors and related electronic components (NAICS 334412–9), computers and peripheral equipment (NAICS 3341), and communications equipment (NAICS 3342).

from 2004 through 2007. The production of durable materials is now estimated to have risen more slowly in 2006 and 2007 and to have fallen more quickly in 2008. These revisions were due in large part to revisions to the index for equipment parts. For nondurable materials, the output gains in 2006 and 2007 are now higher than stated earlier, largely because the declines in textile materials in those years are now not as steep as previously reported and the increases in chemical materials in the same years were revised up. The index for energy materials edged up in 2008 after having increased moderately in the previous two years, and it is little changed by the revision.

Production by Industry Group

Manufacturing production expanded each year from 2004 through 2007 and then slumped in 2008 (figure 3 and table A.3). The output of manufacturing advanced less in 2007, and contracted more in 2008, than reported earlier. With this revision, the month of the peak in manufacturing production moved from July 2007 to December 2007.

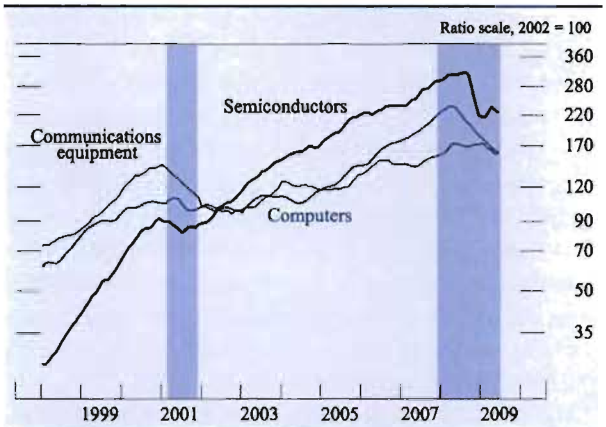
For durable goods industries as a whole, output rose in each year from 2004 through 2007 and fell sharply in 2008. Revisions to the index for durable goods industries for the past few years were small on net. Among durable goods industries, most major categories followed contours similar to that of the durable goods aggregate, with net increases from 2004 through 2007 followed by sharp drops in 2008. Notable exceptions were wood products, nonmetallic mineral products, motor vehicles and parts, and furniture and related products; the indexes for these categories started trending down before 2008.

The revisions to the changes in the output of most major categories of durable goods before 2007 were slight; exceptions include computer and electronic products, in which the gain in output in 2006 is now stated to have been significantly lower, and aerospace and miscellaneous transportation equipment, in which the gain in output in 2006 is now stated to have been somewhat higher. For 2007, the output indexes were revised down noticeably for wood products, nonmetallic mineral products, computer and electronic products, and furniture and related products but were revised up for miscellaneous manufacturing. For 2008, relative to previous estimates, higher output indexes are reported for electrical equipment, appliances, and components and for furniture and related products, but the production indexes for wood products, primary metals, machinery, computer and electronic products, and motor vehicles and parts were revised down moderately.

Production in nondurable manufacturing industries followed a contour similar to that of durable manufacturing, with advances in every year from 2004 through 2007 followed by a decline in 2008. Neither the overall advance in the earlier years nor the decline last year was as great as the swings in durable manufacturing. The output index for the nondurable goods sector in most recent years was little revised, on net, compared with previous estimates. The current revision reports noticeably higher rates of change in 2007 in textile and product mills, apparel and leather, and petroleum and coal products but a noticeably lower rate of change in chemicals. For 2008, output is now reported to have fallen markedly faster for textile and product mills, apparel and leather, printing and support activities, chemicals, and plastics and rubber products compared with previous estimates.

The revised output index for other manufacturing (logging and publishing) fell each year from 2005

4. Industrial production: Selected high-technology industries, January 1998–June 2009



NOTE: For the NAICS categories of these industries, see the note to figure 3.

through 2008, with a particularly sharp drop in 2008. Output in these industries is now estimated to have decreased substantially less in 2006 than reported earlier, but revisions to the rates for other years were smaller.

The index for mining rose moderately in the past two years after a jump in 2006; the increase in 2006 was revised up relative to previous estimates, but the index is otherwise similar to what was previously reported. For utilities, the revised output estimates are also, in general, very similar to those reported earlier.

The estimates for selected high-technology industries—computers and peripheral equipment, communications equipment, and semiconductors and related electronic components—were revised significantly over the 2004–08 period (figure 4 and table A.4). On net, output in the high-tech sector is still reported to have posted gains in recent years, with robust increases from 2004 through 2007 followed by a contraction in 2008. However, the increases in 2006 and 2007 are now shown to have been slower, and the decrease in 2008 is now shown to have been steeper, than reported earlier.

Among the major high-tech components, production of computers and peripheral equipment rose solidly in each of the years from 2004 through 2007 and then fell in 2008; the rates of change were revised up in each of the past few years except 2005. The output of communications equipment expanded in each of the past few years, but the rates of increase in most years are markedly lower than estimated previously. Most notably, the increase of 20.6 percent that was reported earlier for 2007 has been revised down to 6.6 percent based on shipments data from the CIR for telecommunications. Production of semiconductors and related components rose solidly from 2004 through 2007 but contracted significantly in 2008. The expansion in production from 2004 through 2007 was considerably less than stated earlier, and the slight decline previously estimated for 2008 has been revised down to a significant decrease.

Capacity

Total industrial capacity is estimated to have risen at an average annual rate of 1.4 percent in 2005 through 2008 (table A.6). The average annual rate is the same as previous estimates, but the rates of change in 2006 and 2007 are slightly higher, and the rate of change in 2008 is somewhat lower, than stated previously. In 2009, total industrial capacity is now expected to decline nearly 1 percentage point; this decline is larger than estimated previously.

The contour of manufacturing capacity and the revisions to that contour are similar to those for total industry. Manufacturing capacity is now shown to have expanded at an average annual rate of about 1.6 percent from 2005 through 2008, about 0.1 percentage point less than estimated earlier. In 2009, manufacturing capacity is now expected to contract 1.2 percent.

Within manufacturing, the capacity of durable goods manufacturers expanded moderately in each year from 2005 through 2008 and is expected to contract somewhat in 2009. The increase in 2008 was tempered considerably by the recent revision. The capacity of nondurable goods manufacturers followed a similar contour to that of durable goods manufacturers, but the increases from 2005 through 2008 were smaller, and the decline in 2009 steeper. Nondurable goods manufacturing capacity is expected to decrease more in 2009 than in previous estimates; rates of change in capacity for most major nondurable industry groups were marked down. Capacity for the logging and publishing industries rose, on net, from 2005 through 2008 but is expected to fall in 2009; the rates of change are higher as a result of the revision.

Aggregate capacity for the selected high-technology industries advanced substantially in each year from 2005 through 2008 and is expected to expand appreciably in 2009. Relative to previous reports, capacity in these industries rose less quickly in 2005, 2006, and especially 2008, but it increased somewhat more rapidly in 2007. It is expected to rise faster in 2009 than previously estimated. Excluding high-technology industries, manufacturing capacity expanded slightly from 2005 through 2008 but is expected to decline in 2009. The current estimates are similar to previous reports except for 2009, during which the contraction in capacity is now anticipated to be greater than stated previously.

Capacity at mines is estimated to have fallen in 2005 and to have expanded from 2006 through 2008; it is expected to recede somewhat in 2009. The gains in 2006 and 2008 are now reported to have been larger than previously published, but the increase in 2007 has been revised down, and capacity at mines is now expected to contract rather than expand in 2009. Capacity at electric and gas utilities has risen each year since 2004. The current estimates show larger gains in 2005 and 2006 than reported earlier; revisions to other recent years were negligible.

By stage of processing, capacity in the crude stage is now reported to have risen more in 2006 and 2008 than previously shown but is now expected to fall in 2009. The rates of change for capacity in the primary and semifinished stages were revised down for 2008 and 2009; revisions to earlier years were slight. Relative to previous estimates, increases to the index for finished goods processors were revised up in 2007 and 2008, but capacity is expected to fall more in 2009 than stated previously.

Capacity Utilization

From 2005 through 2007, the capacity utilization rate for total industry stood a little below its long-run average of 80.9 percent, but in 2008 it fell to 74.2 percent, a level 6.7 percentage points below its long-run average (table A.7). The utilization rate for total industry was revised down about ½ percentage point in 2007 and 0.7 percentage point in 2008; revisions for earlier years were smaller.

Similarly, manufacturing capacity utilization, on balance, spent most of 2005 through 2007 at a little below its long-run average of 79.6 percent. The utilization rate in manufacturing tumbled during 2008, reaching 70.9 percent in the fourth quarter of 2008, 8¾ percentage points below its long-run average. Relative to earlier reports, the factory operating rate was revised down in 2007 and 2008 but was little changed in earlier years. Within durable goods, utilization rates for many industries were near their long-run averages from 2005 through 2007 and then dropped well below average in 2008; among the exceptions were motor vehicles and parts, nonmetallic mineral products, and wood products, in which the utilization rate was significantly below average in 2006 and 2007 and then fell even further in 2008. In the fourth quarter of 2008, three durable goods industries (nonmetallic mineral products, primary metals, and furniture and related products) had utilization rates between 10 and 20 percentage points below their long-run averages, and two durable goods industries (wood products and motor vehicles and parts) had utilization rates more than 20 percentage points below their long-run averages.

Among durable goods industries, nonmetallic mineral products had the largest downward revisions to utilization over the 2005–08 period; other industries with large downward revisions to their capacity utilization rates were wood products and motor vehicles and parts. The durable goods industries that reported the largest net upward revisions since 2005 were machinery, aerospace and miscellaneous transportation equipment, and furniture and related products.

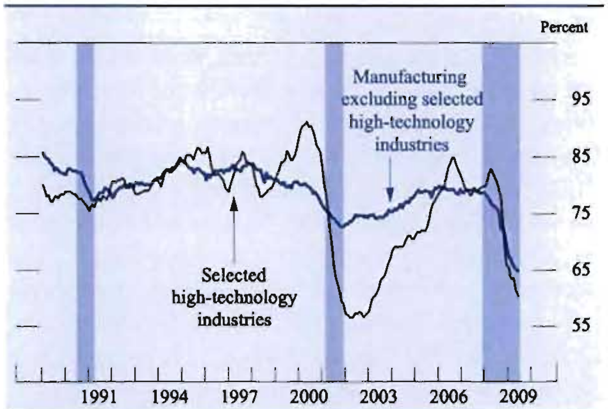
Utilization rates for many nondurable goods industries were somewhat below their long-run averages in 2005 through 2007 and then fell further in 2008, but the declines in 2008 were not as great, on average, as the declines in the utilization rates for durable goods industries. In the fourth quarter of 2008, four nondurable goods industries (textile and product mills, paper, printing and support activities, and plastics and rubber products) had utilization rates between 10 and 20 percentage points below their long-run averages. The nondurable goods industries with the largest downward revisions to utilization rates over the 2005–08 period were food, beverage, and tobacco products; petroleum and coal products; and plastics and rubber products. Apparel and leather had the most noticeable upward revisions to its utilization rate over this period; other nondurable goods industries with large upward revisions were textile and product mills and printing and support activities.

Capacity utilization in the other manufacturing category (logging and publishing) was revised down in 2005 and revised up from 2006 through 2008. It stood more than 10 percentage points below its long-run average in the fourth quarter of 2008.

Capacity utilization in mining was generally above its long-run average from 2006 through 2008 and, in the fourth quarter of 2008, stood at 89.6 percent, about 2 percentage points higher than its long-run average. Relative to earlier estimates, the utilization rate for mining was a little lower in 2006 and 2008 but was little changed in 2005 and 2007. At electric and gas utilities, capacity utilization rates were revised down for 2005 through 2008, and capacity utilization in the fourth quarter of 2008 is now estimated to have been more than 3 percentage points below its long-run average.

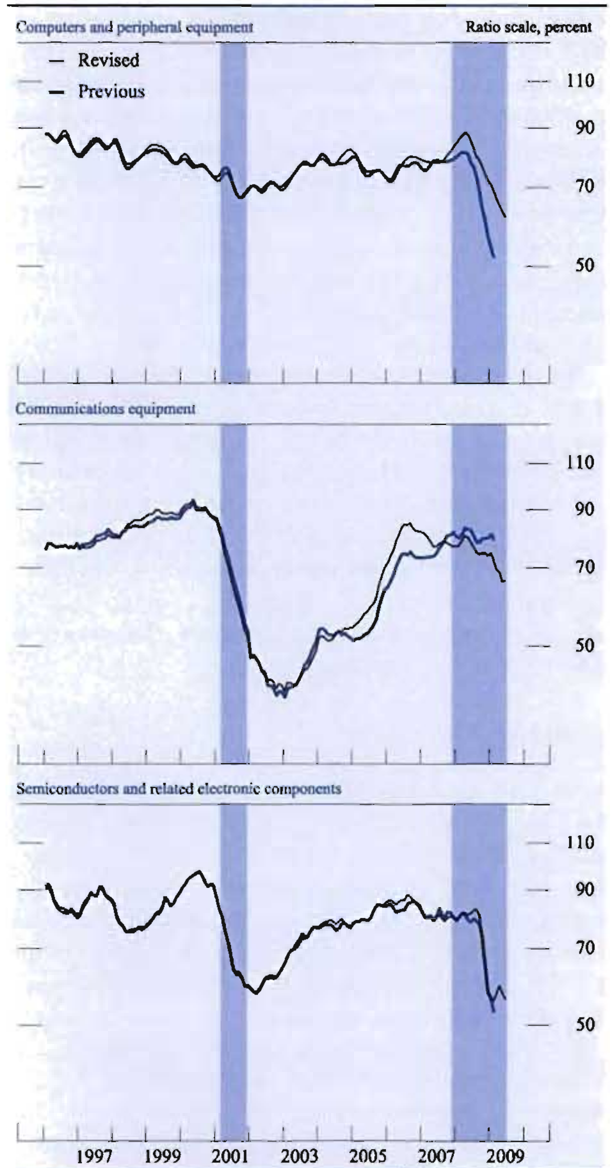
The operating rates for the selected high-technology industries were above their long-run averages in the fourth quarters of 2006 and 2007 but fell to more than 8 percentage points below their long-run

5. Capacity utilization: Selected high-technology industries, and manufacturing excluding selected high-technology industries, January 1989–June 2009



NOTE: The high-technology industries are identified in the note to figure 3.

6. Capacity utilization: Selected high-technology industries, January 1996–June 2009



averages in 2008 (figures 5 and 6 and table A.7). Relative to earlier estimates, capacity utilization is now reported to have been higher in 2005, 2006, and 2008 but lower in 2007. The operating rate for the computers and peripheral equipment industry is now shown to have been higher than previously reported in each of the past few years, particularly 2008, but, in the fourth quarter of 2008, stood about 4 percentage points below its long-run average. The utilization rate for communications equipment was more than 8 percentage points below its long-run average in 2005 and rose to more than 6 percentage points above its long-run average in 2006 before dropping in 2007 and 2008; at the end of 2008, the rate was 1.7 percentage points below its long-run average. Capacity utilization for communications equipment is now higher than previously reported in 2005 and 2006 but lower in 2007 and 2008. Capacity utilization in the semiconductor and related electronic components industry is now lower than earlier estimates in every year after 2005. The operating rate in this industry was above or near its long-run average from 2005 through 2007 but stood more than 16 percentage points below its long-run average in the fourth quarter of 2008.

Technical Aspects of the Revision

Comprehensive benchmark data for manufacturing production in 2007 were not available for this revision. After incorporating the limited information that was available, the benchmark production indexes for manufacturing—defined for each six-digit NAICS industry as nominal gross output divided by a price index—were little changed before 2007. The principal changes resulted from small revisions to price indexes from the Bureau of Economic Analysis and from improved estimates of price indexes for communications equipment output constructed by the Federal Reserve (discussed later in the article). In addition, the benchmark production indexes for other manufacturing (logging and publishing) were advanced through 2007 and updated for 2006 based on data from the Forest Service and the Census Bureau.

The IP indexes in recent years incorporated information from selected CIRs for 2007 from the Census Bureau, the revised benchmark input-output accounts for 2002 from the BEA, the Quarterly Survey of Plant Capacity from the Census Bureau for 2007 and 2008, and other annual industry reports. The indexes also incorporated revised monthly and quarterly source data on production, shipments, inventories, and production-worker hours.

As mentioned earlier, the benchmark production indexes for most industries incorporate updated price indexes from the industry output program of the BEA. However, the price indexes for pharmaceuticals (NAICS 325412), for semiconductors (NAICS 334413), and for most components of communications equipment (NAICS 3342) are constructed by the Federal Reserve from alternative sources. This article provides annual and quarterly price indexes for the relevant components of communications equipment, along with quarterly semiconductor price indexes (tables A.9, A.10, and A.11).

Changes to the Methodology for Adjusting for Temporary Help Supply Employees

The compilation of the initial IP estimate for a given month relies heavily on the hours worked by production workers in the manufacturing sector when the availability of the other IP source data is limited. The hours data are adjusted to account for the labor input of temporary help supply (THS) employees who work in the manufacturing sector; this adjustment is necessary because these workers are on the payrolls of companies that are classified in the service sector of the economy by the Bureau of Labor Statistics. These adjusted detailed hours series are used in making (1) estimates for those IP series based on labor input for the period for which benchmark output indexes are not yet available and (2) preliminary estimates of those IP series based on physical product data for which the current source data are not yet available.

The procedure for implementing this adjustment is as follows. An estimate is made of the component of THS employment that is allocated to manufacturing. This estimate begins with a baseline figure projected from the Current Population Survey but varies based on the cyclical movements of the manufacturing sector and the rest of the economy—THS employment has a cyclical pattern similar to that of manufacturing.[6]

The THS employment in manufacturing is then allocated among the NAICS three-digit industries based on each industry's use of THS workers as reported in the Census Bureau's Annual Survey of Plant Capacity (ASPC) and on each industry's cyclical patterns. With this revision, the allocation of THS employment among industries within manufacturing was updated based on data from the ASPC for 2002 through 2005.[7]

In addition, this revision updates the method for estimating each industry's monthly baseline share of temporary help employment use in manufacturing. Previously, this share was held constant for each industry at the level estimated according to the method just described. With this revision, the share is allowed to evolve based on the industry's share of total manufacturing employment. THS employment is multiplied by assumptions on hours worked and on the productivity of a THS worker relative to a permanent worker to estimate the effective hours contributed by THS workers for each three-digit manufacturing industry. The THS hours are added to the reported production-worker hours for each industry to produce an adjusted production-worker hour series. The percentage adjustment for each three-digit industry's hours is then applied to the hours series for each of its component industries.

Estimating the Effect of Hurricanes on Production

Industrial production in the United States was severely affected by hurricanes in both 2005 (Hurricanes Katrina and Rita) and 2008 (Hurricanes Gustav and Ike). Industries with a large presence in the Gulf Coast region include oil and natural gas extraction, petroleum refining, petrochemical manufacturing, and plastic resin manufacturing. These industries were mostly shut down during the storms, and storm damage sometimes delayed their return to operation. In addition, some other industries in the afflicted areas also shut down factories. The data on which the IP indexes are based for many of these industries are not available on a timely basis; initial estimates for them were made from other sources. The estimation of crude oil extraction and petroleum refining output was relatively straightforward with the availability of weekly data from the Department of Energy. Timely output data on natural gas extraction were less available, but reports by the Minerals Management Service of the U.S. Department of the Interior on shut-in capacity provided a good first estimate until data on output became available from the DOE. Weekly data

6. See Marcello Estevão and Saul Lach (1999), "Measuring Temporary Labor Outsourcing in U.S. Manufacturing," Finance and Economics Discussion Series 1999–57 (Washington: Board of Governors of the Federal Reserve System, October), www.federalreserve.gov/pubs/feds/1999/index.html.

7. For several years, the ASPC collected information about the share of production workers that consisted of temporary workers; this information is not collected in the Quarterly Survey of Plant Capacity, which replaced the ASPC in 2007.

on railcar loadings of chemicals from the Association of American Railroads and information on shut-in capacity of petrochemical plants from Chemical Market Associates, Inc., and PetroChem Wire were used to inform the IP estimates for petrochemical manufacturing; reports from the National Petrochemical and Refiners Association on quarterly petrochemical output became available later and improved the estimates. Anecdotal information from contacts in the plastic resin industry on output was used until monthly data on production from the American Chemistry Council became available. The effect of the storms on other industries was estimated based on data on the regional distribution of industrial activity from the County Business Patterns report of the Census Bureau.

Estimation of Capacity in the Light Motor Vehicle Industry

Capacity for light duty motor vehicles (NAICS 33611) is expected to contract significantly in 2009. The estimate for motor vehicle assembly capacity for a year is constructed from estimates of the peak historical assembly-line speed over the previous 10 years and the number of hours that can be worked at each plant in the United States. Annual line speed data and the number of shifts at individual plants are reported in *Ward's Automotive Yearbooks*. An annual capacity count for a plant is calculated by multiplying the peak line speed by the hours per year that the plant could run. New plants are added to capacity when they start production, and plants are removed from capacity when they are permanently shuttered. An adjustment is made to reflect manufacturers' plans to open or close assembly plants only when the dates have been confirmed and specific plants have been named. Plant-level data are aggregated using price weights for the different models of light vehicles, and if a plant produces multiple models on one assembly line, capacity is split among models based on estimated production levels for the models at the plant.

Changes to Individual Production Series

With this revision, the monthly production indicators for some series have changed.

Carpet and Rug Mills

The index for carpet and rug mills (NAICS 31411) is based on quarterly data on unit shipments from the Carpet and Rug Institute with a model-based inventory adjustment.[8] Formerly, it was based on monthly data from the same source. A cubic spline is used to interpolate monthly values from the quarterly figures, a method similar to that used for the other series for which only quarterly physical product data are available.[9]

High-Technology Goods

Communications equipment

Price indexes for two product classes of communications equipment were revised to incorporate additional detail. The price index for enterprise and home voice equipment (part of NAICS 33421) was updated. A price index for telephones and answering machines, one of the two product categories in this industry, was previously calculated using average selling prices for two types of phones (corded and cordless) but is now a matched-model index constructed using detailed data, beginning in 1997, from the Consumer Electronics Association on transmission frequency, number of lines, and presence of other features such as caller identification, speakerphone, and integrated answering machine. The price index for wireless system equipment (part of NAICS 33422), which covers mobile phone infrastructure, was improved by folding in additional detail on base-station radio transmission capacity using data from the Dell'Oro Group, a market research firm. The resulting mobile infrastructure price index fell 4 percentage points faster per year, on average, from 2000 to 2008.

Updated price indexes for the six product groups in communications equipment, introduced in the 2008 revision, are included in this article (table A.9).

Computers

With this revision, a change to the method for estimating the domestic shipments share of domestic absorption in electronic computer manufacturing (NAICS 334111) was introduced. The six product-based indexes for computer manufacturing are derived from quarterly data on nominal domestic absorption from IDC, an industry research group. For each product, an estimate of the domestic shipments share of domestic

8. Factory production is calculated as shipments plus the change in factory inventories. When only shipments are available, a model-based inventory adjustment is applied. See Charles Gilbert and Kimberly Bayard (2005), "Industrial Production and Capacity Utilization: The 2004 Annual Revision," *Federal Reserve Bulletin*, vol. 91 (winter), pp. 9–25, www.federalreserve.gov/pubs/bulletin/2005/05index.htm.

9. See Richard D. Raddock (1993), "Industrial Production, Capacity, and Capacity Utilization since 1987," *Federal Reserve Bulletin*, vol. 79 (June), pp. 590–605.

absorption—derived from the Census Bureau's CIR for computers and peripheral equipment—is used to convert the IDC domestic absorption data to a domestic shipments concept.[10]

The domestic shipments share for each of the six indexes was constructed by dividing the relevant annual measure of domestic product shipments from the CIR by the corresponding measure of annual domestic absorption from IDC. Each of these shares is converted to a quarterly frequency and projected forward for more-recent quarters when the CIR data are not yet available. Prior to the current revision, projections of the individual domestic shipments shares were based on monthly data on foreign trade in computers from the Census Bureau. Specifically, domestic absorption for the industry (NAICS 334111) was adjusted by net exports to obtain domestic shipments; the change in the ratio of domestic shipments to domestic absorption was applied to the shipments share for each of the six product indexes. With the current revision, the foreign trade data are no longer used. Instead, the CIR-based individual domestic shipments shares are extended out with a model-based trend for quarters when the annual CIR data are not yet available. Examination of all relevant data sources suggests that the shares derived from model-based trends lead to more-accurate measures of domestic production than the shares derived from trade data.

Semiconductors

Beginning with the 2008 revision, detailed price data on MOS (metal-oxide semiconductor) memory products (part of NAICS 334413) from iSuppli, an industry research group, have been used to construct quarterly indicator quality-adjusted price indexes for three categories—DRAM (dynamic random access memory), flash memory, and other memory. These prices are included in this article (table A.11).

Civilian Aircraft

With this revision, a change to the methods used for the calculation of the index of industrial production for civilian aircraft (part of NAICS 336411) was introduced. Production in the civilian aircraft industry is estimated by combining data on aircraft deliveries with an assumption about the time required to build a plane and the intensity of activity during that period. Previously, the production index for aircraft was based on a 10-month build period, during which 43 percent of production was assumed to have occurred in the three months immediately before the delivery and 57 percent was assumed to have occurred in the seven preceding months. Based on discussions with contacts in the aircraft industry, the new indexes assume a shorter build period. Specifically, they now assume that commercial aircraft take either two or three months to build. The new assumptions were applied to the entire history of aircraft models that are still in production; the data for models that are no longer in production were left unrevised.

Changes to Individual Capacity Series

Electricity Generation

The capacity index for electric power generation, transmission, and distribution (NAICS 2211) is now based on generation capability data from the DOE; previously it was based on electricity generation capacity data from the North American Electric Reliability Corporation (NERC). The change was made because the DOE data are compiled using a more consistent definition over time. However, because the DOE data are published with a lag, the capacity projection for the most recent year or two is estimated by extending the DOE generation capability series by the rate of change shown for the NERC electricity generation capacity data.

Nonferrous Metals (except Aluminum)

The capacity index for nonferrous metal (except aluminum) production and processing (NAICS 3314) is now based on copper smelting, copper refining, and zinc smelting data from the U.S. Geological Survey. Formerly the capacity index was based on the USGS data on just copper smelting and copper refining.

Natural Gas Extraction

The DOE no longer publishes physical capacity estimates for natural gas extraction (part of NAICS 211111). Capacity estimates for recent years are based on trend-through-peak estimates of capacity using the IP index and output projections from the Short-Term Energy Outlook (STEO) and Annual Energy Outlook (AEO) reports of the DOE.

10. Prior to 2006, the CIR for computers and peripheral equipment was released annually. Beginning in 2006, the Census Bureau began to issue quarterly reports along with annual summaries. For the construction of the domestic shipments share for 2006 onward, the Federal Reserve used only the annual summaries, not the quarterly reports. However, the Federal Reserve carefully follows the quarterly CIR releases and expects to use them more fully in a few years, when a longer history will be available.

Trend-through-Peak Estimates

As with recent years for natural gas extraction, the trend-through-peak method of estimating capacity is also used for those industries in mining and utilities for which no physical capacity sources are available—seven individual series accounting for about 5 percent of capacity. With this revision, the trend-through-peak method used to estimate capacity indexes for oil extraction (part of NAICS 211111), natural gas liquid extraction (NAICS 211112), and natural gas sales and transmission (NAICS 2212) is based on production indexes that are extended using output projections from the STEO and AEO reports.

The basic method in estimating trend-through-peak capacities for these industries is to construct baseline estimates of capacity by connecting peaks in production, with these peaks representing 100 percent utilization. In practice, the procedure involves a fair degree of judgment and deviates from a strict trend-through-peak approach in a variety of ways. First and most important, if a peak in production was reached several years ago and production has not subsequently approached that previous maximum, published capacity levels generally will, after a time, trend downward. That is, they will tend to follow recent IP. Second, the capacity levels corresponding to peaks in production for different series have yielded a variety of peak utilization rates historically.

Weights for Aggregation

The aggregation method for the IP index is a version of the Fisher ideal index formula.[11] In the IP index, series that measure the output of an individual industry are combined using weights derived from their proportion in the total value-added output of all industries.[12] The weights for manufacturing industries are derived from value-added measures from the Census of Manufactures and the Annual Survey of Manufactures. The Federal Reserve derives estimates of value added for the electric and gas utility industries from annual revenue and expense data issued by other organizations. The weights for aggregation, expressed as unit value added, were estimated with the latest data on producer prices for the period after 2006. Table A.8 shows the annual value-added proportions in the IP index from 2001 through 2008.

The outputs of most industries are inputs to multiple markets. Although data that directly split the output of an industry by its purchaser are sometimes available, most industry output measures do not provide that detail. With the 2002 annual revision, weights that allocate individual IP indexes into multiple market groups were derived from the Standard Make and Use Tables (at the detailed level) from the 1997 benchmark input-output accounts of the BEA.[13] With this revision, the weights for 2002 were updated using estimates from the same tables from the 2002 input-output accounts; years subsequent to 2002 were assumed to have weights identical to those for 2002. The weights for the period up through 1997 are still computed from the 1997 accounts, and the weights between 1997 and 2002 are linear combinations of the 1997 and 2002 weights.

Revised Monthly Data

This revision incorporates product data that became available or were revised after the regular six-month reporting window for monthly IP was closed. These data were released with too great a lag to be included with monthly IP estimates but were available for inclusion in the annual revision.

Revised Seasonal Factors

Seasonal factors for all series were reestimated using data that extend into 2008 or 2009. Factors for production-worker hours—which adjust for timing, holiday, and monthly seasonal patterns—were updated with data through February 2009. The updated factors for the physical product series, which include adjustments for holiday and workday patterns, used data through 2008. Seasonal factors for unit motor vehicle assemblies have been updated, and projections through September 2009 are on the Federal Reserve Board's website at www.federalreserve.gov/releases/g17/mvsf.htm. □

11. A Fisher ideal index estimates the change in aggregate output between two periods as the geometric average of two aggregate output indexes—one that weights the component output indexes based on prices from the earlier period and one that uses prices from the later period. An aggregate IP index is the cumulative product of Fisher indexes computed for each period, with concurrent prices (derived as unit value added) applied to the component output indexes for every period.

12. For detailed discussions of the aggregation method, see Carol Corrado, Charles Gilbert, and Richard Raddock (1997), "Industrial Production and Capacity Utilization: Historical Revision and Recent Developments," *Federal Reserve Bulletin*, vol. 83 (February), pp. 67–92, www.federalreserve.gov/pubs/bulletin/1997/97bulletin.htm#feb; and Carol Corrado (2001), "Industrial Production and Capacity Utilization: The 2000 Annual Revision," *Federal Reserve Bulletin*, vol. 86 (March), pp. 132–48, www.federalreserve.gov/pubs/bulletin/2001/01index.htm.

13. See Carol Corrado (2003), "Industrial Production and Capacity Utilization: The 2002 Historical and Annual Revision," *Federal Reserve Bulletin*, vol. 89 (April), pp. 151–76, www.federalreserve.gov/pubs/bulletin/2003/03index.htm.

A.1. Revised data for industrial production for total industry, 1979–2009

Seasonally adjusted data except as noted

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual avg.[1]
	Industrial production (percent change)																
1979	−.7	.6	.3	−1.1	.8	.0	−.2	−.7	.1	.6	−.1	.1	1.7	−.6	−1.4	1.5	3.0
1980	.4	.1	−.3	−2.0	−2.5	−1.2	−.7	.4	1.6	1.3	1.7	.6	1.7	−15.8	−6.3	16.4	−2.5
1981	−.6	−.5	.5	−.6	.7	.5	.7	.0	−.6	−.7	−1.1	−1.1	.9	1.0	4.3	−8.5	1.3
1982	−1.9	2.0	−.7	−.9	−.7	−.4	−.4	−.9	−.4	−.8	−.3	−.7	−7.7	−5.1	−6.0	−7.1	−5.2
1983	1.9	−.6	.8	1.2	.7	.5	1.5	1.1	1.5	.8	.3	.5	4.9	9.2	14.4	10.8	2.8
1984	2.0	.5	.5	.6	.5	.4	.3	.0	−.1	−.1	.4	.1	12.4	6.3	2.8	.4	8.9
1985	−.3	.5	.1	−.2	.1	.1	−.6	.4	.5	−.4	.3	1.0	1.0	.4	−.7	2.4	1.2
1986	.5	−.7	−.6	.1	.1	−.3	.6	−.1	.2	.5	.5	.9	2.3	−2.4	1.6	4.7	1.0
1987	−.3	1.3	.1	.6	.7	.5	.6	.7	.3	1.5	.5	.5	5.5	7.0	7.3	10.2	5.2
1988	.0	.4	.2	.5	−.1	.2	.2	.5	−.3	.5	.2	.4	3.6	3.6	2.1	2.9	5.2
1989	.2	−.4	.3	.0	−.7	.0	−.9	.9	−.3	−.1	.3	.6	1.6	−1.7	−2.4	1.8	.9
1990	−.5	.9	.5	−.1	.2	.3	−.1	.2	.2	−.7	−1.2	−.7	3.1	2.8	1.2	−6.1	1.0
1991	−.5	−.6	−.5	.2	1.0	1.0	.0	.1	.9	−.2	−.1	−.4	−7.4	2.6	5.5	.9	−1.6
1992	−.6	.8	.8	.7	.4	.0	.8	−.5	.2	.7	.4	.0	−.5	7.2	2.9	4.0	2.8
1993	.5	.3	.0	.3	−.4	.2	.4	.0	.4	.7	.4	.5	3.6	.9	2.1	6.0	3.3
1994	.4	.0	1.1	.5	.6	.7	.2	.5	.2	.9	.6	1.1	5.2	7.5	5.1	8.1	5.3
1995	.3	.0	.2	.0	.2	.3	−.4	1.4	.4	−.2	.3	.4	5.1	1.2	3.9	3.4	4.8
1996	−.7	1.7	−.2	.8	.6	.9	−.1	.6	.6	.0	.8	.6	2.9	8.1	5.4	5.6	4.4
1997	.1	1.2	.8	.0	.7	.5	.5	1.4	.9	.7	.9	.4	7.9	6.4	9.6	10.4	7.3
1998	.5	.0	.1	.4	.7	−.6	−.4	2.1	−.3	.7	−.1	.3	4.4	3.2	2.9	5.1	5.9
1999	.5	.4	.2	.2	.7	−.2	.6	.5	−.3	1.4	.6	.8	4.4	3.7	4.1	8.1	4.3
2000	.0	.4	.4	.6	.2	.1	−.2	−.2	.5	−.4	.0	−.4	4.8	4.9	−.3	−1.2	4.2
2001	−.7	−.6	−.3	−.3	−.7	−.6	−.4	−.4	−.3	−.6	−.5	.0	−5.7	−5.3	−5.7	−5.0	−3.4
2002	.5	.0	.8	.3	.5	.9	−.3	.1	.1	−.3	.4	−.5	2.5	5.9	2.1	−.4	−.1
2003	.7	.3	−.1	−.8	.0	.1	.4	−.1	.6	.1	.9	−.1	2.9	−3.0	2.6	4.1	1.3
2004	.3	.5	−.6	.5	.7	−.9	.7	.2	.0	.9	.2	.7	2.8	1.8	1.9	5.7	2.5
2005	.4	.6	−.1	.0	.3	.4	−.1	.2	−1.7	1.1	1.1	.6	5.7	1.7	−.7	4.0	3.3
2006	.0	.0	.2	.4	−.1	.4	.2	.2	−.3	−.1	−.2	.8	3.6	2.2	2.0	−.6	2.3
2007	−.5	.8	−.2	.4	.1	.0	.3	.1	.4	−.5	.6	.3	1.8	2.4	2.1	.8	1.5
2008	−.1	−.3	−.4	−.6	−.3	−.2	−.1	−1.1	−4.0	1.3	−1.3	−2.3	.2	−4.6	−9.0	−13.0	−2.2
2009	−2.2	−.8	−1.7	−.7	−1.2	−.4	...	...	...	...	...	...	−19.1	−11.6	...	...	...
	Industrial production (2002=100)																
1979	57.6	57.9	58.1	57.5	57.9	57.9	57.8	57.4	57.5	57.8	57.8	57.8	57.9	57.8	57.6	57.8	57.7
1980	58.0	58.1	57.9	56.8	55.3	54.6	54.3	54.5	55.3	56.1	57.0	57.3	58.0	55.6	54.7	56.8	56.3
1981	57.0	56.7	57.1	56.7	57.1	57.4	57.8	57.8	57.4	57.0	56.4	55.8	56.9	57.1	57.7	56.4	57.0
1982	54.7	55.8	55.4	54.9	54.5	54.3	54.1	53.6	53.4	53.0	52.8	52.4	55.3	54.6	53.7	52.7	54.1
1983	53.4	53.1	53.6	54.2	54.6	54.9	55.7	56.4	57.2	57.7	57.9	58.1	53.4	54.6	56.4	57.9	55.6
1984	59.3	59.6	59.9	60.3	60.6	60.8	60.9	61.0	60.9	60.8	61.1	61.1	59.6	60.5	60.9	61.0	60.5
1985	60.9	61.2	61.3	61.2	61.2	61.3	60.9	61.1	61.4	61.1	61.3	62.0	61.2	61.2	61.1	61.5	61.3
1986	62.3	61.8	61.4	61.5	61.6	61.4	61.7	61.6	61.8	62.0	62.3	62.9	61.8	61.5	61.7	62.4	61.9
1987	62.7	63.5	63.6	64.0	64.4	64.7	65.1	65.6	65.8	66.8	67.1	67.4	63.3	64.4	65.5	67.1	65.1
1988	67.5	67.7	67.9	68.3	68.2	68.4	68.5	68.8	68.6	69.0	69.1	69.4	67.7	68.3	68.6	69.1	68.4
1989	69.6	69.3	69.4	69.4	68.9	69.0	68.3	69.0	68.8	68.7	68.9	69.4	69.4	69.1	68.7	69.0	69.1
1990	69.0	69.6	70.0	69.9	70.0	70.2	70.1	70.2	70.4	69.9	69.0	68.6	69.5	70.0	70.2	69.2	69.7
1991	68.2	67.8	67.5	67.6	68.3	68.9	68.9	69.0	69.6	69.5	69.4	69.1	67.8	68.3	69.2	69.3	68.7
1992	68.7	69.2	69.8	70.3	70.6	70.6	71.2	70.8	71.0	71.5	71.8	71.8	69.3	70.5	71.0	71.7	70.6
1993	72.2	72.4	72.4	72.6	72.3	72.5	72.8	72.8	73.1	73.6	73.9	74.3	72.3	72.5	72.9	73.9	72.9
1994	74.6	74.6	75.4	75.8	76.2	76.7	76.9	77.3	77.4	78.1	78.6	79.4	74.9	76.2	77.2	78.7	76.8
1995	79.7	79.7	79.8	79.7	79.9	80.1	79.9	80.9	81.3	81.1	81.3	81.7	79.7	79.9	80.7	81.4	80.4
1996	81.1	82.4	82.3	83.0	83.5	84.2	84.2	84.7	85.1	85.2	85.9	86.4	82.0	83.6	84.7	85.8	84.0
1997	86.5	87.6	88.3	88.3	88.9	89.3	89.8	91.0	91.9	92.5	93.3	93.7	87.5	88.8	90.9	93.2	90.1
1998	94.1	94.2	94.2	94.6	95.3	94.8	94.4	96.3	96.1	96.7	96.6	97.0	94.2	94.9	95.6	96.8	95.4
1999	97.5	97.9	98.1	98.3	99.0	98.8	99.5	100.0	99.7	101.0	101.6	102.4	97.8	98.7	99.7	101.7	99.5
2000	102.4	102.9	103.3	103.9	104.1	104.3	104.0	103.8	104.3	103.9	103.9	103.5	102.9	104.1	104.0	103.7	103.7
2001	102.7	102.1	101.8	101.5	100.8	100.1	99.7	99.3	99.0	98.4	97.9	97.9	102.2	100.8	99.3	98.1	100.1
2002	98.4	98.4	99.2	99.5	100.0	100.9	100.6	100.6	100.7	100.4	100.9	100.4	98.7	100.1	100.6	100.6	100.0
2003	101.1	101.4	101.3	100.5	100.5	100.6	101.0	100.9	101.5	101.6	102.5	102.4	101.3	100.5	101.2	102.2	101.3
2004	102.7	103.3	102.7	103.1	103.9	103.0	103.7	103.9	103.9	104.8	105.1	105.8	102.9	103.3	103.8	105.3	103.8
2005	106.3	107.0	106.9	106.8	107.1	107.5	107.5	107.7	105.8	107.0	108.2	108.9	106.7	107.2	107.0	108.0	107.2
2006	108.9	108.9	109.1	109.5	109.4	109.9	110.1	110.3	110.0	109.8	109.6	110.5	109.0	109.6	110.1	110.0	109.7
2007	109.9	110.8	110.6	111.1	111.1	111.2	111.5	111.6	112.0	111.4	112.1	112.4	110.5	111.1	111.7	112.0	111.3
2008	112.3	112.0	111.6	111.0	110.7	110.4	110.4	109.2	104.8	106.2	104.8	102.4	112.0	110.7	108.1	104.4	108.8
2009	100.1	99.4	97.7	96.9	95.8	95.4	...	...	...	...	...	...	99.0	96.0	...	...	...

NOTE: Monthly percent change figures show the change from the previous month; quarterly figures show the change from the previous quarter at a compound annual rate of change. Production and capacity indexes are expressed as percentages of output in 2002.

Estimates from February 2009 through June 2009 are subject to further revision in the upcoming monthly releases.

1. Annual averages of industrial production are calculated from not seasonally adjusted indexes.

... Not available as of July 15, 2009.

A.2. Revised data for capacity and capacity utilization for total industry, 1979–2009

Seasonally adjusted data

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Annual avg.
	Capacity (percent of 2002 output)																
1979	67.1	67.3	67.4	67.6	67.8	67.9	68.1	68.2	68.4	68.5	68.6	68.8	67.3	67.8	68.2	68.6	68.0
1980	68.9	69.1	69.2	69.3	69.5	69.6	69.8	69.9	70.1	70.2	70.4	70.5	69.1	69.5	69.9	70.4	69.7
1981	70.7	70.9	71.0	71.2	71.4	71.5	71.7	71.9	72.1	72.2	72.4	72.6	70.9	71.4	71.9	72.4	71.6
1982	72.7	72.9	73.0	73.2	73.3	73.4	73.5	73.6	73.7	73.8	73.9	73.9	72.9	73.3	73.6	73.9	73.4
1983	74.0	74.0	74.0	74.1	74.1	74.1	74.1	74.2	74.2	74.2	74.3	74.4	74.0	74.1	74.2	74.3	74.1
1984	74.5	74.5	74.7	74.8	74.9	75.1	75.2	75.4	75.6	75.7	75.9	76.1	74.6	74.9	75.4	75.9	75.2
1985	76.3	76.5	76.7	76.9	77.1	77.2	77.4	77.6	77.7	77.8	78.0	78.1	76.5	77.1	77.6	78.0	77.3
1986	78.2	78.3	78.4	78.5	78.5	78.6	78.7	78.8	78.9	79.0	79.1	79.2	78.3	78.5	78.8	79.1	78.7
1987	79.3	79.5	79.6	79.8	79.9	80.1	80.2	80.4	80.5	80.6	80.7	80.8	79.5	79.9	80.4	80.7	80.1
1988	80.9	81.0	81.1	81.1	81.2	81.2	81.2	81.3	81.4	81.4	81.5	81.6	81.0	81.2	81.3	81.5	81.2
1989	81.7	81.8	82.0	82.1	82.3	82.4	82.6	82.8	82.9	83.1	83.3	83.5	81.8	82.3	82.8	83.3	82.5
1990	83.7	83.8	84.0	84.2	84.3	84.5	84.6	84.8	84.9	85.1	85.2	85.3	83.8	84.3	84.8	85.2	84.5
1991	85.5	85.6	85.7	85.8	85.9	86.0	86.1	86.2	86.3	86.5	86.6	86.7	85.6	85.9	86.2	86.6	86.1
1992	86.8	87.0	87.1	87.3	87.5	87.7	87.9	88.0	88.2	88.4	88.5	88.7	87.0	87.5	88.0	88.5	87.8
1993	88.8	89.0	89.1	89.2	89.3	89.4	89.5	89.6	89.7	89.9	90.1	90.2	89.0	89.3	89.6	90.1	89.5
1994	90.4	90.6	90.9	91.1	91.4	91.7	92.0	92.3	92.6	92.9	93.2	93.5	90.6	91.4	92.3	93.2	91.9
1995	93.9	94.2	94.5	94.8	95.1	95.5	95.8	96.2	96.5	96.9	97.3	97.7	94.2	95.1	96.2	97.3	95.7
1996	98.1	98.6	99.0	99.5	99.9	100.4	100.9	101.4	101.8	102.3	102.8	103.3	98.6	99.9	101.4	102.8	100.7
1997	103.8	104.3	104.9	105.4	106.0	106.6	107.2	107.8	108.5	109.1	109.8	110.5	104.3	106.0	107.8	109.8	107.0
1998	111.2	112.0	112.7	113.4	114.1	114.7	115.4	116.0	116.6	117.1	117.7	118.2	112.0	114.1	116.0	117.7	114.9
1999	118.8	119.3	119.8	120.3	120.7	121.2	121.7	122.1	122.6	123.1	123.5	124.0	119.3	120.7	122.1	123.5	121.4
2000	124.5	124.9	125.4	125.8	126.2	126.7	127.1	127.5	127.9	128.3	128.7	129.2	124.9	126.2	127.5	128.7	126.9
2001	129.6	129.9	130.3	130.7	131.1	131.4	131.8	132.1	132.4	132.7	133.0	133.3	129.9	131.1	132.1	133.0	131.5
2002	133.5	133.7	133.9	134.0	134.1	134.2	134.2	134.2	134.2	134.2	134.1	134.1	133.7	134.1	134.2	134.1	134.0
2003	134.0	133.9	133.8	133.8	133.7	133.6	133.6	133.6	133.5	133.5	133.5	133.5	133.9	133.7	133.6	133.5	133.7
2004	133.5	133.5	133.4	133.4	133.4	133.4	133.3	133.3	133.3	133.3	133.3	133.3	133.5	133.4	133.3	133.3	133.4
2005	133.3	133.4	133.4	133.5	133.6	133.7	133.8	134.0	134.1	134.3	134.4	134.6	133.4	133.6	134.0	134.4	133.8
2006	134.7	134.9	135.0	135.2	135.4	135.5	135.7	135.9	136.1	136.3	136.5	136.7	134.9	135.4	135.9	136.5	135.7
2007	136.9	137.1	137.3	137.6	137.8	138.0	138.3	138.5	138.7	139.0	139.2	139.4	137.1	137.8	138.5	139.2	138.1
2008	139.6	139.8	139.9	140.1	140.2	140.4	140.5	140.6	140.7	140.7	140.7	140.7	139.8	140.2	140.6	140.7	140.3
2009	140.7	140.7	140.6	140.5	140.4	140.2	...	...	...	...	...	...	140.7	140.4	...	...	...
	Capacity utilization (percent)																
1979	85.8	86.1	86.1	85.0	85.5	85.3	84.9	84.1	84.1	84.4	84.1	84.0	86.0	85.3	84.4	84.2	85.0
1980	84.2	84.1	83.7	81.9	79.7	78.5	77.8	77.9	79.0	79.8	81.0	81.3	84.0	80.0	78.2	80.7	80.7
1981	80.7	80.1	80.3	79.7	80.0	80.2	80.6	80.4	79.7	79.0	77.9	76.9	80.3	80.0	80.2	77.9	79.6
1982	75.2	76.5	75.8	75.0	74.4	73.9	73.6	72.8	72.5	71.8	71.5	70.9	75.9	74.4	72.9	71.4	73.7
1983	72.2	71.8	72.3	73.2	73.7	74.1	75.2	76.0	77.1	77.7	77.9	78.2	72.1	73.6	76.1	77.9	74.9
1984	79.7	80.0	80.2	80.6	80.8	81.0	81.0	80.9	80.6	80.3	80.4	80.3	80.0	80.8	80.8	80.3	80.5
1985	79.9	80.0	79.9	79.6	79.5	79.3	78.7	78.8	79.0	78.5	78.7	79.4	79.9	79.5	78.8	78.9	79.3
1986	79.6	79.0	78.4	78.3	78.4	78.1	78.4	78.2	78.3	78.6	78.8	79.4	79.0	78.3	78.3	78.9	78.6
1987	79.0	79.9	79.9	80.2	80.6	80.8	81.2	81.6	81.7	82.8	83.1	83.4	79.6	80.5	81.5	83.1	81.2
1988	83.4	83.6	83.8	84.2	84.1	84.2	84.3	84.7	84.3	84.7	84.8	85.0	83.6	84.2	84.4	84.8	84.3
1989	85.1	84.6	84.7	84.6	83.8	83.7	82.8	83.3	83.0	82.7	82.8	83.1	84.8	84.0	83.0	82.9	83.7
1990	82.5	83.1	83.3	83.0	83.0	83.1	82.8	82.9	82.9	82.2	81.0	80.3	83.0	83.1	82.9	81.2	82.5
1991	79.9	79.2	78.7	78.8	79.5	80.1	80.0	80.0	80.6	80.4	80.2	79.8	79.3	79.5	80.2	80.1	79.8
1992	79.1	79.6	80.1	80.5	80.6	80.5	81.0	80.4	80.5	80.9	81.1	80.9	79.6	80.6	80.6	81.0	80.4
1993	81.2	81.4	81.3	81.4	81.0	81.1	81.3	81.2	81.4	81.9	82.1	82.3	81.3	81.2	81.3	82.1	81.5
1994	82.5	82.3	83.0	83.2	83.4	83.7	83.6	83.7	83.6	84.1	84.3	84.9	82.6	83.4	83.6	84.4	83.5
1995	84.9	84.6	84.4	84.1	84.0	83.9	83.3	84.2	84.2	83.7	83.6	83.6	84.6	84.0	83.9	83.6	84.0
1996	82.6	83.6	83.1	83.4	83.5	83.9	83.4	83.5	83.6	83.2	83.5	83.7	83.1	83.6	83.5	83.5	83.4
1997	83.3	83.9	84.2	83.8	83.9	83.8	83.8	84.4	84.7	84.7	85.0	84.7	83.8	83.8	84.3	84.8	84.2
1998	84.6	84.1	83.6	83.5	83.6	82.6	81.8	83.1	82.4	82.6	82.1	82.0	84.1	83.2	82.4	82.2	83.0
1999	82.1	82.1	81.9	81.7	82.0	81.5	81.8	81.9	81.3	82.1	82.2	82.6	82.0	81.8	81.6	82.3	81.9
2000	82.3	82.4	82.4	82.6	82.5	82.3	81.8	81.4	81.5	80.9	80.7	80.1	82.4	82.5	81.6	80.6	81.7
2001	79.3	78.6	78.1	77.7	76.9	76.2	75.7	75.2	74.7	74.1	73.6	73.5	78.7	76.9	75.2	73.7	76.1
2002	73.7	73.6	74.1	74.2	74.5	75.2	74.9	75.0	75.0	74.9	75.2	74.9	73.8	74.7	75.0	75.0	74.6
2003	75.5	75.8	75.7	75.1	75.2	75.3	75.6	75.6	76.0	76.1	76.8	76.7	75.6	75.2	75.7	76.5	75.8
2004	77.0	77.4	76.9	77.3	77.9	77.2	77.7	77.9	77.9	78.7	78.8	79.4	77.1	77.5	77.9	79.0	77.9
2005	79.7	80.2	80.1	80.0	80.2	80.4	80.3	80.4	78.9	79.7	80.5	80.9	80.0	80.2	79.9	80.4	80.1
2006	80.9	80.8	80.8	81.0	80.8	81.1	81.1	81.2	80.8	80.6	80.3	80.9	80.8	81.0	81.1	80.6	80.9
2007	80.3	80.8	80.6	80.7	80.7	80.6	80.7	80.6	80.7	80.2	80.5	80.6	80.6	80.6	80.7	80.4	80.6
2008	80.5	80.2	79.8	79.2	78.9	78.7	78.6	77.6	74.5	75.4	74.4	72.7	80.1	78.9	76.9	74.2	77.6
2009	71.1	70.6	69.5	69.0	68.2	68.0	...	...	...	...	...	...	70.4	68.4	...	...	...

NOTE: See the general note to table A.1. ... Not available as of July 15, 2009.

A.3. Rates of change in industrial production, by market and industry groups, 2004–08[1]

Item	NAICS code[2]	Revised rate of change (percent)					Difference between rates of change: revised minus previous (percentage points)				
		2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
Total industry	. . .	**3.0**	**2.6**	**1.8**	**1.8**	**–6.7**	**–.1**	**.0**	**.1**	**–.3**	**–.6**
MARKET GROUPS											
Final products and nonindustrial supplies	. . .	2.5	4.4	1.1	.8	–5.8	–.1	.0	.0	–.5	–.4
Consumer goods	. . .	1.5	2.5	.1	.2	–4.2	–.1	.1	–.1	–1.0	–.2
Durable	. . .	–.5	1.2	–3.2	1.1	–17.2	.2	–.2	.7	.2	.3
Automotive products	. . .	–3.2	–1.5	–5.2	3.2	–22.4	–.4	.5	.2	–.4	.0
Home electronics	. . .	7.4	7.8	8.8	15.3	1.6	4.9	–3.2	–2.7	1.2	3.4
Appliances, furniture, carpeting	. . .	1.6	1.5	–5.6	–5.1	–20.4	.0	–.1	.5	.9	.2
Miscellaneous goods	. . .	2.5	4.4	–.7	–1.0	–10.9	.6	–1.2	2.0	.5	–.2
Nondurable	. . .	2.3	2.9	1.2	–.1	–.4	–.3	.2	–.4	–1.3	–.2
Non-energy	. . .	1.9	3.4	1.6	–.9	–1.8	–.3	.3	–.5	–1.8	–.2
Foods and tobacco	. . .	2.3	4.0	.0	1.1	–1.2	.0	.1	–.3	–.4	.4
Clothing	. . .	–13.9	–5.8	–4.8	–.5	–6.7	–4.1	–3.7	–5.1	1.4	.8
Chemical products	. . .	3.5	4.2	5.8	–4.2	–2.2	–.4	1.2	–1.9	–4.2	–1.5
Paper products	. . .	.9	–.4	.1	–1.8	–4.1	–1.3	.5	2.6	–2.9	–.2
Energy	. . .	4.0	1.7	–.1	1.9	3.6	.0	.0	.1	.0	.2
Business equipment	. . .	5.3	9.2	7.4	2.3	–8.4	.1	–1.1	–.3	–.6	.1
Transit	. . .	6.2	15.0	9.2	–1.4	–29.0	–1.0	–.9	.1	2.0	–1.4
Information processing	. . .	7.0	12.1	10.8	6.6	2.0	.7	–2.6	–1.9	–2.3	2.0
Industrial and other	. . .	4.0	5.6	4.8	1.1	–7.4	.0	–.4	.4	–.6	–.7
Defense and space equipment	. . .	1.7	8.0	–1.9	5.7	–.5	–1.4	1.1	.7	.5	.7
Construction supplies	. . .	2.0	7.3	–3.3	–1.0	–11.6	.3	–.2	.2	.6	–.4
Business supplies	. . .	2.9	3.0	.4	1.3	–6.9	–.3	.3	.7	.2	–.8
Materials	. . .	3.7	.4	2.7	3.2	–7.9	.0	.1	.2	–.1	–.9
Non-energy	. . .	5.4	2.6	1.4	3.5	–12.0	.0	.1	.1	.0	–1.4
Durable	. . .	5.8	5.9	.4	4.7	–12.0	–.3	.5	–.7	–.7	–1.9
Consumer parts	. . .	.0	.6	–5.7	–2.2	–20.3	.0	.1	.1	–.2	–.5
Equipment parts	. . .	10.3	12.7	6.9	10.3	–6.5	–.8	1.4	–2.4	–2.1	–3.9
Other	. . .	5.0	3.0	–1.8	3.2	–12.9	.0	.1	.1	.1	–.9
Nondurable	. . .	4.8	–2.6	3.1	1.8	–12.0	.5	–.4	1.5	1.3	–.5
Textile	. . .	–.8	.5	–11.5	–6.9	–13.7	.1	.0	.7	2.5	.7
Paper	. . .	3.8	–1.0	1.8	–1.4	–10.8	.0	.2	.2	–.1	.1
Chemical	. . .	9.6	–7.3	6.9	4.3	–15.8	1.0	–1.5	2.1	2.3	–1.1
Energy	. . .	–.5	–4.1	5.5	2.5	.2	.0	.0	.3	–.2	.2
INDUSTRY GROUPS											
Manufacturing[3]	. . .	3.6	3.8	1.2	1.9	–8.7	–.1	.1	.1	–.4	–.8
Manufacturing (NAICS)	31-33	3.7	4.0	1.3	2.0	–8.7	–.1	.0	–.1	–.4	–.8
Durable manufacturing	. . .	3.8	7.0	1.2	3.2	–11.1	–.2	.0	–.3	–.6	–.8
Wood products	321	1.4	11.8	–13.0	–7.5	–20.7	.0	.1	.3	–.7	–.5
Nonmetallic mineral products	327	4.4	5.5	–3.6	–1.2	–10.3	.0	.1	–.1	–2.0	.1
Primary metal	331	8.3	–.7	–4.2	4.3	–26.8	.2	.4	.0	.2	–2.7
Fabricated metal products	332	1.8	6.1	3.3	3.3	–7.0	.0	–.1	1	–.1	.3
Machinery	333	5.2	8.3	2.8	–1.0	–10.6	.0	.0	.3	–.3	–1.2
Computer and electronic products	334	9.7	15.3	9.3	11.0	–2.6	–.5	.1	–2.9	–2.9	–3.0
Electrical equipment, appliances, and components	335	2.4	1.7	–.4	3.3	–2.9	.1	–.1	.1	–.4	1.8
Motor vehicles and parts	3361-3	–1.8	.1	–6.2	–1.9	–23.3	–.4	.5	–.3	.4	–.5
Aerospace and miscellaneous transportation equipment	3364-9	2.9	10.9	5.6	11.1	–12.7	–.5	–.6	1.1	.1	–.2
Furniture and related products	337	3.4	1.6	–1.7	–2.6	–17.8	.0	.0	–.1	–.9	.6
Miscellaneous	339	1.8	6.4	3.5	2.9	–2.3	.1	–.2	.8	1.3	–.3
Nondurable manufacturing	. . .	3.5	.7	1.4	.8	–6.3	.0	.0	.1	–.2	–.8
Food, beverage, and tobacco products	311,2	1.3	4.2	.2	1.9	–1.6	.0	.1	–.2	–.3	.0
Textile and product mills	313,4	.5	–.3	–11.4	–7.3	–13.8	.0	–.1	.3	.8	–1.2
Apparel and leather	315,6	–8.9	–1.4	–.4	–.8	–8.2	.1	–.1	.4	1.3	–.7
Paper	322	2.9	–.5	.5	–2.1	–10.9	.0	.2	.2	.1	.1
Printing and support	323	2.5	.6	2.4	–1.5	–9.6	.1	.1	.4	–.2	–1.3
Petroleum and coal products	324	10.5	–3.7	2.3	.3	.5	.0	.0	.0	.7	.0
Chemical	325	6.6	–1.2	5.1	.7	–9.8	.1	.0	.1	–.7	–1.3
Plastics and rubber products	326	.9	2.5	–3.0	4.5	–11.9	.0	–.1	.7	.1	–1.3
Other manufacturing (non-NAICS)	1133, 5111	1.4	–.3	–1.2	–1.8	–8.8	–.7	.2	3.3	–.5	.0
Mining	21	–.9	–4.9	8.7	.3	.8	.0	.0	.5	.1	.2
Utilities	2211,2	1.8	2.0	–.6	3.1	.3	.0	.0	.1	.1	.1
Electric	2211	2.4	3.5	–1.1	3.5	–.8	.1	.1	.1	.2	.3
Natural gas	2212	–1.2	–4.8	1.4	1.6	5.9	–.1	–.2	–.1	–.4	–.2

1. Rates of change are calculated as the percent change in the seasonally adjusted index from the fourth quarter of the previous year to the fourth quarter of the year specified in the column heading.

2. North American Industry Classification System.

3. Manufacturing comprises North American Industry Classification System (NAICS) manufacturing industries (sector 31-33) plus the logging industry and the newspaper, periodical, book, and directory publishing industries. Logging and publishing are classified elsewhere in NAICS (under agriculture and information, respectively), but historically they were considered to be manufacturing industries and were included in the industrial sector under the Standard Industrial Classification (SIC) system. In December 2002, the Federal Reserve reclassified all its industrial output data from the SIC system to NAICS.

. . . Not applicable.

A.4. Rates of change in industrial production, special aggregates and selected detail, 2004–08[1]

Item	NAICS code[2]	Revised rate of change (percent)					Difference between rates of change: revised minus previous (percentage points)				
		2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
Total industry	**. . .**	**3.0**	**2.6**	**1.8**	**1.8**	**–6.7**	**–.1**	**.0**	**.1**	**–.3**	**–.6**
Energy	. . .	1.3	–1.8	3.9	2.1	1.3	.0	.0	.2	–.1	.2
Consumer products	. . .	4.0	1.7	–.1	1.9	3.6	.0	.0	.1	.0	.2
Commercial products	. . .	4.5	.4	1.2	1.9	.5	.0	.0	.0	–.1	.5
Oil and gas well drilling	213111	8.4	11.9	14.9	–.7	6.9	.0	.0	.1	.1	.0
Converted fuel	. . .	2.3	–2.6	2.6	5.7	–4.4	.0	.0	.0	.4	–.3
Primary materials	. . .	–1.7	–4.7	6.8	1.2	2.0	.0	.0	.4	–.4	.5
Non-energy	. . .	3.4	4.0	1.2	1.7	–9.4	–.1	.0	.1	–.4	–.7
Selected high-technology industries	. . .	8.6	22.6	13.1	18.2	–6.9	–.7	.2	–4.2	–4.1	–6.4
Computers and peripheral equipment	3341	3.5	25.3	22.1	24.2	–11.9	1.8	–3.6	4.2	7.4	2.2
Communications equipment	3342	2.6	8.9	12.4	6.6	10.4	1.9	–4.8	–8.2	–14.0	1.7
Semiconductors and related electronic components	334412-9	13.8	28.4	9.8	22.3	–15.0	–3.5	4.3	–5.7	–3.7	–14.7
Excluding selected high-technology industries	. . .	3.0	2.7	.4	.7	–9.5	–.1	.1	.3	–.1	–.4
Motor vehicles and parts	3361-3	–1.8	.1	–6.2	–1.9	–23.3	–.4	.5	–.3	.4	–.5
Motor vehicles	3361	–3.4	–1.4	–7.6	–1.9	–30.3	–.7	.9	–.6	.8	–.8
Motor vehicle parts	3363	–1.0	–.6	–4.3	.3	–14.8	–.2	.0	.0	–.3	–.3
Excluding motor vehicles and parts	. . .	3.5	3.0	.9	.9	–8.5	.0	.0	.4	–.1	–.4
Consumer goods	. . .	2.1	3.2	.8	–1.1	–4.2	–.2	.1	–.2	–1.4	–.1
Business equipment	. . .	5.1	6.6	6.2	2.3	–8.8	–.1	–.7	.4	–.5	.0
Construction supplies	. . .	1.9	7.4	–3.4	–1.0	–11.8	.2	–.2	.3	.9	–.3
Business supplies	. . .	1.9	2.7	–.6	.4	–9.8	–.3	.3	1.1	.5	–.9
Materials	. . .	5.3	.5	1.4	2.4	–11.2	.3	–.1	.7	.6	–.5
Measures excluding selected high-technology industries											
Total industry	. . .	2.7	1.6	1.2	1.1	–6.7	–.1	.0	.3	–.1	–.3
Manufacturing[3]	. . .	3.2	2.5	.4	.9	–8.9	–.1	.1	.3	–.2	–.4
Durable	. . .	3.1	4.8	–.4	1.4	–11.7	–.1	.1	.1	–.2	.0
Measures excluding motor vehicles and parts											
Total industry	. . .	3.4	2.8	2.3	2.0	–5.9	–.1	.0	.1	–.4	–.6
Manufacturing[3]	. . .	4.1	4.0	1.8	2.1	–7.8	–.1	.0	.1	–.5	–.8
Durable	. . .	4.9	8.1	2.5	4.0	–9.3	–.1	.0	–.4	–.8	–.8
Measures excluding selected high-technology industries and motor vehicles and parts											
Total industry	. . .	3.1	1.7	1.7	1.2	–5.8	.0	.0	.3	–.2	–.3
Manufacturing[3]	. . .	3.7	2.7	1.0	1.1	–7.8	.0	.0	.3	–.2	–.4
Measures of non-energy materials inputs											
Finished processors	. . .	5.6	6.2	1.7	4.0	–11.1	–.4	.7	–1.1	–1.2	–2.2
Primary and semifinished processors	. . .	5.3	–.2	1.3	3.2	–12.5	.4	–.3	1.0	.9	–.8
Stage-of-process groups											
Crude	. . .	2.6	–6.5	7.6	1.2	–4.6	.0	.0	.3	–.5	–.4
Primary and semifinished	. . .	3.5	3.5	–.8	2.5	–8.0	–.2	.2	.2	–.1	–1.0
Finished	. . .	2.5	5.2	3.3	1.1	–5.8	.1	–.2	–.1	–.6	–.1

1. Rates of change are calculated as the percent change in the seasonally adjusted index from the fourth quarter of the previous year to the fourth quarter of the year specified in the column heading.

2. North American Industry Classification System.

3. See table A.3, note 3.

. . . Not applicable.

A.5. Rates of change for annual industrial production indexes, 2004–08[1]

Item	Revised rate of change (percent)					Difference between rates of change: revised minus previous (percentage points)				
	2004	2005	2006	2007	2008	2004	2005	2006	2007	2008
Total industry	**2.5**	**3.3**	**2.3**	**1.5**	**–2.2**	**.0**	**.0**	**.1**	**–.2**	**–.5**
Market Groups										
Consumer goods	1.2	2.7	.4	1.0	–2.7	–.1	–.1	.1	–.7	–.5
Durable	1.4	.5	–1.0	.4	–9.9	.3	.0	.3	.7	–.2
Nondurable	1.2	3.4	.9	1.1	–.5	–.2	–.1	.1	–1.2	–.5
Business equipment	5.3	7.0	9.4	2.7	–1.1	.1	–.3	–1.0	–.7	.1
Defense and space equipment	–1.8	10.6	–2.1	3.7	2.5	–1.0	.0	1.2	.0	1.0
Construction supplies	2.3	4.5	2.3	–1.9	–6.3	.1	.0	.0	.6	–.1
Business supplies	2.1	3.3	1.2	1.3	–2.9	–.1	–.1	.6	.7	–.7
Materials	3.1	2.4	2.4	2.0	–1.9	.1	.1	.1	.1	–.5
Non-energy	4.5	4.0	2.7	2.1	–3.7	.2	.1	.2	.0	–.8
Energy	–.4	–1.2	1.7	1.8	1.8	.0	.0	.0	.2	.2
Industry Groups										
Manufacturing[2]	3.0	4.0	2.5	1.4	–3.2	.0	–.1	.1	–.3	–.6
Manufacturing (NAICS)	3.1	4.2	2.7	1.5	–3.1	.0	.0	–.1	–.3	–.6
Durable manufacturing	4.1	5.5	4.4	2.1	–3.3	.1	.0	–.2	–.6	–.7
Nondurable manufacturing	1.9	2.8	.8	1.0	–2.9	.0	.0	.0	.0	–.5
Other manufacturing (non-NAICS)	.8	–.3	–1.0	–1.3	–5.7	.0	–1.0	3.3	.1	.1
Mining	–.6	–1.3	3.3	.6	2.1	.0	.0	.2	.5	.3
Utilities	1.4	2.1	–.6	3.4	.3	.0	.0	.0	.1	–.2

1. The rates of change are calculated from annual averages of seasonally adjusted industrial production indexes rather than between the fourth quarter of one year and the fourth quarter of the next.

2. See table A.3, note 3.

A.6. Rates of change in capacity, by industry groups, 2005–09[1]

Item	Revised rate of change (percent)					Difference between rates of change: revised minus previous (percentage points)				
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Total industry	**.8**	**1.5**	**2.0**	**1.1**	**–.9**	**.0**	**.2**	**.2**	**–.4**	**–.6**
Manufacturing[2]	1.3	1.4	2.2	1.3	–1.2	–.1	.1	.3	–.5	–.6
Manufacturing (NAICS)	1.4	1.4	2.3	1.3	–1.2	–.1	.1	.3	–.5	–.6
Durable manufacturing	2.4	2.0	3.7	2.0	–.6	–.2	–.4	.4	–1.0	–.2
Nondurable manufacturing	.5	.8	1.0	.8	–1.7	.1	.5	.2	.1	–1.0
Other manufacturing (non-NAICS)	–.2	1.1	.6	.9	–.9	.0	.0	.0	.7	.1
Mining	–1.1	2.3	1.4	1.1	–.7	.0	1.0	–.4	.4	–1.5
Utilities	1.5	1.3	1.3	2.3	1.8	8	.5	.0	.1	.1
Selected high-technology industries	11.9	5.7	22.9	6.3	8.4	–1.2	–4.7	1.5	–11.2	1.2
Manufacturing except selected high-technology industries[2]	.6	1.1	1.0	1.0	–1.6	.0	.3	.3	.2	–.7
Stage-of-process groups										
Crude	–.9	1.5	1.4	1.2	–1.2	–.1	.6	.0	.7	–1.4
Primary and semifinished	1.0	1.3	2.0	.8	–1.0	.2	.1	–.1	–1.1	–.5
Finished	1.9	1.8	2.4	2.2	–.6	–.3	.1	7	.4	–.5

1. Rates of change are calculated as the percent change in the seasonally adjusted index from the fourth quarter of the previous year to the fourth quarter of the year specified in the column heading.

2. See table A.3, note 3.

A.7. Capacity utilization rates, by industry groups, 2005–08

Item	NAICS code[1]	Revised rate (percent of capacity, seasonally adjusted)					Difference between rates of change: revised minus previous (percentage points)			
		2008 avg.	2005:Q4	2006:Q4	2007:Q4	2008:Q4	2005:Q4	2006:Q4	2007:Q4	2008:Q4
Total industry	...	**80.9**	**80.4**	**80.6**	**80.4**	**74.2**	**.0**	**–.1**	**–.5**	**–.7**
Manufacturing[2]	...	79.6	79.2	79.0	78.7	70.9	.0	.0	–.6	–.8
Manufacturing (NAICS)	31-33	79.4	78.9	78.8	78.6	70.9	.0	–.1	–.6	–.9
Durable manufacturing	...	77.8	77.9	77.3	77.0	67.1	.0	.0	–.8	–.7
Wood products	321	79.2	89.2	75.2	68.6	54.8	–.7	–.7	–1.5	–1.5
Nonmetallic mineral products	327	77.7	78.1	72.6	70.5	63.0	–5.3	–6.3	–7.5	–5.9
Primary metal	331	80.5	83.3	80.4	84.1	61.4	–.6	–.4	.3	–1.5
Fabricated metal products	332	77.5	77.6	79.5	80.5	74.1	–.4	–.4	–.8	–.7
Machinery	333	78.6	79.8	81.8	79.8	70.3	1.3	2.4	2.6	1.5
Computer and electronic products	334	78.3	75.3	78.4	75.4	69.4	.6	.4	–2.5	–.6
Electrical equip., appliances, and components	335	83.2	83.1	82.2	82.8	78.4	–.1	.2	–.6	.7
Motor vehicles and parts	3361-3	76.7	76.4	70.3	70.2	53.6	–1.9	–2.0	–2.1	–2.2
Aerospace and miscellaneous transportation equipment	3364-9	73.2	73.2	77.3	84.2	72.0	3.2	4.5	3.9	2.9
Furniture and related products	337	78.4	79.8	79.0	77.6	65.1	.8	1.5	1.0	2.1
Miscellaneous	339	76.5	77.0	76.3	74.4	69.4	.2	–.2	–.4	–2.4
Nondurable manufacturing	...	81.5	80.1	80.6	80.5	74.8	.1	–.2	–.5	–1.2
Food, beverage, and tobacco products	311,2	81.5	80.3	79.4	79.7	77.1	–.5	–.9	–1.4	–1.9
Textile and product mills	313,4	81.6	78.5	73.1	71.3	64.7	–1.2	.6	2.5	2.6
Apparel and leather	315,6	79.5	75.2	76.8	77.7	72.2	5.7	4.9	4.7	2.4
Paper	322	87.6	84.4	84.2	82.6	74.4	.4	–.1	.0	.5
Printing and support	323	83.4	78.3	79.7	78.4	72.7	.6	1.1	1.9	3.5
Petroleum and coal products	324	86.1	88.4	88.8	87.1	85.7	1.1	–.1	–1.7	–3.7
Chemical	325	78.2	75.7	79.0	78.5	70.0	.2	–.1	–.5	–1.3
Plastics and rubber products	326	83.6	85.2	81.9	84.1	72.7	–.7	–.4	–.5	–1.5
Other manufacturing (non-NAICS)	1133, 5111	84.2	84.1	82.2	80.2	72.5	–1.2	1.5	1.1	.5
Mining	21	87.6	85.4	90.8	89.8	89.6	–.1	–.5	–.1	–.2
Utilities	2211,2	86.8	85.3	83.7	85.2	83.6	–.4	–.7	–.7	–.6
Selected high-technology industries	...	78.2	77.4	82.8	79.6	69.8	2.2	2.9	–.9	1.5
Computers and peripheral equipment	3341	78.1	74.3	79.5	81.6	74.1	.0	2.0	3.0	13.7
Communications equipment	3342	76.2	67.5	82.3	77.3	74.3	5.7	8.9	–3.6	–5.3
Semiconductors and related electronic components	334412-9	80.6	84.6	84.9	80.0	64.5	.4	–.3	–1.3	–.9
Measures excluding selected high-technology industries										
Total industry	...	81.0	80.5	80.5	80.5	74.4	–.2	–.3	–.5	–.8
Manufacturing[2]	...	79.7	79.3	78.8	78.7	71.0	–.2	–.2	–.5	–1.0
Stage-of-process groups										
Crude	...	86.6	83.1	88.7	88.3	83.8	–.2	–.4	–.8	–1.7
Primary and semifinished	...	82.0	82.6	80.7	80.7	73.4	–.7	–.7	–.6	–.6
Finished	...	77.7	76.6	77.6	77.2	71.0	.7	.6	–.4	–.7

1. North American Industry Classification System.
2. See table A.3, note 3.

. . . Not applicable.

A.8. Annual proportion in industrial production, by market groups and industry groups, 2000–08

Item	NAICS code[1]	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total industry	...	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
MARKET GROUPS										
Final products and nonindustrial supplies	...	57.5	59.0	58.9	58.2	57.0	56.9	56.8	56.2	57.0
Consumer goods	...	28.4	30.0	31.0	31.0	30.2	29.8	29.3	29.2	29.5
Durable	...	7.9	8.1	8.9	8.7	8.0	7.4	7.1	6.8	6.3
Automotive products	...	3.7	4.0	4.7	4.6	4.0	3.6	3.3	3.2	2.9
Home electronics	...	.4	.4	.4	.4	.4	.4	.4	.3	.3
Appliances, furniture, carpeting	...	1.4	1.4	1.4	1.3	1.3	1.3	1.2	1.1	1.0
Miscellaneous goods	...	2.4	2.3	2.4	2.3	2.3	2.2	2.2	2.1	2.1
Nondurable	...	20.5	21.8	22.1	22.2	22.2	22.4	22.2	22.4	23.2
Non-energy	...	16.8	18.0	18.2	18.0	17.3	16.7	16.4	16.2	17.1
Foods and tobacco	...	9.2	9.8	9.6	9.6	9.3	8.9	8.7	8.8	9.4
Clothing	...	1.2	1.1	.8	.7	.6	.5	.4	.4	.4
Chemical products	...	4.0	4.6	5.2	5.2	5.1	5.0	5.1	4.8	5.1
Paper products	...	2.0	2.1	2.1	2.0	1.9	1.8	1.7	1.7	1.7
Energy	...	3.7	3.8	3.9	4.2	4.9	5.7	5.8	6.2	6.1
Business equipment	...	11.6	11.2	10.2	9.6	9.4	9.3	9.6	9.3	9.5
Transit	...	1.9	2.0	1.8	1.6	1.6	1.6	1.8	1.6	1.5
Information processing	...	4.1	3.9	3.2	3.0	3.0	2.8	2.9	2.8	2.9
Industrial and other	...	5.5	5.3	5.2	5.0	4.9	4.8	5.0	4.9	5.0
Defense and space equipment	...	1.4	1.6	1.6	1.6	1.5	1.6	1.5	1.5	1.7
Construction supplies	...	4.6	4.8	4.9	4.9	4.8	4.9	5.0	4.9	4.9
Business supplies	...	11.0	11.0	10.8	10.8	10.6	10.6	10.5	10.5	10.7
Materials	...	42.5	41.0	41.1	41.8	43.0	43.1	43.2	43.8	43.0
Non-energy	...	31.9	30.3	30.1	29.6	29.7	29.3	29.3	29.2	29.0
Durable	...	20.6	19.2	18.7	18.3	18.2	17.8	17.7	17.2	16.8
Consumer parts	...	4.1	3.8	4.0	3.8	3.6	3.3	3.2	2.9	2.7
Equipment parts	...	8.0	7.2	6.5	6.4	6.3	6.2	6.0	5.8	5.9
Other	...	8.4	8.2	8.1	8.1	8.3	8.3	8.5	8.4	8.2
Nondurable	...	11.3	11.1	11.4	11.3	11.4	11.5	11.6	12.0	12.2
Textile	...	.9	.8	.8	.7	.7	.7	.6	.5	.5
Paper	...	2.9	2.8	2.8	2.5	2.4	2.3	2.3	2.3	2.3
Chemical	...	4.3	4.1	4.4	4.5	5.1	5.3	5.5	5.9	5.9
Energy	...	10.6	10.7	11.0	12.2	13.3	13.8	13.8	14.6	14.0
INDUSTRY GROUPS										
Manufacturing[2]	...	84.0	83.5	83.2	81.7	80.5	79.5	79.3	78.6	79.0
Manufacturing (NAICS)	31-33	79.2	78.6	78.5	77.2	76.2	75.5	75.4	74.8	75.3
Durable manufacturing	...	45.3	44.0	43.2	42.0	40.7	39.7	39.6	38.4	38.1
Wood products	321	1.4	1.4	1.5	1.6	1.6	1.5	1.4	1.2	1.0
Nonmetallic mineral products	327	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2
Primary metal	331	2.5	2.3	2.3	2.3	2.7	2.6	2.8	2.7	2.5
Fabricated metal products	332	6.0	5.8	5.7	5.5	5.3	5.3	5.5	5.6	5.9
Machinery	334	5.9	5.5	5.3	5.0	4.9	4.9	5.0	4.9	4.9
Computer and electronic products	334	10.5	9.3	8.1	7.9	7.8	7.4	7.2	6.7	6.9
Electrical equipment, appliances, and components	335	2.5	2.4	2.2	2.0	1.9	1.9	1.9	1.9	2.0
Motor vehicles and parts	3361-3	6.6	6.5	7.4	7.2	6.4	5.9	5.5	5.1	4.5
Aerospace and miscellaneous transportation equipment	3364-9	3.2	3.7	3.5	3.3	3.1	3.2	3.2	3.4	3.5
Furniture and related products	337	1.7	1.7	1.8	1.7	1.6	1.6	1.5	1.4	1.3
Miscellaneous	339	2.9	3.1	3.3	3.3	3.1	3.1	3.1	3.1	3.3
Nondurable manufacturing	...	33.9	34.6	35.3	35.2	35.5	35.8	35.7	36.5	37.2
Food, beverage, and tobacco products	311,2	10.6	11.3	11.3	11.4	10.9	10.6	10.4	10.7	11.5
Textile and product mills	313,4	1.4	1.3	1.4	1.3	1.2	1.2	1.1	.9	.9
Apparel and leather	315,6	1.3	1.2	1.0	.9	.7	.6	.6	.6	.6
Paper	322	3.1	3.1	3.1	2.9	2.7	2.6	2.6	2.5	2.6
Printing and support	323	2.6	2.6	2.4	2.2	2.1	2.0	1.9	1.9	1.8
Petroleum and coal products	324	1.8	1.7	1.8	2.1	3.2	4.2	4.5	5.0	4.7
Chemical	325	9.3	9.7	10.7	10.8	11.2	11.3	11.4	11.7	12.1
Plastics and rubber products	326	3.7	3.7	3.8	3.6	3.4	3.3	3.2	3.1	3.1
Other manufacturing (non-NAICS)	325	4.8	4.8	4.7	4.5	4.3	4.1	4.0	3.8	3.7
Mining	21	7.1	7.1	7.2	8.5	9.8	10.7	11.0	11.7	10.6
Utilities	2211	8.9	9.4	9.6	9.8	9.7	9.8	9.7	9.7	10.4
Electric	2212	7.6	8.0	8.2	8.2	8.0	8.0	8.1	8.0	8.7
Natural gas	2211	1.4	1.4	1.4	1.6	1.7	1.8	1.6	1.7	1.8

NOTE: The IP proportion data are estimates of the industries' relative contributions to the overall IP change between the reference year and the following year. For example, a 1 percent increase in durable goods manufacturing between 2008 and 2009 would account for a .381 percent increase in total IP.

1. North American Industry Classification System.
2. See table A.3, note 3.
. . . Not applicable.

A.9. Annual production and price indexes for selected communications equipment, 1998–2008

Year	Index, 2002=100											
	Data networking		Enterprise and home voice		Transmission and related[1]		Wireless system		Satellites and earth station		Other	
	Production	Prices	Production	Prices	Production	Prices	Production	Prices	Production	Prices	Production	Prices
1998	n.a	234.4	n.a	170.6	118.2	189.3	n.a	164.8	78.0	160.9	83.6	108.4
1999	n.a	194.4	n.a	154.3	155.7	169.6	n.a	143.7	70.0	143.2	86.4	106.3
2000	n.a	174.1	n.a	145.3	228.7	149.3	n.a	129.0	94.6	129.9	111.5	100.4
2001	123.3	133.2	n.a	123.1	202.6	116.5	n.a	114.6	82.9	131.1	95.9	100.9
2002	100.0	100.0	100.0	108.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2003	112.9	76.6	86.6	100.0	81.0	90.5	123.9	83.7	117.2	90.3	97.3	98.6
2004	124.2	59.9	74.0	91.0	77.3	83.2	161.8	73.2	175.0	72.4	89.5	99.4
2005	160.5	54.3	67.1	82.4	62.2	77.4	159.3	71.7	188.6	75.6	70.6	100.4
2006	254.1	51.4	64.0	79.8	69.8	66.5	148.3	67.7	260.2	69.2	66.8	99.8
2007	276.1	50.2	69.3	77.5	91.1	61.1	115.5	62.9	286.2	66.1	66.5	99.8
2008	282.6	n.a	61.9	n.a	91.8	n.a	146.2	n.a	365.5	n.a	73.2	n.a

NOTE: The complete set of annual prices necessary to compute the annual price indexes for 2008 are not available. The estimates for the quarterly price indexes for 2008 (shown in table A.10) are based on only incomplete data.

1. Category consists of transmission, local loop, and legacy central office equipment.

n.a. Not available.

A.10. Quarterly production and price indexes for selected communications equipment, 1998:Q1–2008:Q4

Year and quarter	Index, 2002=100							
	Data networking		Enterprise and home voice		Transmission and related[1]		Wireless system	
	Production	Prices	Production	Prices[2]	Production	Prices	Production	Prices
1998:Q1	n.a	n.a	n.a	n.a	96.9	118.6	n.a	n.a
Q2	n.a	n.a	n.a	n.a	115.2	118.7	n.a	n.a
Q3	n.a	n.a	n.a	n.a	124.8	117.1	n.a	n.a
Q4	n.a	n.a	n.a	n.a	135.2	117.6	n.a	n.a
1999:Q1	n.a	n.a	n.a	n.a	123.9	120.2	n.a	n.a
Q2	n.a	n.a	n.a	n.a	143.5	127.2	n.a	n.a
Q3	n.a	n.a	n.a	n.a	166.8	129.2	n.a	n.a
Q4	n.a	n.a	n.a	n.a	187.8	128.0	n.a	n.a
2000:Q1	n.a	n.a	n.a	n.a	213.0	134.0	n.a	121.9
Q2	n.a	n.a	n.a	n.a	235.9	138.0	n.a	122.6
Q3	n.a	n.a	n.a	n.a	228.2	140.0	n.a	123.7
Q4	n.a	n.a	n.a	n.a	237.4	135.6	n.a	124.7
2001:Q1	150.9	148.0	n.a	n.a	250.0	115.2	n.a	124.4
Q2	126.2	137.1	n.a	n.a	210.6	112.7	n.a	122.4
Q3	109.6	127.4	n.a	n.a	206.2	109.5	n.a	114.7
Q4	107.3	126.9	n.a	n.a	144.7	106.0	n.a	110.7
2002:Q1	105.0	110.7	116.9	n.a	131.8	102.3	98.0	109.2
Q2	99.3	107.3	102.2	n.a	105.2	102.2	99.7	106.3
Q3	98.3	91.6	91.4	n.a	88.1	98.0	99.3	93.9
Q4	97.5	90.6	90.0	n.a	75.6	97.6	103.0	90.9
2003:Q1	97.7	87.9	91.5	104.3	80.9	94.7	103.3	87.4
Q2	109.8	80.8	87.0	100.7	81.9	91.1	106.4	83.8
Q3	119.4	70.7	92.2	97.9	79.1	89.2	131.8	69.2
Q4	124.4	63.0	75.9	97.2	82.0	91.6	153.6	65.7
2004:Q1	139.8	60.5	79.1	97.2	82.2	92.1	163.9	65.8
Q2	118.9	59.6	77.5	95.4	80.7	89.6	160.4	68.6
Q3	122.8	58.2	70.7	90.9	72.4	88.1	161.2	68.5
Q4	115.6	56.4	68.7	89.4	73.9	88.5	161.9	74.1
2005:Q1	128.7	54.0	65.5	86.4	69.0	85.2	158.6	77.1
Q2	146.9	53.5	65.8	86.4	64.7	79.3	163.1	74.8
Q3	162.6	52.9	69.2	82.6	58.7	79.2	160.3	70.2
Q4	203.1	51.9	67.9	81.5	56.6	76.4	155.4	66.3
2006:Q1	220.4	51.9	64.3	81.5	61.2	75.8	159.2	64.4
Q2	245.4	50.6	64.8	80.5	69.1	74.2	160.5	65.2
Q3	269.5	49.5	61.7	79.8	74.2	75.2	154.5	68.3
Q4	280.3	48.7	65.4	79.2	74.5	73.4	119.5	71.1
2007:Q1	276.9	49.0	69.1	79.1	84.6	71.1	113.0	71.0
Q2	271.9	50.0	69.7	77.5	89.9	69.0	103.9	68.4
Q3	276.6	49.2	71.3	76.8	93.0	67.2	115.2	58.0
Q4	279.0	47.9	66.9	75.8	96.9	65.6	129.6	48.2
2008:Q1	287.5	49.3	65.3	76.7	96.1	65.2	139.6	48.7
Q2	295.5	48.1	62.7	76.0	96.7	62.5	158.6	48.3
Q3	279.6	48.6	64.3	73.6	87.9	60.0	144.5	47.7
Q4	268.1	47.5	55.2	73.1	86.7	57.0	142.3	46.9

NOTE: Quarterly production and price indexes are not available for two categories of communication equipment shown in table A.9: "satellites and earth station" and "other."

1. Category consists of transmission, local loop, and legacy central office equipment.

2. Index, 2003=100.

n.a. Not available.

A.11. Quarterly price indexes for selected semiconductors, 1998:Q1–2008:Q4

Year and quarter	Index, 2002=100		
	Dynamic random access memory	Flash memory	Other memory[1]
	Prices	Prices	Prices
1998:Q1	956.2	367.2	514.6
Q2	689.7	340.0	478.0
Q3	530.0	286.0	439.5
Q4	572.6	280.3	421.9
1999:Q1	640.0	234.5	439.6
Q2	520.3	229.9	471.3
Q3	493.0	285.7	469.9
Q4	663.0	321.3	465.7
2000:Q1	516.1	314.1	396.6
Q2	482.6	327.9	410.7
Q3	513.8	317.5	409.3
Q4	319.6	300.5	385.9
2001:Q1	206.1	232.8	275.1
Q2	125.6	202.9	231.3
Q3	72.6	164.6	188.3
Q4	59.8	136.4	155.5
2002:Q1	125.2	109.7	114.9
Q2	101.2	103.7	103.8
Q3	85.4	96.3	94.7
Q4	88.8	90.5	86.9
2003:Q1	63.9	84.2	91.7
Q2	56.8	74.1	85.2
Q3	67.5	69.3	79.4
Q4	64.1	66.5	77.3
2004:Q1	62.1	61.5	74.7
Q2	65.9	58.4	69.0
Q3	62.2	45.4	73.8
Q4	53.4	35.9	68.8
2005:Q1	43.5	31.8	63.0
Q2	32.9	29.0	61.3
Q3	32.3	26.2	58.7
Q4	29.1	24.3	59.5
2006:Q1	28.7	19.6	66.4
Q2	28.9	16.9	63.7
Q3	30.5	14.6	61.6
Q4	33.5	14.0	59.1
2007:Q1	25.6	10.8	60.2
Q2	15.2	10.8	59.1
Q3	13.6	12.5	50.2
Q4	9.1	10.3	42.1
2008:Q1	6.9	7.3	52.1
Q2	7.9	6.6	50.9
Q3	6.6	4.8	50.8
Q4	4.6	4.0	46.1

1. Other memory comprises all types of memory except flash memory and dynamic random access memory; static random access memory is its largest component.

November 2009

The Financial Crisis and U.S. Cross-Border Financial Flows

Carol C. Bertaut and Laurie Pounder, of the Board's Division of International Finance, prepared this article. James Coonan provided research assistance.

This article examines the effects of the recent financial crisis, which began in August 2007, on U.S. financial flows. Cross-border financial flows are of interest for several reasons, including the information they provide about changes in a country's indebtedness, foreign investor attitudes toward domestic assets, and the current account balance. Cross-border financial flows are the counterparts to transactions recorded in the current account, the broadest measure of a country's transactions with the rest of the world. When a country runs a deficit in the current account—as has been the case for the United States since the early 1990s—this imbalance implies that foreign investors must, on net, be acquiring the country's assets. In essence, the United States has been borrowing from the rest of the world to finance the excess of imports over exports.[1] Foreigners' willingness to continue investing in the United States, and the nature of those investments, determines the price that the United States must pay to continue running current account deficits.

U.S. financial inflows typically occur through foreign purchases of U.S. securities, net lending to U.S. banks and other firms, and foreign direct investment in the United States. During the financial crisis, however, the composition of inflows changed dramatically, and some inflows came from unusual sources.

In this article, we focus on cross-border flows in securities—both foreign purchases of U.S. securities and U.S. purchases of foreign securities—as well as on cross-border bank flows to characterize the effect of the crisis on net inflows. In addition to flows, we analyze the (related) influence of the crisis on gross cross-border securities, banking, and nonbank positions.[2] These positions are primary components of the net international investment position of the United States, which measures the country's international financial indebtedness. We identify three major channels through which cross-border flows and positions were affected by the crisis:

1. "flight to safety" shifts in portfolio composition away from riskier securities and toward investments in safe and liquid markets, particularly U.S. Treasury securities[3]
2. unusual flows through the banking system resulting from a shortage of dollar liquidity abroad and the breakdown in interbank markets
3. a pullback from cross-border positions during the financial crisis, reflecting a general increase in risk aversion. We find that although both U.S. and foreign investors did reduce their holdings of cross-border securities and foreign deposits, the adjustments in cross-border portfolio holdings were relatively minor compared with the substantial valuation losses that investors faced. We find somewhat more evidence of such a pullback in banks' own cross-border positions.

These channels, of course, interact in their effects on financial flows and portfolio positions. Flight-to-safety concerns over foreign exposure can result in reduced cross-border positions, and risk aversion can intensify funding pressures.

The first section of the article addresses the flight-to-safety flows of private investors out of risky securities and toward U.S. Treasury securities, as well as the shift by official investors to an even heavier concentration of their purchases in U.S. Treasury securities. This section also discusses the unusual flows resulting from the flight of U.S. investors out of foreign securities. Before the crisis, financial inflows from foreign investors were typically partially offset by outflows from U.S. purchases of foreign securities. During the crisis, these flows reversed.

1. Alternatively, one could argue that the desire of the rest of the world to invest in the United States causes an imbalance that drives the U.S. current account to be in deficit.

2. We discuss only certain positions of nonbank firms. In particular, we exclude direct investment positions.

3. For the purposes of this article, "Treasury securities" refers to U.S. Treasury securities.

The second section of the article describes the unusual net lending flows from the United States to Europe—through interbank markets and through liquidity swap lines with the Federal Reserve—in response to a shortage of dollar liquidity abroad. This section breaks the crisis into three distinct phases. During the first phase, covering the first year of the crisis, the majority of banking offices directed lending to the home region of the parent bank. The second phase, the most intense period of the crisis, can be characterized by a breakdown of interbank markets and cross-border borrowing of foreign central banks from the Federal Reserve. Finally, the third phase is the slow recovery of interbank markets in 2009. The analysis disaggregates total net lending by nationality of the parent bank and aggregates individual bank-level data by banks' lending behavior.

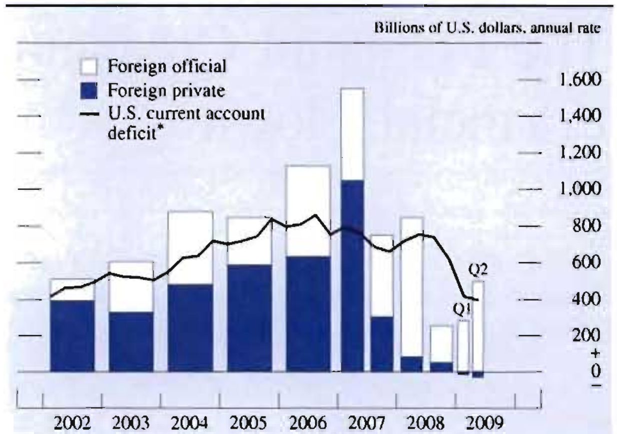
While the first two sections discuss net flows for specific sectors of the financial account, the third section documents declines in gross cross-border positions and a slowdown in cross-border trading during the crisis across most instrument types associated with the financial account (including securities, interbank lending, borrowing and lending by nonbank firms, and trade credit). This section shows that the retreat from securities positions during the crisis has been minor, but that banking and other positions have experienced more-significant drops.

The final section concludes, adding a discussion of other countries' experiences of flight to safety and declining cross-border positions during the crisis. The article also includes two boxes. The first box provides background on the data collected by the Treasury International Capital (TIC) reporting system and on the challenges that the crisis presented to the measurement of financial transactions and cross-border portfolio positions (see box "The Treasury International Capital Data Reporting System"). For example, bankruptcy filings, takeovers, and the transition of some financial firms to bank holding company status generated changes that made it difficult to assess whether financial flows were being correctly reported. The second box, "Difficulties in Assessing Market Values of Securities during the Financial Turmoil," discusses the problems inherent in determining the market values of some cross-border securities positions when trading becomes extremely thin.

Flight-to-Safety Shifts in Portfolios during the Crisis

In recent years before the crisis, most of the inflows to the United States occurred through foreign acquisitions of U.S. securities. These foreign acquisitions,

1. Foreign net purchases of U.S. securities, by type of purchaser, and U.S. current account deficit, 2002-09



NOTE: For stacked bars, a positive value indicates net purchases of securities, and a negative value indicates net sales of securities.

* For illustrative purposes, the U.S. current account deficit is shown as a positive value.

SOURCE: For foreign official and foreign private, and in subsequent figures except as noted, staff estimates from data collected through the Treasury International Capital reporting system; for U.S. current account deficit, Bureau of Economic Analysis.

representing net purchases both by foreign private investors and by foreign official investors, typically amounted to more than the current account deficit (figure 1). Foreign private investors include foreign banks, non-government-operated investment funds, and foreign corporations, as well as individual investors. Foreign official investors are primarily foreign central banks and finance ministries but also include investment funds operated by central governments (so-called sovereign wealth funds). During the crisis, both types of investors exhibited flight to safety in their securities portfolios, with the result that total foreign purchases of U.S. securities fell below the current account deficit. This section discusses that flight to safety and the unusual flows resulting from the flight of U.S. investors out of foreign securities, which made up, in part, for the gap between the current account deficit and foreign purchases of U.S. securities.

Increased Purchases of U.S. Treasury Securities

As concerns rose over the risks associated with various U.S. securities that were structured around U.S. subprime loans and other forms of real estate loans and consumer credit during the summer of 2007, foreign investors began to acquire increasing amounts of U.S. Treasury securities, with corresponding movements out of other, riskier securities. We interpret these movements in cross-border portfolios

The Treasury International Capital Data Reporting System

The primary data source for U.S. cross-border financial portfolio flows and positions is the data collected by the Treasury International Capital (TIC) reporting system. The TIC system includes monthly and quarterly data collected in aggregate by country, broad instrument type, and type of foreign counterparty, as well as periodic (now annual) in-depth surveys of cross-border holdings of both long- and short-term securities.[1]

Components of the TIC System

Information on foreign purchases of U.S. long-term securities and on U.S. purchases of foreign long-term securities is collected monthly on the TIC S form. Data are collected on foreign gross purchases and gross sales by country for four types of long-term U.S. securities: U.S. Treasury debt securities, U.S. agency debt securities, U.S. debt securities issued by all other institutions (primarily corporate issuers), and U.S. equity. These data distinguish foreign official purchases of U.S. securities from purchases by other foreigners. The TIC S form also reports U.S. cross-border purchases and sales of foreign long-term debt and equity, again by country. For analytical purposes, the sales of each type of security are usually subtracted from gross purchases to measure net transactions.

The TIC B forms collect data on cross-border positions in the form of deposits, loans, brokerage balances, and repurchase agreements. Although these data are commonly referred to as the TIC banking data, they also include positions reported by other depository institutions, by bank and financial holding companies, and by securities brokers and dealers. The TIC B forms also collect selected data on cross-border holdings of short-term securities, such as short-term Treasury bills and certificates, commercial paper, and negotiable certificates of deposit. Like the TIC S data, the TIC B data are reported by country and by type of foreign counterparty.

Cross-border positions of nonbanks (including entities such as exporters and importers, industrial firms, insurance companies, and pension funds) are collected quarterly by country on the TIC C forms. These forms distinguish between "financial" claims and liabilities (such as deposits, short-term securities, and loans) and "commercial" claims and liabilities (such as accounts receivable or payable arising from import or export activities).

In addition to the monthly and quarterly data, more-comprehensive data on foreign holdings of U.S. securities and U.S. holdings of foreign securities are available from detailed annual surveys of cross-border portfolios. Because the annual survey data are collected at the individual security level, the surveys can provide considerable additional information on cross-border securities holdings, including greater detail on the types of securities held, their maturity structure, and the face and market values of the individual securities.

1. For further information on the TIC system for collecting cross-border financial data, see Carol C. Bertaut, William L. Griever, and Ralph W. Tryon (2006), "Understanding U.S. Cross-Border Securities Data," *Federal Reserve Bulletin*, vol. 92 (May), pp. A59–A75, www.federalreserve.gov/pubs/bulletin/2006/cross_border_securities.pdf.

Financial Accounts of the Bureau of Economic Analysis and Adjustments to the TIC Data

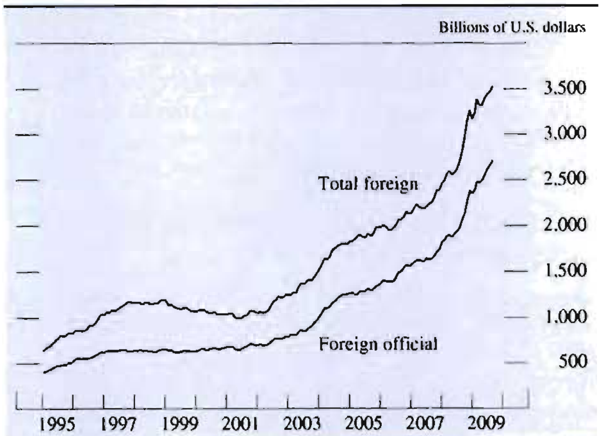
The TIC data, including both the monthly and quarterly data as well as the annual surveys, are the primary source data for many of the items in the official international financial transactions accounts compiled by the Bureau of Economic Analysis (BEA). In our analysis, we use estimates at a monthly frequency, prepared by staff members at the Federal Reserve Board, that are similar to those reported by the BEA. These flows may differ somewhat from the underlying as-reported TIC data, because the BEA and the Board's staff adjust reported flows to reconcile the information obtained from the monthly and quarterly data with that obtained in the annual surveys and other data sources. In particular, net purchases of securities attributed to foreign official investors are larger in this analysis than in the underlying TIC data because the TIC S data do not identify as foreign official acquisitions those that occur through foreign private intermediaries. Because of these additional acquisitions, when a new survey of foreign holdings of U.S. securities is conducted, foreign official holdings of U.S. securities are often revealed to be larger than would be estimated from summing official net purchases since the previous survey.

Complications from the Financial Crisis in Assessing Correct TIC Reporting

Aspects of the crisis itself have complicated the measurement of financial transactions and cross-border portfolio positions. In particular, bankruptcy filings and mergers and takeovers of major market participants generated changes in reporter panels as well as some unusual unwinding of positions that made it difficult to assess whether financial flows were being correctly reported. For example, Lehman Brothers Holdings Inc. held large cross-border positions in repurchase agreements, in which they lent securities to foreign banks in exchange for a cash loan. In order to correctly measure financial flows, it was necessary to determine the resolution of these and other such positions—that is, whether securities changed hands as a result of failure to repay, whether positions were taken over by companies acquiring subsets of Lehman's business, or whether the positions are still pending bankruptcy court outcomes.

In addition, changes in reporter classifications resulting from the creation of several bank holding companies generated new reporting responsibilities, which in turn generated inconsistent definitions of data series and further complicated the analysis of financial flows.

2. Total foreign holdings and foreign official holdings of U.S. Treasury securities, 1995-2009



as reflecting changes in investor risk aversion or flight-to-safety portfolio motives. These movements became more pronounced with the intensification of the crisis in the fall of 2008 but reversed somewhat with the stabilization of financial markets through the first half of 2009.

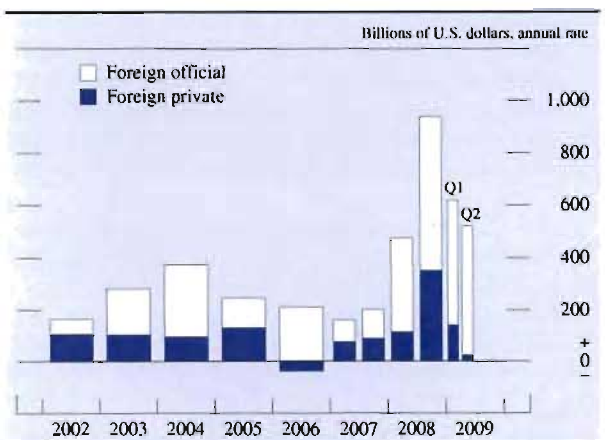
Although foreign investors historically have held a large share of U.S. Treasury securities, most of these securities are held by official investors and, in large part, reflect official reserve holdings. Official holdings of U.S. Treasury securities grew especially rapidly between 2002 and mid-2007—more than doubling from roughly $700 billion to more than $1.6 trillion—as many Asian central banks acquired large amounts of dollar reserves over this period (figure 2). U.S. Treasury securities make up a much smaller share of foreign private portfolios and typically have accounted for a much smaller fraction of foreign private investors' purchases of U.S. securities: U.S. Treasury securities accounted for only about 12 percent of foreign private investors' securities holdings in 2003 and for less than 10 percent in 2006. Although foreign private investors made large purchases of Treasury securities during months of market turbulence (for example, in August 2007 and April 2008), they did not noticeably shift their purchases into such securities until the intensification of the crisis in the fall of 2008 (figure 3, solid bars). Foreign private monthly purchases reached a record $93 billion in October 2008 and remained sizable through the first quarter of 2009.

Identifying the foreign counterparties for these recent large private purchases of Treasury securities is difficult. The TIC system that collects the underlying data for transactions in long-term securities is designed to record transactions between U.S. residents and their direct cross-border counterparties, not the ultimate investors. Thus, if an investor in France purchases a Treasury security but the transaction is booked through a London intermediary, the TIC system will report a sale of U.S. Treasury securities to the United Kingdom, not France. This example highlights the "financial center bias" in the data: Roughly one-third of all purchases and sales of U.S. long-term securities in the TIC system are recorded against the United Kingdom, with nearly as many recorded collectively against the Caribbean financial centers of the Bahamas, Bermuda, and the Cayman Islands.

Nonetheless, in both the summer of 2007 and the fall of 2008, net purchases of Treasury securities by entities in the Caribbean banking centers, especially the Cayman Islands, picked up notably. This increase in Treasury acquisitions is consistent with shifts in the portfolios of hedge funds and other investment funds located in these offshore financial centers to safer and more-liquid investments during periods of pronounced market turmoil. More recently, foreign private investors have reduced their purchases of Treasury securities, and net purchases of such securities through Caribbean financial centers have reversed to net sales. These developments may indicate increased risk tolerance and a diminution of "safe haven" flows.

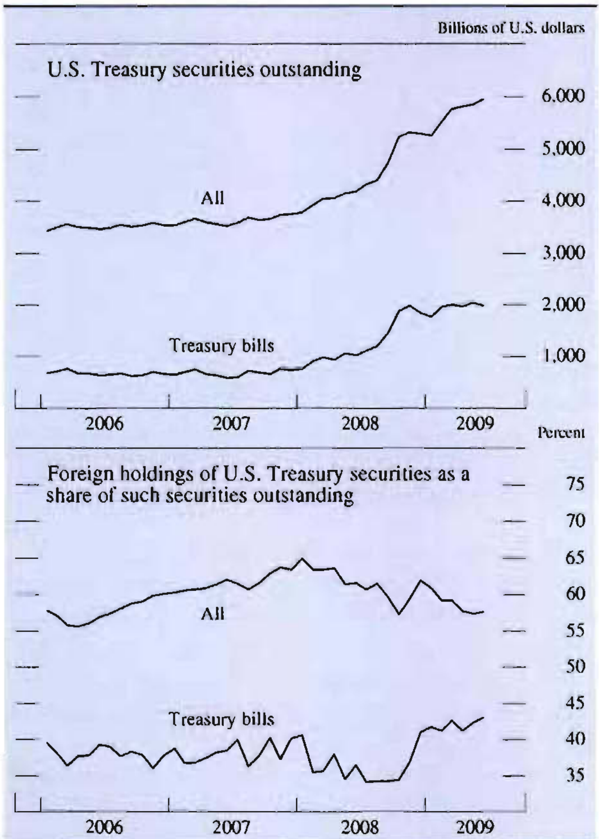
Foreign official investors also increased their purchases of Treasury securities, especially in the second half of 2008, and their acquisitions of these securities have remained high in 2009 (figure 3, white bars). Total foreign acquisitions of Treasury securities (official and private purchases combined) amounted to more than $1 trillion in the two years since summer 2007, raising estimated total foreign holdings to nearly $3.4 trillion by mid-2009. However, because the issuance of Treasury securities has been heavy

3. Foreign net purchases of U.S. Treasury securities, by type of purchaser, 2002-09



NOTE: See general note to figure 1.

4. U.S. Treasury securities outstanding, and foreign holdings of U.S. Treasury securities as a share of such securities outstanding, by type of security, 2006-09



NOTE: U.S. Treasury securities outstanding are constructed as marketable U.S. Treasury debt held by the public, excluding holdings of the Federal Reserve System Open Market Account.

SOURCE: For U.S. Treasury securities outstanding, staff estimates from U.S. Treasury, Monthly Statement of the Public Debt of the United States; and Federal Reserve Board, Statistical Release H.4.1, "Factors Affecting Reserve Balances." For foreign holdings of U.S. Treasury securities, staff estimates from data collected through the Treasury International Capital reporting system.

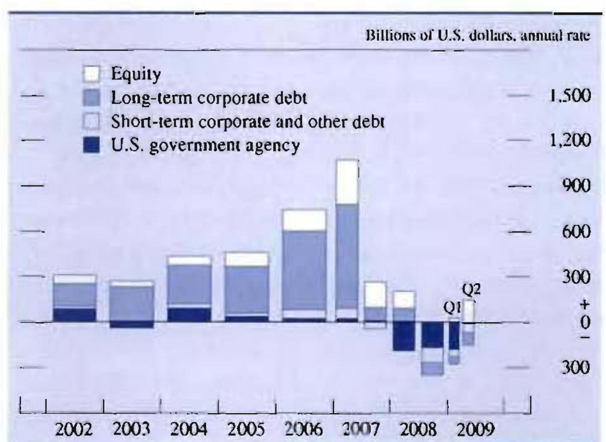
over the past two years, these record foreign acquisitions have not resulted in foreign investors acquiring a disproportionate share of U.S. Treasury securities outstanding. As of June 2009, foreign investors were estimated to hold about 58 percent of the marketable Treasury debt held by the public, a share about unchanged from June 2006 (figure 4).[4]

Foreign holdings of Treasury securities typically have been concentrated in long-term bonds and notes—that is, securities with an original maturity of more than one year. However, with the onset of the financial turmoil, a much larger fraction of both foreign official and foreign private acquisitions of Treasury securities has been Treasury bills: From June 2007 through June 2009, total foreign holdings of Treasury bills increased more than $625 billion, to more than $850 billion, accounting for about two-thirds of the total increase in foreign holdings of Treasury securities. More than one-half of these short-term Treasury securities were acquired during the turbulent market conditions last fall. In part, increased foreign holdings of short-term Treasury securities reflect changes to the issuance patterns of Treasury debt last fall: Newly issued Treasury bills accounted for much more of the increase in debt outstanding than has been typical in recent years (figure 4, top panel). Nonetheless, the share of short-term Treasury bills held by foreign investors has risen slightly over the past couple of years, from about 38 percent before the onset of the crisis to about 43 percent as of June 2009 (figure 4, bottom panel).

Sharply Reduced Purchases of Other Types of U.S. Securities

Although foreign private investors had made relatively small purchases of Treasury securities prior to the turmoil, they had made sizable acquisitions of other, riskier securities. Indeed, in 2005, 2006, and the first half of 2007, foreign private investors' acquisitions of long-term securities other than Treasury securities had accounted for the bulk of financial inflows. Their purchases, on net, of these other securities dropped to essentially zero in the first half of 2008 and reversed to sizable net sales in the second half of the year (figure 5). Foreign investors contin-

5. Foreign private net purchases of U.S. securities other than U.S. Treasury securities, by type of security, 2002-09



NOTE: Short-term corporate and other debt consists primarily of commercial paper, negotiable certificates of deposit, and bankers' acceptances. See also general note to figure 1.

4. We construct total marketable Treasury debt held by the public as the total marketable Treasury debt outstanding and held by the public as reported by the Monthly Statement of the Public Debt of the United States, minus Treasury securities held by the Federal Reserve System in the System Open Market Account.

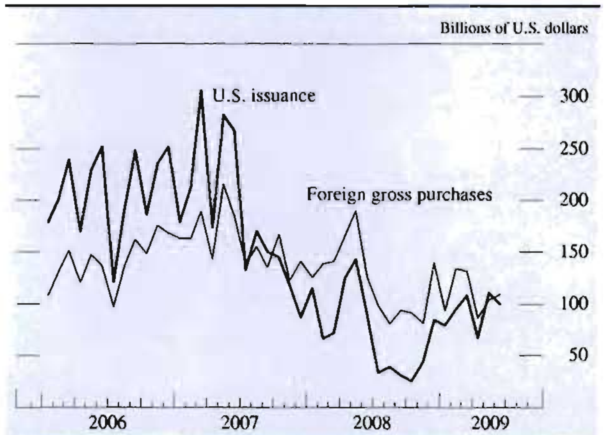
ued to sell U.S. corporate and agency debt securities in early 2009 but resumed purchasing U.S. equity, especially in the second quarter.

Much of the falloff in foreign purchases of other types of securities reflects markedly reduced purchases of U.S. corporate debt securities: After amounting to more than $500 billion of foreign inflows in 2006 and nearly $350 billion in the first six months of 2007, foreign private net purchases of U.S. corporate debt totaled less than $50 billion from summer 2007 through the end of 2008.

The reduction in U.S. corporate debt issuance since mid-2007 may have been a factor contributing to the marked slowdown in foreign net purchases of corporate debt securities over this period and especially in the fourth quarter of 2008. Foreign purchases of U.S. corporate debt partly reflect acquisitions of newly issued debt, and foreign gross purchases are correlated with U.S. corporate bond issuance (figure 6). Even as lower corporate issuance reduced foreign gross purchases of U.S. corporate debt, however, foreign sales of debt remained high because foreign gross sales of U.S. corporate debt partly reflect redemptions of maturing securities. According to the detailed survey data, roughly 8 percent of corporate debt held by foreign investors over the past two years had a remaining maturity of less than one year. With total foreign holdings of corporate debt amounting to $2.7 trillion as of June 2007 and to $2.8 trillion as of a year later, redemptions of maturing debt amount to about $225 billion in each of those years and are thus recorded in the TIC system as sales of U.S. corporate debt by foreign residents. As new issuance of U.S. corporate debt slowed sharply, especially in the second half of 2008, net sales by foreign investors may have been explained, in part, by limited acquisitions of newly issued debt that were insufficient to offset the maturing bonds in their portfolios. But at the same time, net sales by foreign investors also indicated weak foreign demand for such securities, as limited issuance of U.S. corporate debt largely reflected weak demand by investors, including foreign investors.

Much of the previous foreign demand for long-term corporate debt appears to have been for corporate asset-backed securities (ABS), including sizable acquisitions of corporate mortgage-backed securities. Although the monthly transactions data over this period do not distinguish transactions in corporate ABS from transactions in other corporate debt securities, we can use information from the detailed surveys of foreign holdings of U.S. securities to learn more about the types of securities acquired. According to the survey data, foreign investors' holdings of corporate ABS increased by more than $300 billion between June 2006 and June 2007, accounting for more than 40 percent of the total increase in holdings of corporate debt securities. At $902 billion, foreigners' holdings of corporate ABS accounted for about one-third of their holdings of corporate debt securities by the end of June 2007.[5]

6. U.S. issuance, and foreign gross purchases, of U.S. corporate debt, 2006-09



SOURCE: For U.S. issuance, staff estimates based on data from the Depository Trust & Clearing Corporation and Thomson Financial; for foreign gross purchases, staff estimates from data collected through the Treasury International Capital reporting system.

By June 2008, however, foreign investors held only $760 billion in U.S. corporate ABS, about $150 billion less than they did the year before. In large part, the notably lower foreign holdings in June 2008 reflect sizable valuation losses on these securities: Compared with the relative stability in their prices over the previous 12 months, prices of corporate ABS fell roughly 13.5 percent by mid-2008 (see box "Difficulties in Assessing Market Values of Securities during the Financial Turmoil"). The underlying survey data indicate somewhat lower aggregate holdings of these securities as well. Nonetheless, foreign investors also appear to have continued buying some U.S. corporate ABS between the two surveys. Of the $760 billion in corporate ABS held in June 2008, about $215 billion reflects securities that were not held in 2007, including roughly $105 billion in securities issued over the 12-month period. In contrast, roughly $280 billion in individual corporate ABS held in 2007 was no longer held by June 2008.

Foreign investors did not substantially change their total holdings of short-term U.S. corporate debt

5. The underlying survey data indicate that most of the increase in the value of total foreign investment in U.S. corporate ABS between June 2006 and June 2007 appears to have arisen from increased foreign holdings rather than from valuation changes: The average effective price increase in these securities during that period was only about 1½ percent.

Difficulties in Assessing Market Values of Securities during the Financial Turmoil

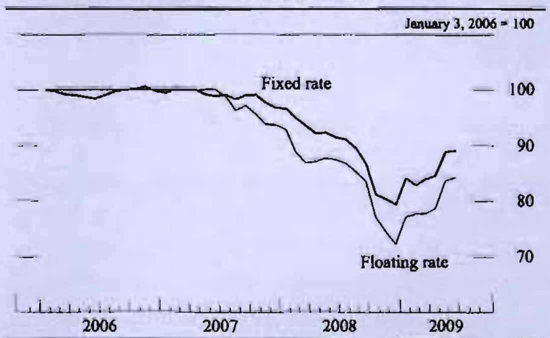
The Treasury International Capital surveys of foreign holdings of U.S. securities and U.S. holdings of foreign securities collect data both at face value (or, for equity, number of shares) and at market value as of the survey date (end of June for foreign holdings of U.S. securities and end of December for U.S. holdings of foreign securities). As part of the comprehensive process for reviewing the survey data, prices assigned to individual securities are crosschecked across survey respondents and with commercial data sources to verify the assigned market values. For securities such as Treasury securities or commonly traded U.S. equities, determining the correct price as of the survey dates is fairly straightforward: Because these securities trade in large, liquid markets, prices for the securities are readily available and easily verifiable.

If we want to understand how cross-border portfolios were affected by valuation gains or losses as the financial crisis unfolded, however, we need to be able to estimate such valuation changes for dates other than those of the surveys. This requirement is especially true for estimating valuation effects for foreign holdings of U.S. securities, because the most recent survey collected holdings in June 2008, before the intensification of the crisis in the fall of 2008. Estimating valuation gains or losses for periods beyond survey dates is a somewhat more complicated process because the composition of investor portfolios may change over the period. However, foreign holdings of most classes of U.S. securities such as U.S. Treasury securities and equities in aggregate are similar to the composition of standard price indexes of U.S. Treasury securities or of equities weighted by market capitalization. Thus, to create estimates of foreign holdings of U.S. securities for nonsurvey dates, we update the survey values of holdings with net purchases as recorded in the monthly transactions data, and we apply aggregate price indexes to these estimates to adjust for valuation gains or losses over nonsurvey intervals. Similarly, we can estimate valuation gains or losses on U.S. holdings of foreign equity and foreign debt by applying foreign equity and bond price indexes to our holdings of foreign securities.[1]

However, market conditions during the financial turmoil made the task of assessing market prices of securities that became very thinly traded extremely difficult, even on survey dates. This problem was especially true for corporate asset-backed securities (ABS), for which the difficulty was compounded by the very large number of securities involved. ABS typically are issued in different tranches. Each tranche is usually relatively small, and different risk characteristics may be associated with each tranche. As a result, many securities that superficially appear similar because they are issued by the same ABS issuer on the same date can have very different market values because of their different risk characteristics, a fact that makes crosschecking and verifying prices across reporters and with commercial data sources considerably more difficult. Furthermore, prices were more difficult to obtain for some ABS—particularly those in smaller, more risky tranches—than for others. As market functioning for ABS became impaired, tracking prices became harder, especially for these more risky tranches. And although riskier tranches tend to be smaller, they are numerous and in aggregate can account for a sizable portion of cross-border positions. For example, the June 2008 survey of foreign holdings of U.S. securities identified roughly 8,000 individual ABS with face values of more than $25 million. These 8,000 securities accounted for roughly three-fourths of the total face value of corporate ABS held by foreigners. But more than 28,000 individual ABS, each with a face value of $25 million or less, collectively accounted for the remaining one-fourth of corporate ABS held. A further complication has been that many ABS—particularly those issued in the Cayman Islands and held by U.S. investors—were privately placed, with little information on the price of the securities even at issue, let alone on the price as of the survey date.

ABS price indexes can provide some guidance on how ABS prices are likely to have moved between surveys, besides providing a means to estimate more recent valuation gains or losses. Because roughly two-thirds of U.S. corporate ABS held by foreign investors was floating-rate debt, using an average of an index of floating-rate ABS, such as the Barclays Capital U.S. Floating-Rate Asset-Backed Securities Index, and an index of fixed-rate ABS, such as the Barclays Capital U.S. Asset-Backed Securities Index, is a reasonable guide to estimating current valuation effects. By this measure, prices for U.S. corporate ABS were little changed between June 2006 and June 2007 but fell roughly 13 percent between July 2007 and June 2008; they had declined a further 18 percent by year-end 2008 (figure A). Although these price declines are sizable, they may actually understate total foreign losses on U.S. corporate ABS, as the indexes themselves capture price changes only for securities that are actively traded.

A. Change in prices of U.S. corporate asset-backed securities, by type of security, 2006-09



SOURCE: For fixed rate, staff calculations from Barclays Capital U.S. Asset-Backed Securities Index; for floating rate, staff calculations from Barclays Capital U.S. Asset-Backed Securities Floating-Rate Index.

1. For more detail on how to construct monthly estimates of securities positions accounting for net transactions and valuation changes, see Carol C. Bertaut and Ralph W. Tryon (2007). "Monthly Estimates of U.S. Cross-Border Securities Positions," International Finance Discussion Papers 910 (Washington: Board of Governors of the Federal Reserve System, November), www.federalreserve.gov/pubs/ifdp/2007/910/ifdp910.pdf.

between June 2007 and June 2008. However, as with long-term debt, the asset-backed portion of foreign holdings declined. In mid-2007, asset-backed commercial paper (ABCP) accounted for nearly 40 percent of foreign holdings of U.S. short-term corporate debt. By mid-2008, this figure had declined to about 25 percent. Starting in the third quarter of 2008, as short-term funding markets ceased normal functioning, foreign investors did decrease their overall positions in short-term U.S. corporate debt. Such positions dropped about 30 percent between June and December of 2008 and continued falling more gradually in 2009, losing another 10 percent by June 2009.

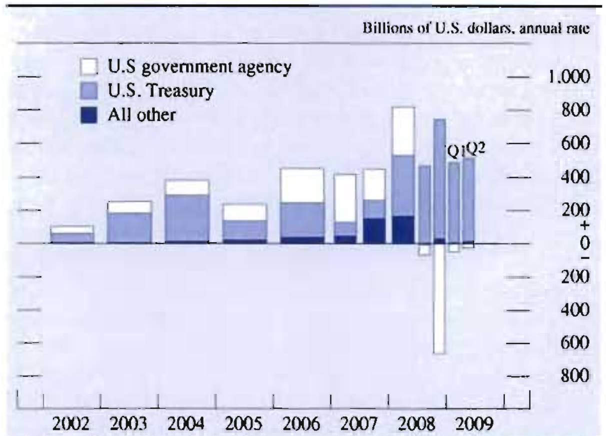
Foreign private investors also slowed their net purchases of U.S. government agency debt and equity in the second half of 2007, turning to net sales of these securities in 2008. However, the magnitude of this reversal was considerably less dramatic than the marked slowdown in net purchases of corporate debt securities. Although concerns about the financial viability of Fannie Mae and Freddie Mac gained particular market attention in the summer of 2008, foreign private investors had been net sellers of agency securities since mid-2007. Foreign private interest in agency debt does not appear to have been affected by the move in September 2008 to place Fannie Mae and Freddie Mac into conservatorship, as foreign private net sales of agency securities have continued thus far in 2009, though at a somewhat slower pace than in the previous few quarters.

Although foreign private purchases of U.S. equity did show some sizable swings during months of more pronounced market turmoil, foreign acquisitions, on net, were not affected to the same degree as were foreign purchases of corporate debt securities. Foreign purchases of equity remained sizable in the second half of 2007. And despite the sharp drop in U.S. equity prices in the fall of 2008, foreign investors made only limited net sales of U.S. stocks, though, as we discuss in the section "Marked Slowdown in Cross-Border Securities Trading" (p. A162), gross trading in U.S. equity was sharply curtailed. More recently, foreign investors have returned to purchasing U.S. equity.

Portfolio Shifts for Foreign Official Investors

Foreign official investment has typically occurred through purchases of U.S. Treasury securities, but in recent years, official investors began to acquire an increasing amount of U.S. agency securities (figure 7). For the period 2005 through summer 2007, official purchases of agency securities accounted for about one-half of all official inflows. During this period, foreign official purchases of agency securities accounted for more than two-thirds of the net issuance of agency debt.

7. Foreign official net purchases of U.S. securities, by type of security, 2002-09



NOTE: All other consists of long-term corporate debt and equity. See also general note to figure 1.

The composition of foreign official inflows was little affected by the onset of financial turmoil in mid-2007 but changed markedly with the intensification of the turmoil in the second half of 2008. As we saw with foreign private investors, official investors made large net purchases of Treasury securities and net sales of other types of securities beginning in summer 2008. However, some special factors influenced the timing and extent of the shift in the composition of official inflows.

Official net purchases of agency securities remained strong in 2007 and through the first half of 2008 but began to weaken as concerns about Fannie Mae and Freddie Mac began to surface in July 2008. Beginning in July 2008, most official investors appeared to allow maturing issues of long-term agency securities in their portfolios to be redeemed without making offsetting new purchases, resulting in a small net decline in their holdings of agency securities. From October 2008 through the end of that year, however, some official investors made sizable outright sales of their holdings of agency securities as they intervened to support their currencies. These outright sales of agency securities continued through the end of 2008 and contributed to an unusual net outflow from official investors for the quarter.

Official investors had also acquired increasing amounts of other U.S. securities, primarily U.S. corporate stocks and bonds, in 2006 and the first half of 2007. These official inflows largely reflect acquisitions by sovereign wealth funds willing to invest in somewhat riskier U.S. securities. Although inflows into such securities actually picked up in the second half of 2007 and the first half of 2008, they, too, reflect aspects of the financial turmoil: Official purchases in late 2007 and early 2008 were boosted by the well-publicized injections of capital by some sovereign wealth funds into U.S. financial institutions as the financial crisis unfolded.

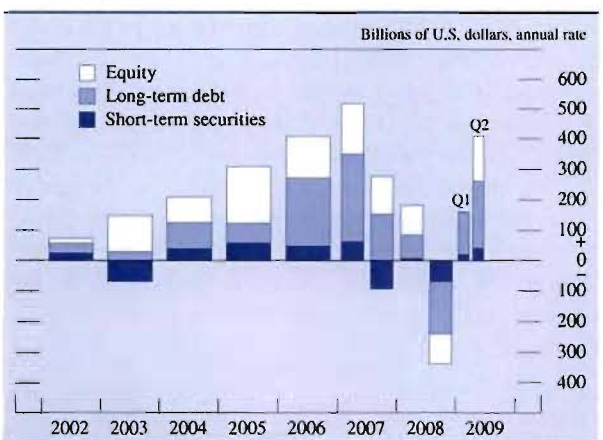
So far in 2009, official inflows have remained sizable, but they continue to be concentrated in U.S. Treasury securities.

Flight-to-Safety Shifts in Securities Portfolios of U.S. Investors

U.S. purchases of foreign securities are outflows in the financial account and thus typically offset some of the financial inflows recorded through foreign official and foreign private purchases of U.S. securities. U.S. investors had acquired increasing amounts of foreign stocks and bonds from 2004 through the first half of 2007. They continued to acquire foreign securities through the first half of 2008, though at a reduced pace, but began to sell foreign securities in the summer of 2008 (figure 8). These record sales of foreign securities in the second half of 2008 provided a financial inflow to the United States, making up, in part, for the gap between the current account deficit and foreign purchases of U.S. securities evident in figure 1.

Increased risk aversion and an interest in reducing foreign exposure (a form of flight to safety) are likely motivations for the pullback in U.S. investors' holdings of foreign securities, especially investments in foreign equity, which are the bulk of U.S. external securities portfolios. U.S. investors continued to acquire foreign equity through the first half of 2008

8. U.S. net purchases of foreign securities, by type of security, 2002-09



NOTE: See general note to figure 1.

but made fairly sizable net sales of foreign equity in the second half of 2008 as foreign stock markets plunged.

U.S. residents' net purchases of foreign bonds slowed notably in the first half of 2008 and reversed to large net sales in the second half of that year. As with foreign purchases of U.S. corporate bonds, the deterioration in U.S. purchases of foreign bonds may reflect, in part, weak global debt issuance since the onset of the turmoil. Another similarity to the foreign sales of U.S. corporate debt is an apparent reduction in U.S. demand for foreign-issued ABS. Although the majority of foreign debt securities owned by U.S. investors are conventional debt securities issued by foreign governments and corporations, a sizable portion of the increase in U.S. investors' holdings of foreign long-term debt between 2005 and the onset of the crisis came from increased purchases of foreign-issued ABS.[6] Of the $720 billion in foreign private-sector debt held by U.S. residents at year-end 2005, about $131 billion, or roughly 18 percent, consisted of foreign-issued ABS. By the end of 2007, total holdings of foreign private-sector debt had grown to $1.2 trillion, and holdings of foreign ABS had more than doubled, increasing to $330 billion, which accounted for 27 percent of foreign private-sector debt held.

By December 2008, U.S. investors' holdings of foreign private-sector debt had declined to $945 billion, and holdings of foreign ABS had decreased to $231 billion. As with foreign holdings of U.S.-issued corporate ABS, much of the decline in the market value of holdings of foreign ABS between 2007 and 2008 reflects sizable estimated valuation losses on this debt: Between December 2007 and December 2008, prices of these securities are estimated to have fallen roughly 25 percent.

U.S. residents' holdings of foreign-issued short-term debt also grew rapidly in the years before the crisis, reaching $368 billion by December 2006. Much of this increase likely reflected increased holdings of foreign ABCP: The share of commercial paper (ABCP and unsecured) in these holdings increased from about 15 percent in December 2003 to almost 50 percent in December 2006. This fraction stayed

6. Much of this foreign-issued ABS was backed, at least in part, by U.S. loans; this characteristic of foreign-issued ABS was especially true for U.S. holdings of ABS issued through the Cayman Islands, which amounted to nearly $200 billion in December 2007. For further information, see Daniel O. Beltran, Laurie Pounder, and Charles Thomas (2008), "Foreign Exposure to Asset-Backed Securities of U.S. Origin," International Finance Discussion Papers 939 (Washington: Board of Governors of the Federal Reserve System, August), www.federalreserve.gov/pubs/ifdp/2008/939/ifdp939.pdf.

fairly constant at about 50 percent over 2007 and 2008, while total holdings of short-term foreign debt dropped. Overall, from the onset of the crisis in August 2007 through March 2009, U.S. holdings of short-term foreign debt declined by about one-third.

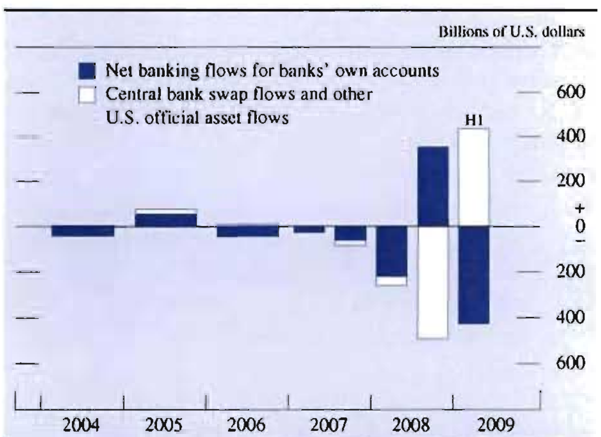
With an easing of tensions in financial markets, an improved environment for foreign bond issuance, and a recovery in global equity markets so far this year, U.S. residents have resumed purchases of both foreign stocks and bonds.

BANKING DEVELOPMENTS

Banks' cross-border positions (which include some positions of securities brokers) are quite volatile, and large net flows for a given month are not unusual. Over longer periods of time, however, banking usually contributes little to net U.S. financial flows, as was the case for the period 2004 through early 2007 (figure 9, solid bars). However, since mid-2007, cross-border banking flows have exhibited unusual patterns that reflect features of the financial crisis.

Even as the crisis slowed the growth in gross positions, net changes in positions showed a substantial increase in net lending abroad, or outflows, between mid-2007 and mid-2008. These outflows were followed by a large inflow between September and December 2008 as previous net lending was retracted; finally, renewed sizable outflows from January to June 2009 reflected a resurgence in net lending. Over the whole period from August 2007 to June 2009, new net lending abroad by banks in the United States cumulated to about $480 billion.

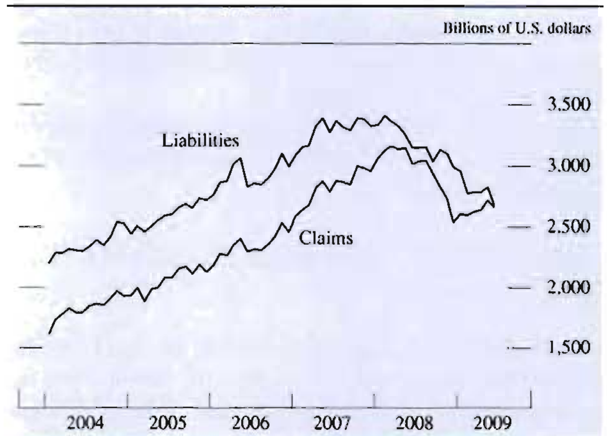
9. U.S. cross-border net banking flows for banks' own accounts, and central bank swap flows and other U.S. official asset flows, 2004–09



NOTE: Semiannual values not annualized. A positive value indicates a net financial inflow to the United States, and a negative value indicates a net financial outflow from the United States.

SOURCE: For net banking flows for banks' own accounts, staff estimates from data collected through the Treasury International Capital reporting system; for central bank swap flows and other U.S. official asset flows, Federal Reserve Board, Statistical Release H.4.1, "Factors Affecting Reserve Balances."

10. Banking offices in the United States: Banks' own gross cross-border claims on foreigners, and their own gross cross-border liabilities to private foreigners, 2004–09



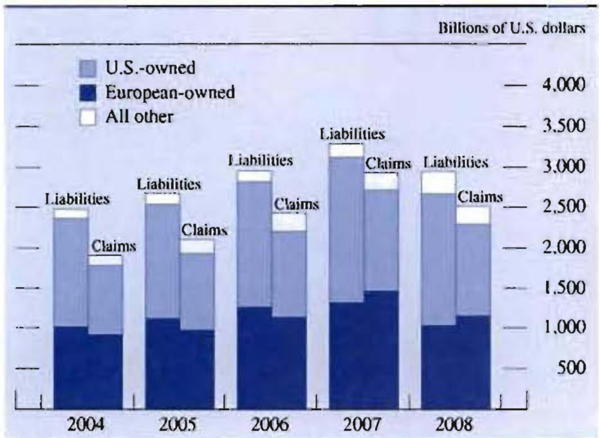
This pattern was driven mainly by significant U.S. dollar liquidity needs of European banks. Through much of the crisis, banks located in the United States played a primary role in funding dollar needs abroad. During the height of the crisis in the fall of 2008, however, foreign central banks provided dollars, drawn from their swap lines with the Federal Reserve, to foreign banks directly. This section will elaborate on these unusual flows from banking and the official swap lines (figure 9, white bars).

Background on Cross-Border Banking Positions

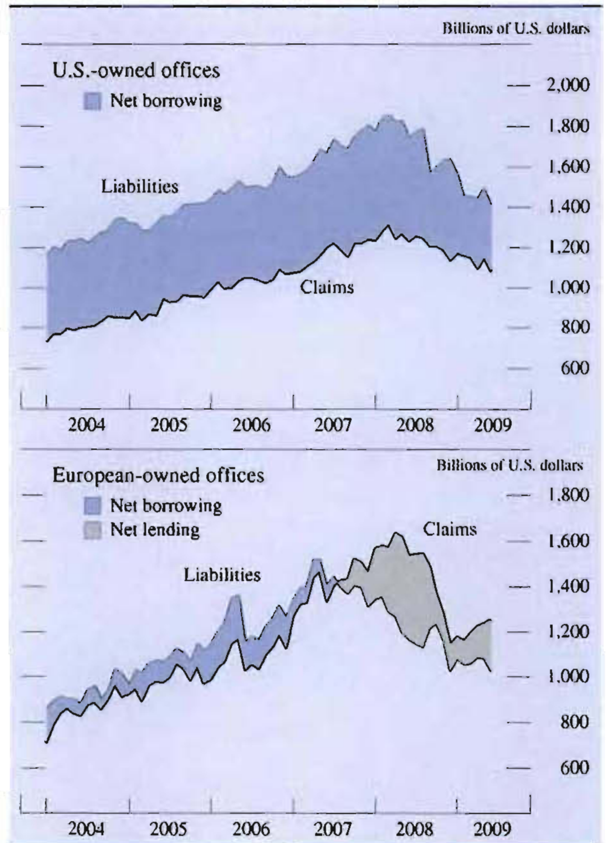
Gross cross-border positions reported by banks in the United States are sizable: Gross cross-border claims and liabilities each represent just more than one-fifth, respectively, of U.S.-owned assets abroad (claims) and foreign-owned assets in the United States (liabilities) in the U.S. international investment position. At the end of 2007, these positions amounted to about $3.8 trillion in gross claims on foreigners and about $4.2 trillion in gross liabilities to private foreigners. Most of these positions, about 80 percent on each side, are banks' own claims and liabilities. We report banks' own gross positions in recent years (figure 10). The remaining 20 percent of the positions are banks' holdings of short-term securities and deposits on behalf of customers, which are discussed elsewhere in this article.[7]

7. Changes in customers' short-term securities portfolios are discussed earlier in the section "Flight-to-Safety Shifts in Portfolios during the Crisis" (p. A148). The decline in customers' banking

11. Banking offices in the United States: Gross cross-border claims on foreigners and gross cross-border liabilities to private foreigners, by nationality of parent bank, 2004–08



12. Banking offices in the United States: Gross cross-border claims on foreigners, gross cross-border liabilities to private foreigners, and net position for U.S.-owned offices and for European-owned offices, 2004–09



Banks' own cross-border claims consist mainly of deposits with foreign banks, loans, resale agreements, and their holdings of foreign certificates of deposit (CDs) and short-term securities. Banks' own cross-border liabilities consist mainly of deposits by foreigners and repurchase agreements (repos). A substantial fraction—more than two-thirds—of banks' own cross-border positions are with affiliated banking offices abroad (that is, intercompany positions).

By definition, banking offices located in the United States include both U.S.-owned banks and U.S. offices of foreign-owned banks. Therefore, for foreign-owned banks in the United States, affiliated offices abroad include the parent office. Gross U.S. cross-border positions are roughly split between U.S.-owned banks and offices of banks headquartered in Europe (figure 11). Banking offices with headquarters elsewhere (primarily Asia, Canada, and Australia) account for less than 10 percent of gross positions.

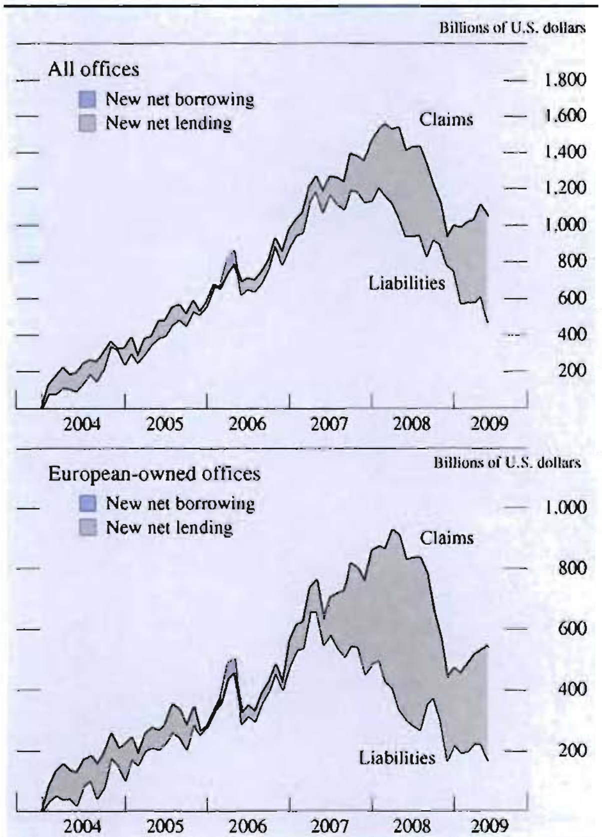
For several years before the crisis, U.S.-owned banks, as a group, were substantial net borrowers from abroad, which means that their liabilities exceeded their claims (figure 12, top panel, shaded area). However, this position was fairly stable, with little new net borrowing or lending over the 2004 to 2006 period. Offices of foreign-based banks, which are primarily European, maintained a more neutral cross-border position in the pre-crisis period: Claims were nearly equal to liabilities (figure 12, bottom panel). These positions also created little new net borrowing or lending before 2007.

positions is discussed in a later section, "Reductions in Foreign Exposure in Securities, Banking, and Nonbank Positions" (p. A160).

Increased Net Lending through Mid-2008

Normally, banks generate little net flows, meaning little new net borrowing or lending, because banks' gross cross-border liabilities to foreigners and gross cross-border claims on foreigners typically grow at about the same rate. However, between mid-2007 and mid-2008, a substantial gap opened between the paths of liabilities and claims (figure 13, top panel). *New* net lending, by our definition, occurs when claims rise relative to liabilities, regardless of the absolute position of claims and liabilities initially. Figure 13 illustrates new net lending by showing the cumulative changes in claims and liabilities. At its peak in early fall of 2008, this gap cumulated to about $430 billion in new net lending abroad by banks located in the United States since January 2007, about $390 billion of which occurred between August 2007 and August 2008. The gap then narrowed dramatically through the fall of 2008, retracting nearly 80 percent of that lending, but opened again beginning in January 2009,

13. Banking offices in the United States: Cumulative changes since 2004 in gross cross-border claims on foreigners and in gross cross-border liabilities to private foreigners, and new net borrowing or lending, for all offices and for European-owned offices, 2004-09



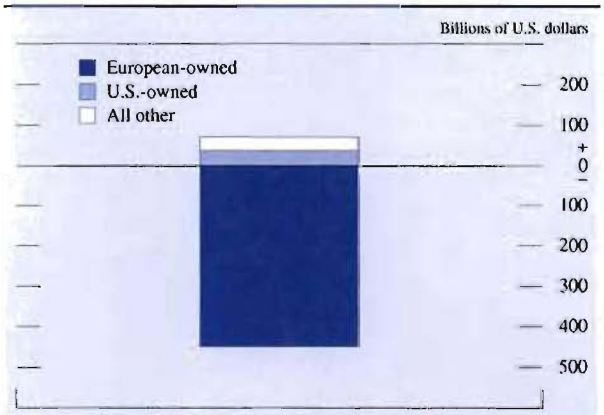
cumulating to about $435 billion in new net lending between January and June 2009.

European-Owned Banks

The increased net lending abroad between mid-2007 and mid-2008 is mainly attributable to U.S. offices of European-owned banks lending to their affiliated offices in Europe. Although U.S. banking offices with European parents make up less than one-half of U.S. gross cross-border positions, their increased lending more than explains the overall pattern for the first year of the crisis (figure 13, bottom panel). European-owned offices in the United States generated an outflow of more than $450 billion over the first year of the crisis (figure 14). Furthermore, almost all of that new lending was to affiliated offices, often the parent office.

In the several years prior to the crisis, many European banks directly or indirectly sponsored more than 100 special purpose vehicles (SPVs), including

14. Net flows of U.S.-owned and European-owned banks and of banks with owners of other nationalities, August 2007 through August 2008



NOTE: A positive value indicates a net financial inflow to the United States, and a negative value indicates a net financial outflow from the United States.

structured investment vehicles (SIVs). These vehicles issued hundreds of billions of dollars of ABS, including ABCP, into the U.S. market. When ABCP markets froze in the fall of 2007, European banks not only lost a source of new funding, but also needed to pay off the commercial paper and medium-term notes maturing throughout late 2007 and early 2008 that could not be rolled over in the market.[8] Because many of the assets backing the commercial paper were illiquid, European banks needed other sources of U.S. dollars. This need added substantially to the demand for dollars by European banks at a time when liquidity was at a premium and financial markets, including foreign exchange markets, were under stress from many angles.

The notion of a dollar liquidity crunch in Europe is supported by the fact that net lending to Europe during the first year of the crisis was widespread across many banks, whereas banking flows are usually dominated by the few largest banks. The U.S. offices of 30 banks each lent more than $10 billion abroad, on net, between August 2007 and August 2008.[9] Of those banks, 22 were European owned, and all but 4 had sponsored SPVs.

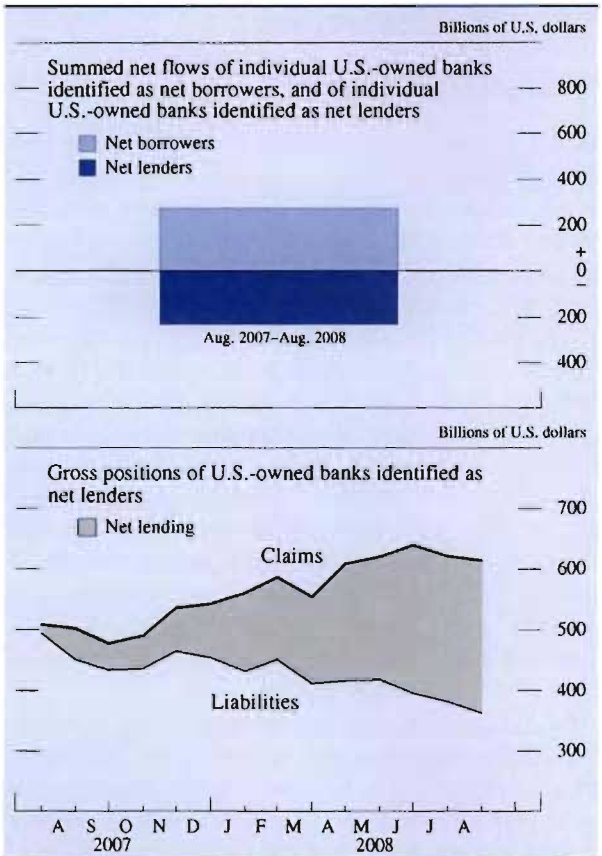
U.S.-Owned Banks

If Europe had such strong demand for dollars, why were U.S.-owned banks not also lending to Europe?

8. Although the ABS were liabilities of the SPVs and not of the banks themselves, most banks chose, as a matter of reputation, to intervene to support the SPVs they had created.

9. In this analysis, securities brokerage arms that report separately (for example, J.P. Morgan Worldwide Securities Services) are counted as separate banks.

15. Summed net flows and gross positions of U.S.-owned banks, August 2007 through August 2008



NOTE: For summed net flows, a positive value indicates a net financial inflow to the United States, and a negative value indicates a net financial outflow from the United States. The outflows from net lenders shown in the top panel reflect the change in gross positions shown in the bottom panel.

The net position of U.S.-owned banks changed little during the first year of the crisis, generating a small net inflow. But this result obscures the many ways that cross-border flows of U.S.-owned banks responded to the crisis. Some U.S.-owned banks actually did lend abroad—as much as $235 billion during the first year of the crisis (figure 15, top panel). However, those amounts were more than offset by about $270 billion in inflows from other U.S.-owned institutions that were net borrowers. This latter group of U.S.-owned banks appears to have borrowed from foreign affiliates to shore up the liquidity of the parent bank, similar to the behavior of the European-owned banks. Presumably their need for liquidity at home outweighed the profit to be gained from lending abroad. A majority of the $270 billion in inflows generated by these U.S.-owned net borrowers was attributable to securities brokers. These institutions did not have access to borrowing from the Federal Reserve early in the crisis and likely turned to their own foreign offices instead for needed cash.

The group of U.S.-owned banks that generated $235 billion in outflows, or net lending, during the first year of the crisis had both increasing gross cross-border claims and decreasing gross cross-border liabilities (figure 15, bottom panel). Looking at each bank individually suggests that this group encompasses two very different sets of banks in terms of their situation and behavior during the crisis. One set had increasing gross claims abroad over the first year of the crisis and roughly flat gross liabilities. In particular, these banks increased their gross claims on *unaffiliated* foreigners during this period, suggesting that they were lending to European banks and not just their own offices abroad. Such banks presumably had sufficient liquidity at home to enable them to fulfill some of the dollar demand in Europe.

In contrast, a second set of U.S.-owned banks and brokers started from a large net borrowing position (meaning that their liabilities to foreigners were greater than their claims on foreigners) and then saw their gross cross-border liabilities plummet nearly 50 percent during the first year of the crisis, which also generated outflows. If these institutions were among those in which the market lost confidence, such that foreign counterparties were unwilling to continue lending to them, then these U.S.-owned banks and brokers would have been forced to pay off their liabilities to foreigners. This situation is a plausible explanation for the data pattern. Indeed, this set includes some institutions that eventually required substantial government rescues or entered bankruptcy. When only net flows are considered, the data for these two very different sets of U.S.-owned banks are observationally equivalent. Although only one set of banks actually lent more abroad, both sets produced net outflows, which are generally referred to as net lending.

During the first year of the crisis, many of the depository institutions that lent abroad (or generated outflows), both U.S.-owned and European-owned offices, also borrowed from the Federal Reserve's discount window, which included use of the Term Auction Facility. But even among those banks, average borrowings from the discount window during that period equaled at most 10 percent of their net lending abroad, suggesting that the Federal Reserve was not the primary source of those funds.

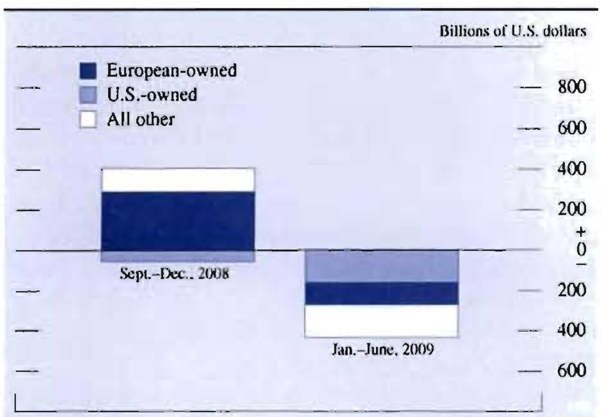
Crisis Intensification: September to December, 2008

Starting in September 2008, however, the Federal Reserve began to play a key role in providing dollar liquidity abroad. In response to the severe dollar shortage, the Federal Reserve dramatically increased the availability of dollars to foreign central banks through liquidity swap facilities. Outstanding amounts drawn on the swap lines reached $288 billion in September, $534 billion in October, and a peak of $554 billion at the end of December 2008. More than three-fourths of these funds were drawn by central banks in Europe.

Because of the swap lines, the foreign banks that had been borrowing heavily from their U.S. offices were able to obtain dollars directly from their own central banks. In response, the U.S. offices of many of those foreign banks were able to decrease their lending position to their parents, receiving a flow of funds back into the United States between September and December of 2008. Specifically, European-owned banks accounted for inflows of about $290 billion over this period (figure 16).

The cross-border flows of U.S.-owned banks also showed the severity of the crisis during this period. U.S.-owned banks that had been lending early in the crisis stopped lending. Meanwhile, nearly all securities brokers, even those that had been able to borrow from affiliates earlier in the crisis, generated large outflows as their borrowings from foreigners collapsed. These events resulted largely from the breakdown in the market for repos, an important source of funding for many securities brokers. Finally, U.S.-owned depository institutions that had been borrowing from their foreign offices abroad also decreased that borrowing, possibly because more funds were available at home from the Federal Reserve at the height of the crisis.

16. Net flows of U.S.-owned and European-owned banks and of banks with owners of other nationalities, September 2008 through June 2009



NOTE: See note to figure 14.

Gradual Improvement in 2009

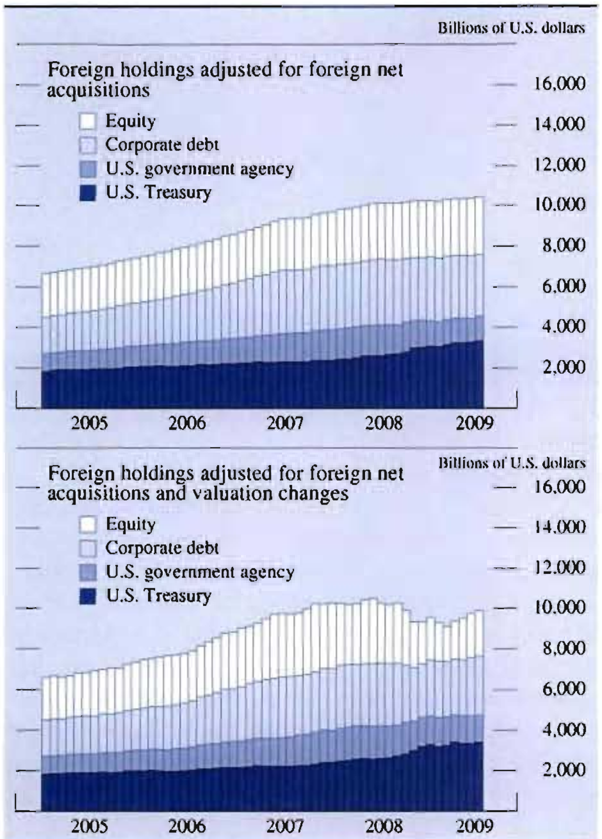
As the tone of interbank markets began to improve slowly during the winter, foreign central banks decreased their drawings on the swap lines with the Federal Reserve, leaving $310 billion outstanding at the end of March and just $114 billion at the end of June. The decline in the swaps is recorded as an inflow for the United States as the Federal Reserve decreases its claims on foreign central banks. Private banking offices in the United States (this time, more U.S. and Asian banks than European banks) stepped back in to provide dollar liquidity abroad (figure 16). Between January and June of 2009, net bank lending abroad increased almost dollar for dollar with the decline in the swaps, an indication that the strength of demand for dollar funding abroad was undiminished but that banks regained the ability to provide that funding through interbank markets in the first half of 2009.

Overall, cross-border bank flows reflected the crisis through the channeling of liquidity "home" to protect the parent bank, with European banks generating by far the strongest net flows from U.S. offices in order to meet extraordinary demand for dollars in Europe. This channeling of liquidity and the subsequent breakdown in interbank markets, failure of banking institutions, and intervention of central banks reflected concerns over risk similar to those we saw in the cross-border securities flows. These characteristics of the crisis are also apparent in the contraction of gross banking positions, discussed in the next section.

Reductions in Foreign Exposure in Securities, Banking, and Nonbank Positions

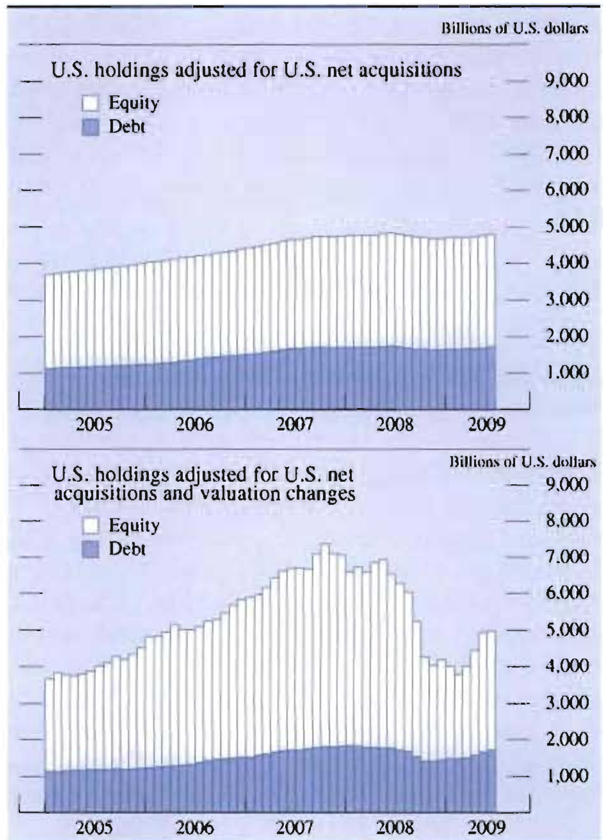
As discussed earlier, increased risk aversion during the crisis led to notable flight-to-safety flows in securities portfolios, including net sales of foreign assets by U.S. investors and net sales of riskier U.S. assets by foreign investors, as well as flows due to banks channeling liquidity "home." Flows, of course, represent changes in positions, so these movements imply a broad reduction in outstanding cross-border positions—in other words, a retraction of foreign exposure. Perhaps surprisingly, however, such reductions are significant only in banking and certain other nonsecurities positions.

17. Foreign holdings of U.S. securities adjusted for foreign net acquisitions, and such holdings also adjusted for valuation changes, by type of security, 2005–09



NOTE: Data extend through June 2009.

18. U.S. holdings of foreign securities adjusted for U.S. net acquisitions, and such holdings also adjusted for valuation changes, by type of security, 2005–09



NOTE: Data extend through June 2009.

Limited Effects of Recent Sales on Overall Cross-Border Securities Holdings

Although the financial crisis had a marked effect on the composition of securities flows, the size of cross-border positions is sufficiently large that the pullback in cross-border securities holdings resulting from the record cross-border securities sales last fall shows up more as a slight flattening out of securities holdings than as an outright reduction in cross-border exposure. Foreign holdings of U.S. corporate equity, corporate debt, and agency securities moved down somewhat in the second half of 2008, but, on net, total foreign holdings of securities other than Treasury securities were little changed from their pre-turmoil levels (figure 17, top panel). And total foreign holdings of Treasury securities rose by a more than offsetting amount, so that total foreign holdings of U.S. securities actually continued to rise slightly through the second half of 2008 and in 2009.

These limited reductions in foreign holdings of U.S. securities are put into perspective when considered in light of the sizable valuation losses foreign investors have faced on their cross-border securities portfolios (figure 17, bottom panel). While foreign net acquisitions of corporate and agency securities left foreign holdings of these securities about unchanged from summer 2007 through year-end 2008, adjusting these holdings by incorporating valuation losses shows a much more pronounced decline. Cumulative valuation losses on foreign holdings of these securities from mid-2007 through the end of 2008 were about $1.6 trillion, or roughly 23 percent of their pre-turmoil value. The recovery in equity markets and in corporate bond prices in the first half of 2009, however, reversed about $200 billion of these losses.

We provide a similar analysis of the data on U.S. holdings of foreign stocks and debt securities (figure 18). A slight reduction in U.S. holdings resulting from U.S. net sales of foreign securities is evident in the second half of 2008, but this pullback in cross-border positions was just about reversed in the first half of 2009 (figure 18, top panel). However, U.S.

investors faced considerable valuation losses on their cross-border holdings, especially their holdings of foreign equity in 2008 (figure 18, bottom panel). Total valuation losses are estimated at nearly $2.5 trillion, or nearly 40 percent of the value as of June 2007. Most of these losses are valuation losses on foreign equity, and although foreign equity markets recovered some in the first half of 2009, we estimate that by June 2009, foreign portfolios of U.S. investors had recovered only to about where they were in early 2006.

Marked Slowdown in Cross-Border Securities Trading

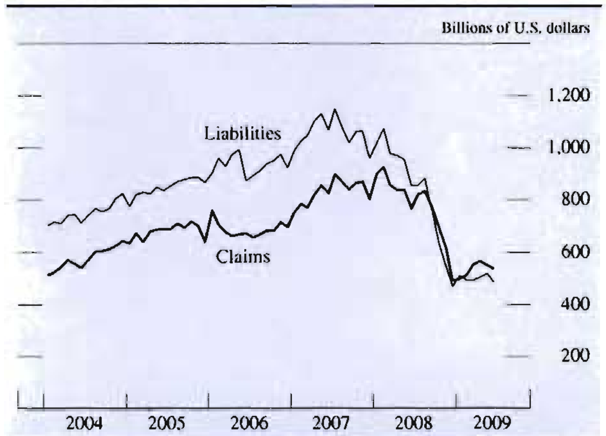
Although securities positions were little changed by cross-border net sales, gross cross-border trading in U.S. securities was sharply curtailed in the fall of 2008, a further sign of investor caution. In a typical month, total foreign gross purchases and sales of U.S. securities greatly exceed net purchases (figure 19). From 2005 through mid-2007, gross cross-border trading, especially of equities and Treasury securities, grew rapidly, and trading remained at high levels even after the onset of the financial crisis in the summer of 2007. With the intensification of the crisis in October 2008, however, gross trading fell back sharply to the levels last seen in 2005. Trading has been slow to recover but has picked up a bit in recent months, at least with respect to Treasury securities.

Drop-Off in Gross Banking Positions

In contrast to the limited pullback in securities positions, the decline in cross-border banking positions was substantial. Gross positions declined from their

19. Foreign gross purchases and foreign gross sales of U.S. long-term securities, and foreign net purchases of such securities, 2000–09

20. Cross-border repurchase agreements, by type of position, 2004–09



peaks of early 2008 by about 15 percent for claims and 30 percent for liabilities (see figure 10).

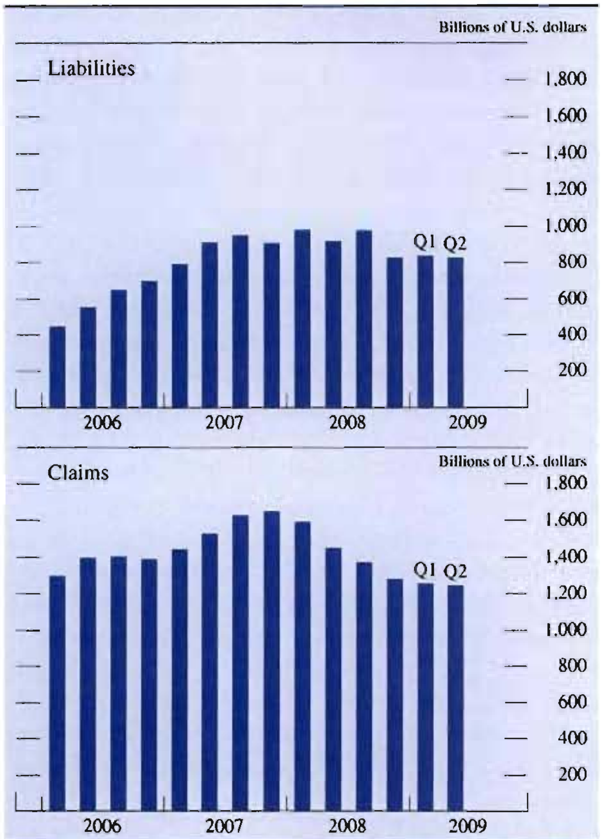
A major contributor to the decline in banking positions was the particularly striking drop in repos, an important form of short-term interbank lending (figure 20). Cross-border repos are primarily undertaken by securities brokers (included as reporters in the banking data). The cross-border repo market flattened out in the first three quarters of the crisis but came under further stress with the collapse of The Bear Stearns Companies Inc. in March 2008 as fears about counterparty risk increased. The decline in repos accelerated dramatically with the collapse of Lehman Brothers Holdings Inc. in September 2008. From March through December of 2008, cross-border repo positions shrank 47 percent on the claims side and 57 percent on the liabilities side. Meanwhile, other banking positions fell steeply in September and October of that year as hedge fund liquidations and concurrent declines in derivatives trading contributed to a drop in brokerage balances, which are included in deposits.

Decline in Nonbank Positions

This section addresses pullbacks in positions, excluding securities and direct investment, of nonbank entities located in the United States (including individuals).[10] In general, the gross positions of nonbank entities declined during the crisis as firms and investors brought money home, reducing cross-border

10. Positions of nonbank entities are compiled by the Bureau of Economic Analysis (BEA), combining data reported on the TIC system's C form, which collects positions of U.S. nonbank firms with unaffiliated foreigners, with surveys conducted by the BEA, which collect positions with affiliated foreigners, plus additional estimates by BEA staff.

21. Cross-border loan and bank deposit positions of nonbanks, by type of position, 2006–09



NOTE: Liabilities are loans made to U.S. resident firms or individuals by foreigners, mostly foreign banks; claims are loans to foreigners and deposits in foreign banks made by U.S. resident firms or individuals.

SOURCE: Data collected through the Treasury International Capital reporting system, combined with balance of payments data from the Bureau of Economic Analysis.

investments. This decline was a reversal of the trend for both U.S.-residents' investments abroad and foreign investments in the United States.[11]

The decrease is evident in the data on the cross-border loan and bank deposit positions of nonbank firms and individuals (figure 21).[12] Here, liabilities are loans made to U.S. entities by foreigners, mostly foreign banks (figure 21, top panel). In the other direction, claims are loans to foreigners and deposits in foreign banks made by U.S. entities (figure 21, bottom panel).[13] Cross-border holdings by nonbanks of negotiable CDs are also included in this category. Liabilities (loans to the United States) fell about 10 percent in 2008 and a little further in early 2009. Claims (loans to foreigners and deposits in foreign banks) fell more steeply—almost one-third in 2008.

Cross-border commercial positions also exhibited declines. These positions are primarily trade payables and advance receipts (liabilities) and trade receivables and advance payments (claims). The gross level of commercial positions (not shown) declined about 10 to 20 percent in the second half of 2008 with the fall in trade and the tightness of trade financing.

Cross-border positions of financial intermediaries that are neither banks nor securities brokers also fell dramatically during the crisis.[14] However, as with securities, the financial crisis exacerbated or highlighted difficulties in measuring certain nonbank financial flows. This circumstance was particularly true for positions of the many financing vehicles that were not full-fledged firms in the sense of having employees or physical headquarters. During the crisis, the Bureau of Economic Analysis discovered that many SPVs or SIVs located in offshore financial centers had affiliated vehicles in the United States that issued securities and loaned the proceeds to the offshore entities.[15] Such direct loans are difficult to survey. The size of the cross-border position resulting from these loans is estimated by the amount of securities issued by the vehicles known to have this structure. When markets for ABCP froze in the fall of 2007, the U.S. vehicles were unable to roll over short-term debt securities. To pay off maturing securities, the U.S. vehicles had to reclaim the funds they had loaned to the offshore entities, thereby creating an inflow of $170 billion in the second half of 2007 and a significant decline in the level of cross-border claims. Overall, as markets deleveraged and some vehicles ceased to exist, cross-border claims fell nearly 40 percent, and liabilities about 23 percent, from their peaks in 2007 (figure 22).

11. The decline in foreign holdings of U.S. short-term securities and the decrease in holdings of foreign commercial paper by U.S. residents are discussed earlier in the section "Flight-to-Safety Shifts in Portfolios during the Crisis" (p. A148).

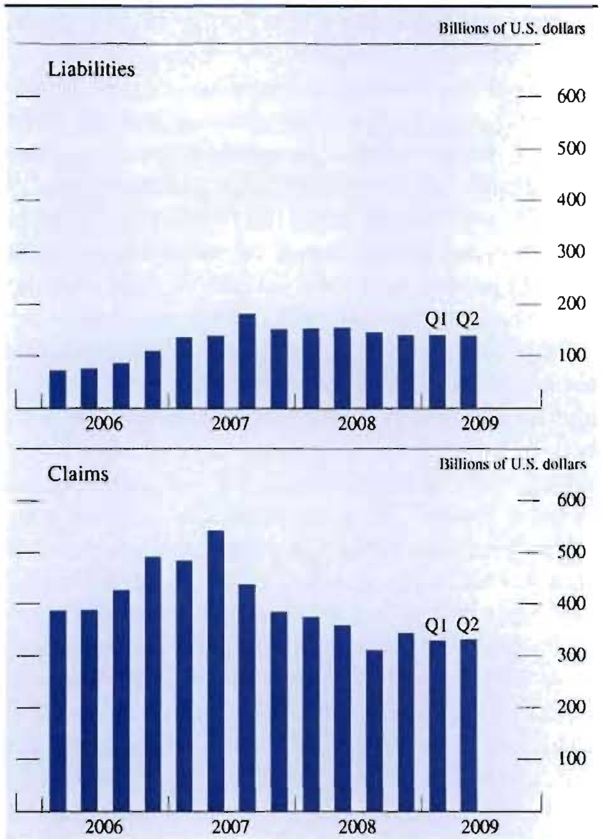
12. The term *loans* is used broadly to denote other financial positions that are not explicitly securities, negotiable CDs, deposits, direct investment, or commercial (that is, trade).

13. This category includes both positions for which firms use a U.S. bank as a custodian or servicer of their foreign accounts and positions that U.S. firms enter into directly with firms or banks abroad. The positions that use a U.S. bank as a custodian are reported in the TIC data and are included in the financial account as positions reported by banks. The positions held directly with foreign counterparties are not included in the TIC data; in the financial account, these are positions with unaffiliated foreigners reported by U.S. nonbanking concerns.

14. Examples of such entities include insurance firms, financial management firms, and securitization vehicles.

15. Intercompany positions are generally considered direct investment, which is not discussed in this article, except for non-equity positions between financial firms such as banks, securities brokers, and financing vehicles.

22. Cross-border positions of nonbank financial intermediaries, by type of position, 2006-09



NOTE: The majority of these claims and liabilities are in the form of intercompany balances. Such balances represent transactions between firms in a direct investment relationship, but the transactions are excluded from direct investment data when both firms are classified in the finance industry, and they are excluded from banking data when the firms are neither banks nor securities brokers.

SOURCE: Bureau of Economic Analysis.

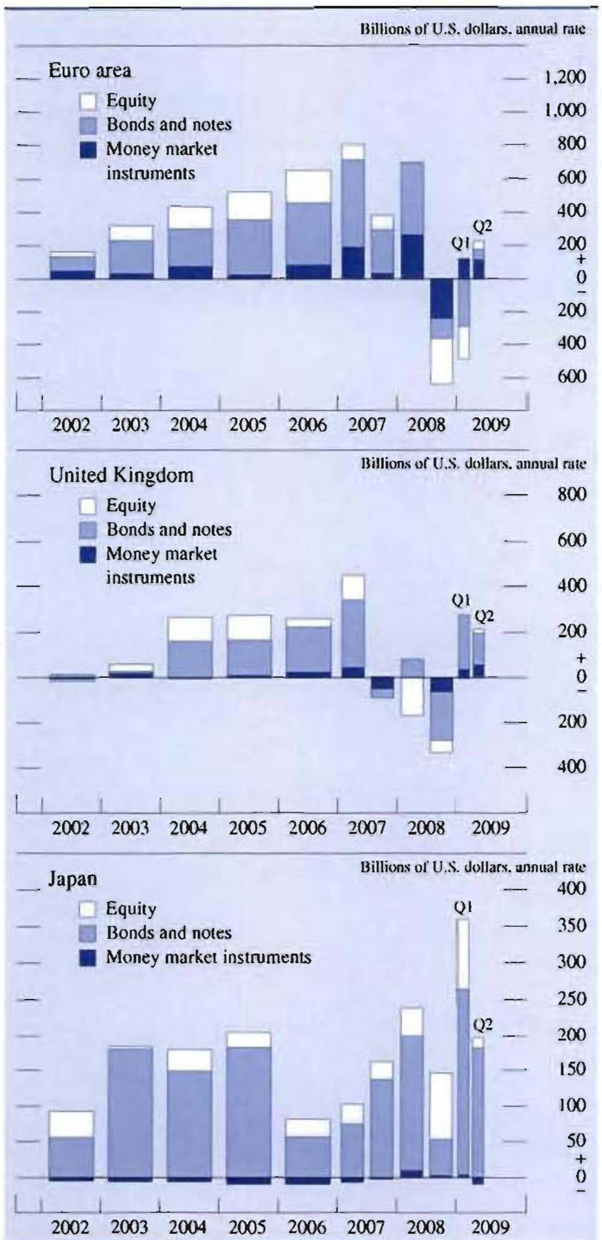
Conclusion and Global Overview: Similar Portfolio Shifts in Other Country Statistics?

U.S. cross-border financial flows indicate pronounced flight-to-safety swings in the composition of securities purchased during the financial crisis, with foreign investors, on net, selling U.S. securities other than U.S. Treasury securities and U.S. investors, on net, selling foreign securities, especially in the second half of 2008. We look next to see whether such shifts in cross-border securities purchases are also evident in financial flow data for the euro area, the United Kingdom, and Japan. And although we did not see much evidence of a pullback in cross-border securities investment relative to the size of cross-border holdings in the U.S. data, we consider whether data for these countries indicate a global pullback in investment in securities other than those of the home country of the investor.

Similar to the pattern of cross-border investment for U.S. investors, investors in both the euro area and the United Kingdom had made sizable and growing cross-border securities purchases in the years leading up to the financial turmoil. In both regions, home investors also reduced their net purchases of "foreign" securities (that is, securities issued outside of the home country) following the onset of the crisis in 2007 and made large net sales of such securities in the second half of 2008 (figure 23, top and middle panels). As financial markets stabilized more recently, these net sales again reversed to show net purchases, though the reversal through June 2009 is relatively small for the euro area. Financial flow data for Japan, however, do not show a similar pullback from foreign investment (figure 23, bottom panel). Instead, Japanese investors acquired increasing amounts of foreign securities through the first half of 2008, suggesting that the financial crisis may have affected U.S. and European investors sooner and to a greater extent than it did Asian investors. And although global equity prices fell sharply in the second half of 2008, Japanese investors increased their purchases of foreign equity, though they did reduce their purchases of foreign bonds.

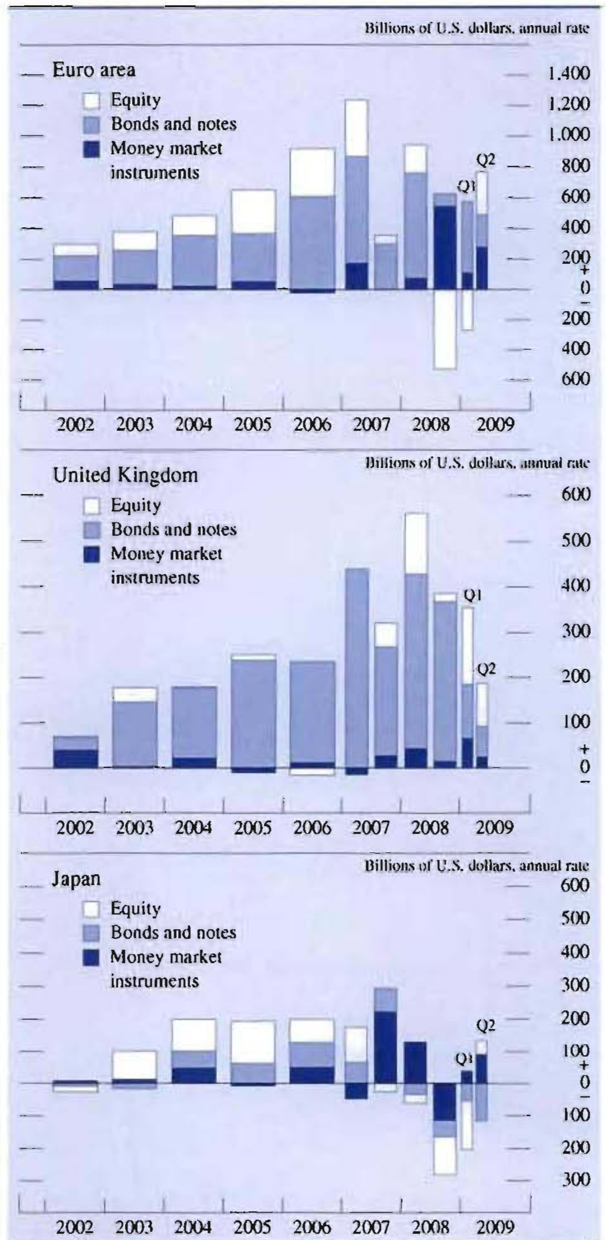
We also look at foreign investment in the euro area, the United Kingdom, and Japan to see if the data for these countries show patterns similar to that for the United States—that is, reduced foreign purchases of riskier securities issued by these countries. The pattern of a flight to safety by foreign investors does seem to be present in the euro-area data: We see a marked slowdown in purchases of euro-area equities by foreign investors during the onset of the crisis in the second half of 2007 and a shift to large sales of euro-area equity during the intensification of the crisis in the second half of 2008 (figure 24, top panel). The euro-area data also show reduced foreign purchases of euro-area bonds, especially in the second half of 2008. Detail underlying this slowdown indicates offsetting purchases of euro-area sovereign bonds and sales of other, presumably riskier, euro-area debt securities. In contrast, foreign inflows into money market instruments jumped sizably in the second half of 2008. These inflows, concentrated in September and October of 2008, were mostly in the form of increased foreign purchases of short-term euro-area government securities, consistent with foreign investor demand for safer or more-liquid investments during the intensification of the financial crisis. The Japanese data also suggest flight to safety, as they

23. Cross-border portfolio investment: Domestic net acquisitions of foreign securities for the euro area, the United Kingdom, and Japan, by type of security, 2002-09



NOTE: See general note to figure 1.
SOURCE: Staff estimates from balance of payments accounts as reported by the European Central Bank, U.K. Office for National Statistics, and Bank of Japan via Haver Analytics.

24. Cross-border portfolio investment: Foreign net acquisitions of domestic securities for the euro area, the United Kingdom, and Japan, by type of security, 2002-09

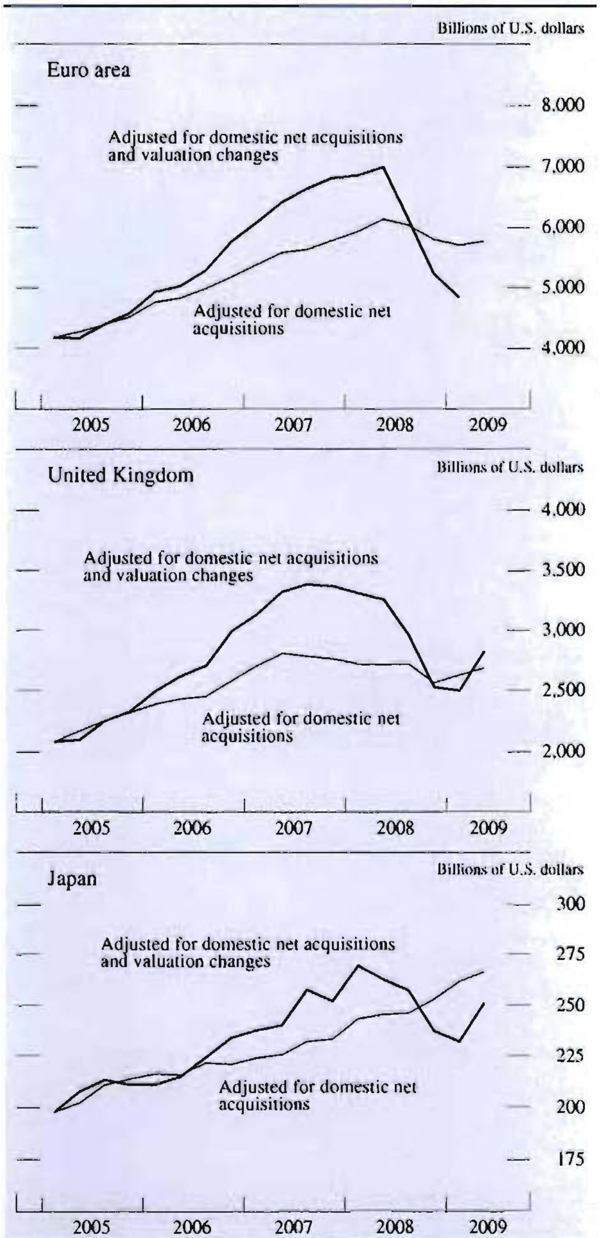


NOTE: See general note to figure 1.
SOURCE: Staff estimates from balance of payments accounts as reported by the European Central Bank, U.K. Office for National Statistics, and Bank of Japan via Haver Analytics.

show net sales of Japanese equity and large inflows into liquid money market instruments beginning in the summer of 2007 and then a switch to net sales of all types of Japanese securities by foreign investors in the second half of 2008 (figure 24, bottom panel).

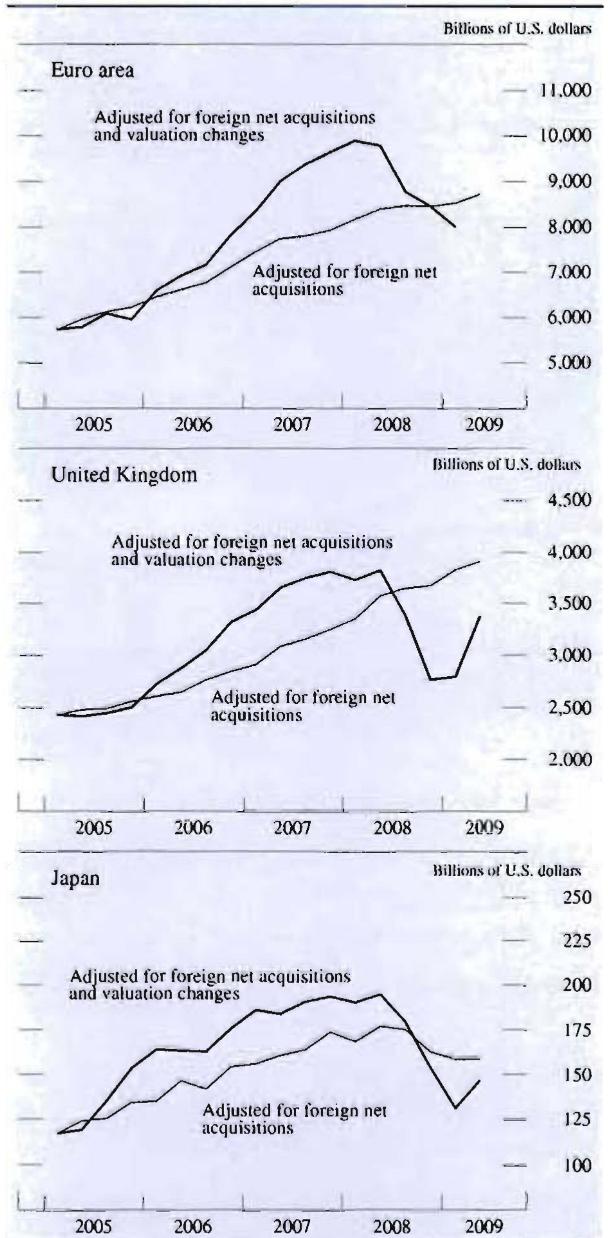
Evidence of such flight-to-safety flows is less apparent in the U.K. data, as foreign purchases of U.K. equity appear to have been less influenced by market swings (figure 24, middle panel). The U.K. data also indicate continued strong foreign purchases of long-term U.K. debt securities, even in the second half of 2008. However, detail underlying these figures shows a shift in the composition of foreign purchases that is similar to the shift evident in the euro-area data:

25. Cross-border portfolio investment: Domestic holdings of foreign securities adjusted for domestic net acquisitions for the euro area, the United Kingdom, and Japan, and such holdings also adjusted for valuation changes, 2005-09



SOURCE: Staff estimates from international investment positions and balance of payments accounts as reported by the European Central Bank, U.K. Office for National Statistics, and Bank of Japan via Haver Analytics.

26. Cross-border portfolio investment: Foreign holdings of domestic securities adjusted for foreign net acquisitions for the euro area, the United Kingdom, and Japan, and such holdings also adjusted for valuation changes, 2005-09



SOURCE: Staff estimates from international investment positions and balance of payments accounts as reported by the European Central Bank, U.K. Office for National Statistics, and Bank of Japan via Haver Analytics.

Foreign investors' purchases of U.K. government securities picked up in the second half of 2008, while their purchases of debt securities issued by financial institutions fell sharply and remained weak in the first half of 2009.

But as with the U.S. data, these effects on the composition of cross-border financial flows in other industrial countries do not indicate a significant pullback in the overall size of such countries' cross-border securities positions (figure 25). In the euro area and the United Kingdom, recent reductions in holdings of foreign securities arising from sales of foreign securities (thin lines) are small relative to the size of holdings and compared with the actual movements in investment positions incorporating valuation changes (thick lines). And the reduction in foreign holdings of Japanese securities arising from foreign sales of such securities since mid-2008 also is quite small, especially relative to valuation losses incurred on these holdings (figure 26).

Similarly, the fall in cross-border banking activity evident in the U.S. data was mirrored by declines in banking activity around the globe. The external (that is, cross-border) claims of all banks located in countries reporting to the Bank for International Settlements fell about 8 percent between March and December of 2008.[16] Declines early in the year were concentrated in the United States and the United Kingdom, but in the fourth quarter, sizable drops occurred in the euro area, developing countries, and offshore financial centers as well.

With the improvement in the tone of financial markets so far in 2009, many of the unusual cross-border financial flows generated by the financial crisis appear to be reversing. U.S. and foreign data indicate that investors are making renewed purchases of riskier foreign securities such as equities and that purchases are no longer concentrated in safer and more-liquid short-term government debt securities. Increased cross-border interbank lending and the concurrent decline in central bank swaps indicate that banks are again able to provide funding through interbank markets. However, cross-border data to date also indicate some longer-lasting effects of the financial crisis. The slow recovery in interbank repo positions and still-subdued gross cross-border securities trading suggest continued investor caution. Moreover, many of the institutions directly affected by the crisis—SPVs and SIVs active in the issuance of ABS—were located in offshore financial centers, and the unwinding of their activity and the closure of some of these entities have had a notable effect on the size of nonbank cross-border positions. And because much of the pre-crisis growth in cross-border purchases of corporate debt securities was in the form of corporate ABS, the disruption in corporate ABS markets and the curtailment of corporate ABS issuance show through as significantly reduced foreign purchases of corporate debt securities. □

16. See the figure "Cross-border positions" in Bank for International Settlements (2009), *BIS Quarterly Review*, "Statistical Annex," table 1A (Basel, Switzerland: BIS, June), p. A4, www.bis.org/publ/qtrpdf/r_qs0906.pdf.

April 2010
(revises 2009 draft release, includes revised data)

The 2008 HMDA Data: The Mortgage Market during a Turbulent Year

Robert B. Avery, Neil Bhutta, Kenneth P. Brevoort, Glenn B. Canner, and Christa N. Gibbs, of the Division of Research and Statistics, prepared this article. Cheryl R. Cooper and Christine Coyer provided research assistance.

The Home Mortgage Disclosure Act of 1975 (HMDA) requires most mortgage lending institutions with offices in metropolitan areas to publicly disclose information about their home-lending activity. The information includes the disposition of applications for mortgage credit, the characteristics of the home mortgages that lenders originate or purchase during a calendar year, the location of the properties related to those loans, and personal demographic and other information about the borrowers.[1] The disclosures are intended not only to help the public determine whether institutions are adequately serving their communities' housing finance needs, but also to facilitate enforcement of the nation's fair lending laws and to inform investment in both the public and private sectors.

The Federal Reserve Board implements the provisions of HMDA through regulation.[2] The Federal Financial Institutions Examination Council (FFIEC) is responsible for collecting the HMDA data and facilitating public access to the information.[3] Each September, the FFIEC releases summary tables pertaining to lending activity from the previous calendar year for each reporting lender and aggregations of home-lending activity for each metropolitan statistical area (MSA) and for the nation as a whole.[4] The FFIEC also makes available a consolidated data file containing virtually all the reported information for each lending institution.[5]

The 2008 HMDA data consist of information reported by about 8,400 home lenders, including all of the nation's largest mortgage originators. The loans reported are estimated to represent the majority of home lending nationwide. Thus, they likely provide a broadly representative picture of home lending in the United States.

This article presents a number of findings from our initial review of the 2008 HMDA data. Three of those findings are noted here. First, the 2008 HMDA data reflect the ongoing difficulties in the housing and mortgage markets. Reported loan application and origination volumes fell sharply from 2007 to 2008 after already falling considerably from 2006 to 2007. A reduction in lending occurred among all groups of borrowers regardless of race, ethnicity, or income, although lending for some groups declined more sharply than for others.

Second, the Federal Housing Administration's (FHA) role in the mortgage market expanded considerably during 2008. The increasing use of FHA-insured loans in 2008 appears to be related to a number of factors, including difficulties faced by private mortgage insurance (PMI) companies and their pullback from the marketplace.

Third, the data show a decline in the incidence of reported higher-priced lending between 2007 and 2008.[6] However, atypical changes in the interest rate environment, related primarily to widening spreads

1. A description of the items reported under HMDA is provided in appendix A.

2. HMDA is implemented by Regulation C (12 C.F.R. pt. 203) of the Federal Reserve Board. Information about the regulation is available at www.federalreserve.gov.

3. The FFIEC (www.ffiec.gov) was established by federal law in 1979 as an interagency body to prescribe uniform examination procedures and to promote uniform supervision among the federal agencies responsible for the examination and supervision of financial institutions. The member agencies are the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the National Credit Union Administration, the Office of the Comptroller of the Currency, the Office of Thrift Supervision, and representatives from state bank supervisory agencies.

4. For the 2008 data, the FFIEC prepared and made available to the public more than 51,100 MSA-specific HMDA reports on behalf of reporting institutions. The FFIEC also makes available to the public reports about private mortgage insurance (PMI) activity. All the HMDA and PMI reports are available on the FFIEC's reports website at www.ffiec.gov/reports.htm.

5. The only reported items not included in the data made available to the public are the loan application number, the date of application, and the date on which action was taken on the application. Those items are withheld to help ensure that the individuals involved in the application cannot be identified.

6. Loans are reported as higher priced in HMDA if their annual percentage interest rate (APR) spread is 3 percentage points or higher

between the yields on Treasury securities and the interest rates on prime mortgage loans, resulted in a large number of loans being reported as higher priced in 2008 that would not have been so reported a year earlier. As a result, the decline in the incidence of reported higher-priced lending actually understates the true extent of the decline in subprime lending. Also the distortion led to an increase in the reporting of higher-priced loans for FHA even though it appears that FHA pricing was relatively unchanged.

The article proceeds in seven major sections. The next section briefly describes the economic environment in 2008. The following two sections provide an overview of the mortgage market along several dimensions in 2008 and its evolution over time based on the HMDA data. The fourth section discusses in detail how changes in the interest rate environment affected the reporting of higher-priced lending in the HMDA data and provides estimates of higher-priced lending that adjusts for these changes. The fifth section analyzes the surge in government-backed lending, assessing the importance of higher loan limits and changes in pricing and coverage by PMI companies. This section also draws on industry data to help describe changes in the credit-risk profile of government-backed loans. The sixth section describes how the reduction in mortgage lending during 2008 played out across different demographic groups. And finally, the last section presents analyses that speak to issues of fair lending.

2008: A Turbulent Year

The 2008 HMDA data reflect a sharp deterioration in economic conditions during the year. The housing market's continued decline was reflected in the Federal Housing Finance Agency's (FHFA) nationwide home price index, which posted a year-over-year decline of more than 8 percent by November 2008, compared with less than 3 percent in January. At the same time, mortgage-related losses continued to weigh on the confidence of investors and the health of financial institutions. A number of major financial institutions either failed, merged under distress, or received government assistance. The government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac were placed into conservatorship by the FHFA in September.[7]

Difficulties in the housing and financial markets advanced into a broad-based economic recession.[8] By December 2008, the unemployment rate had risen to 7.2 percent from 4.9 percent a year earlier, and the number of employed individuals fell by nearly 3 million during the year.[9] The deterioration in household income and wealth as well as fears about buying into a falling market may have weakened demand for housing and mortgages.

On the supply side, strained lending institutions, facing the risks posed by falling home prices and a weakening economy, were apprehensive or unable to offer loans that did not have some form of government backing. Potential borrowers, especially those with blemished credit histories and those seeking "jumbo" mortgages, likely found it more difficult than in previous years to obtain a mortgage.[10] Those with adequate credit histories but little money for a down payment also faced a more challenging situation since PMI companies, which suffered large losses in 2007 and 2008, tightened their standards and raised prices.[11] Lenders also sharply curtailed the issuance of second-lien loans used heavily in previous years to help finance home purchases. Partly in response to difficulties in the private market, the government raised the size limits on loans eligible to be purchased by Fannie Mae or Freddie Mac and insured by the FHA as well as the guarantee limit for loans backed by the Department of Veterans Affairs (VA) as part of the Economic Stimulus Act of 2008.

Mortgage Market Trends From The HMDA Data

For 2008, 8,388 institutions reported under HMDA: 3,942 commercial banks, 913 savings institutions

for a first lien or 5 percentage points or higher for a junior lien than the yield on a comparable-maturity Treasury security.

7. To maintain the GSEs' ability to purchase home mortgages, the Treasury announced plans to establish a backstop lending facility for the GSEs, to purchase up to $100 billion of preferred stock in each of the two firms, and to initiate a program to purchase agency mortgage-backed securities. See Board of Governors of the Federal Reserve System (2009), *Monetary Policy Report to the Congress* (Washington: Board of Governors, February), www.federalreserve.gov/monetarypolicy/mpr_20090224_part1.htm.

8. The National Bureau of Economic Research declared the start of the recession as December 2007.

9. Employment statistics from the Bureau of Labor Statistics; based on individuals 16 years or older.

10. Industry sources indicate that the dollar amount of originations of subprime loans fell 88 percent from 2007 to 2008, to a level of $23 billion. Jumbo loans are loans that exceed the size limits set for loans that Fannie Mae and Freddie Mac are permitted to purchase (commonly referred to as conforming loans). Available data indicate that the dollar amount of originations of jumbo loans fell 72 percent from 2007 to 2008, to a level of $97 billion. See Inside Mortgage Finance (2009), *The 2009 Mortgage Market Statistical Annual, Vol. 1: The Primary Market* (Bethesda, Md.: Inside Mortgage Finance Publications).

11. See Mortgage Insurance Companies of America (2009), *2009–2010 Fact Book & Member Directory* (Washington: MICA), www.privatemi.com/news/factsheets/2009-2010.pdf.

1. Distribution of reporters covered by the Home Mortgage Disclosure Act, by type of institution, 2006–08

Type	2006		2007		2008	
	Number	Percent	Number	Percent	Number	Percent
Depository institution						
Commercial bank	3,900	43.9	3,910	45.4	3,942	47.0
Savings institution	946	10.6	929	10.8	913	10.9
Credit union	2,036	22.9	2,019	23.4	2,026	24.2
All	6,882	77.4	6,858	79.7	6,881	82.0
Mortgage company						
Independent	1,328	14.9	1,124	13.1	957	11.4
Affiliated[1]	676	7.6	628	7.3	550	6.6
All	2,004	22.6	1,752	20.3	1,507	18.0
All institutions	**8,886**	**100**	**8,610**	**100**	**8,388**	**100**

NOTE: Here and in all subsequent tables, components may not sum to totals because of rounding.

1. Subsidiary of a depository institution or an affiliate of a bank holding company.

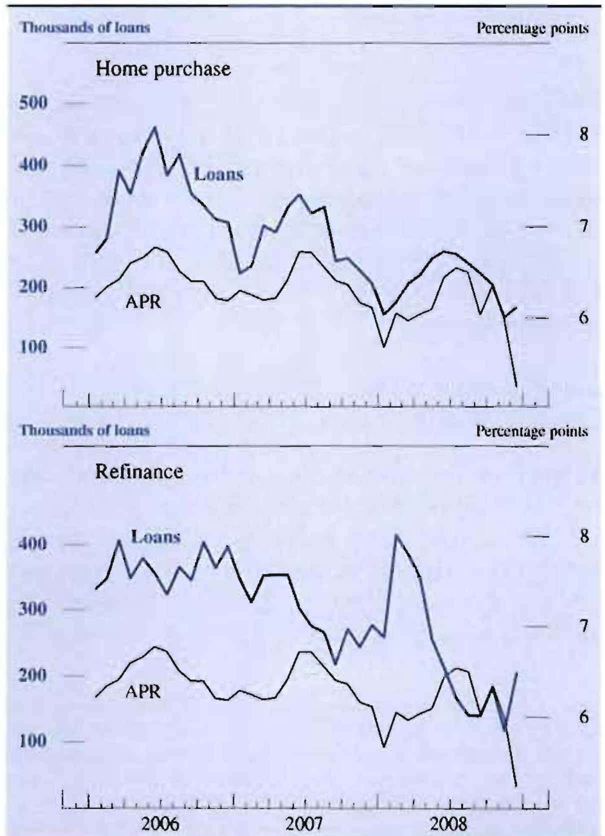
SOURCE: Here and in the subsequent tables and figures except as noted, Federal Financial Institutions Examination Council, data reported under the Home Mortgage Disclosure Act (www.ffiec.gov/hmda).

(savings and loans and savings banks), 2,026 credit unions, and 1,507 mortgage companies (table 1).[12] The number of reporting institutions fell nearly 3 percent from 2007, primarily because of a relatively large decline in the number of independent mortgage companies—that is, mortgage companies that were neither subsidiaries of depository institutions nor affiliates of bank or savings institution holding companies that reported data.

Reporting lenders submitted information on 14.2 million applications for home loans of all types in 2008, down 34 percent from 2007 and almost 50 percent from 2006 (table 2). Lenders also reported information on 2.9 million loans that they had purchased from other institutions and on 276,000 requests for preapprovals of home-purchase loans that did not result in an application for a loan (preapproval data not shown in table).

The top panel of figure 1, which shows the monthly counts of loans, indicates a downward trend in home-purchase lending from 2006 to 2008. For instance, the 2006 peak month for home-purchase lending (in June) was more than 400,000 loans, compared with less than 300,000 loans at the peak month (June) in 2008. The bottom panel of figure 1 indicates that refinance lending jumped at the beginning of 2008 to a level in February exceeding any month in 2006 or

1. Volume of home-purchase and refinance originations and annual percentage rate, by month, 2006–08



NOTE: The data are monthly. Loans are first-lien mortgages for site-built properties and exclude business loans. Annual percentage rate (APR) is the average monthly rate for a 30-year fixed-rate mortgage from the Primary Mortgage Market Survey, as reported by the Federal Financial Institutions Examination Council, www.ffiec.gov/ratespread/newcalc.aspx.

12. Not all mortgage lenders have to provide HMDA data. Depositories must have had an office in a metropolitan area and had assets of more than $37,000,000 at the end of 2007 to report data for 2008. For filing year 2008, 55.7 percent of the commercial banks in existence on December 31, 2008, filed HMDA data. However, the filers had 93.0 percent of the total mortgage dollars outstanding on commercial bank portfolios at that time. For savings institutions, 70.9 percent of existing institutions holding 94.1 percent of the mortgage dollars filed. For credit unions, only 25.4 percent of the institutions filed; however, these institutions held 92.5 percent of the mortgage dollars outstanding on credit union balance sheets.

Independent mortgage banks needed to meet other criteria related to their dollar volume of mortgage lending, the share of mortgage lending of their total lending, and their lending in metropolitan areas to be eligible for reporting. There is no comprehensive list of independent mortgage lenders, so it is difficult to know the full scope of HMDA data coverage of such lenders.

2. Home loan and reporting activity of lending institutions covered under the Home Mortgage Disclosure Act, 1990–2008

Number

Year	Applications (millions)				Loans purchased (millions)	Total[1] (millions)	Reporters	Disclosure reports[2]
	Applications received for home loans on 1–4 family properties, and home loans purchased from another institution			Total[1]				
	Home purchase	Refinance	Home improvement					
1990	3.3	1.1	1.2	5.5	1.2	6.7	9,332	24,041
1991	3.3	2.1	1.2	6.6	1.4	7.9	9,358	25,934
1992	3.5	5.2	1.2	10.0	2.0	12.0	9,073	28,782
1993	4.5	7.7	1.4	13.6	1.8	15.4	9,650	35,976
1994	5.2	3.8	1.7	10.7	1.5	12.2	9,858	38,750
1995	5.5	2.7	1.8	10.0	1.3	11.2	9,539	36,611
1996	6.3	4.5	2.1	13.0	1.8	14.8	9,328	42,946
1997	6.8	5.4	2.2	14.3	2.1	16.4	7,925	47,416
1998	8.0	11.4	2.0	21.4	3.2	24.7	7,836	57,294
1999	8.4	9.4	2.1	19.9	3.0	22.9	7,832	56,966
2000	8.3	6.5	2.0	16.8	2.4	19.2	7,713	52,776
2001	7.7	14.3	1.9	23.8	3.8	27.6	7,631	53,066
2002	7.4	17.5	1.5	26.4	4.8	31.2	7,771	56,506
2003	8.2	24.6	1.5	34.3	7.2	41.5	8,121	65,808
2004	9.8	16.1	2.2	28.1	5.1	33.3	8,853	72,246
2005	11.7	15.9	2.5	30.2	5.9	36.0	8,848	78,193
2006	10.9	14.0	2.5	27.5	6.2	33.7	8,886	78,638
2007	7.6	11.5	2.2	21.4	4.8	26.2	8,610	63,055
2008	5.0	7.7	1.4	14.2	2.9	17.1	8,388	51,109

NOTE: Except as noted, applications exclude requests for preapproval that were denied by the lender or were accepted by the lender but not acted upon by the borrower. In this article, applications are defined as being for a loan on a specific property; they are thus distinct from requests for preapproval, which are not related to a specific property.

1. Applications for multifamily homes are included only in the total columns; for 2008, these applications numbered 42,792.

2. A report covers the mortgage lending activity of a lender in a single metropolitan statistical area in which it had an office during the year.

2007. Refinance lending then fell sharply during the remainder of 2008. Figure 1 also shows that the annual percentage interest rate (APR) for a 30-year fixed-rate prime mortgage fell sharply at the end of 2007 to levels not seen in several years; it continued to fall in early 2008 and dipped below 6 percent in January 2008, which may have triggered the jump in refinance lending.[13]

The Potential Effect of Nonreporters on Lending Volume in the 2008 HMDA Data

As part of the HMDA data collection effort, the Federal Reserve Board tracks each financial institution that is expected to report (including all lenders that reported data for the previous calendar year) and then contacts those that did not submit a report.[14] In some cases, nonreporting is due to a cessation of business; in others, it is the result of a merger, acquisition, or consolidation. When a merger, acquisition, or consolidation occurs, all lending by the institutions covered by HMDA in that year is reported by the surviving entity; only when an institution goes out of business is the volume of reported loans possibly affected.

The Federal Reserve's respondent tracking report records what happened to each institution that failed to report. For institutions that ceased operations, the tracking report also records, to the extent possible, the month that operations were discontinued. The tracking report indicates that 15 institutions that reported HMDA data for 2007 ceased operations during 2008 or at the beginning of 2009 and did not report lending activity for 2008.[15] Of the 15 nonreporting institutions, 3 were banking institutions and 12 were independent mortgage companies.

Although it is not possible to know how many loans these 15 institutions originated in 2008 before discontinuing operations, one can gauge their poten-

13. The APRs for prime loans are based on data from Freddie Mac's Primary Mortgage Market Survey and reflect interest rates and discount points offered to consumers during the first three days of each week. For more details, see note 29. Loan counts in figure 1 are aggregated to the monthly level using the date of loan origination, as opposed to an earlier date when the interest rate for the loan was locked. If the HMDA data were aggregated using the "lock" date, the spike in refinancings would likely occur closer to the January dip in the APR.

14. Sometimes contacting a nonreporting lender is impossible because the firm has ceased operations.

15. The list of lenders that ceased operations and did not report is as comprehensive as possible at this time. If additional information becomes available, the list will be updated on the Federal Reserve Board's website. For a list of the institutions that ceased operations and did not report, see appendix table A.1, which has been posted separately as an Excel file.

tial importance by measuring their lending activity in 2007.[16] In the aggregate, these 15 nonreporting companies accounted for about 5 percent of all conventional first-lien loans for site-built properties in the 2007 HMDA data (data not shown in tables).[17] The tracking reports indicate that the 15 nonreporting institutions had exited the marketplace by the middle of 2008, so their effects on the completeness of the HMDA data are confined to the first half of the year.

Government-Backed Lending

Government-backed loans—those insured by the FHA and those backed by guarantees from the VA, the Farm Service Agency, or the Rural Housing Service—rose in 2008 relative to 2007. The rise in FHA-insured lending was particularly large. The number of reported FHA-insured loans was almost three times greater in 2008 than in 2007, and the FHA-insured share of home-purchase and refinance loans rose to more than 21 percent in 2008 from less than 6 percent in 2007 (table 3).[18] Moreover, by December of 2008, the FHA's share of home-purchase and refinance lending was about 30 percent (data not shown in tables).

Lenders typically require borrowers to purchase mortgage insurance (through the FHA or PMI companies) or a credit guarantee (through the VA, for example) when the borrower provides a small down payment.[19] Such credit enhancements protect lenders against loss if the borrower defaults.

3. Share of home loans, by type of loan, 1990–2008

Percent

Year	Conventional	FHA insured	VA/other guaranteed[1]	All
1990	77.4	18.1	4.5	100
1991	81.7	13.8	4.5	100
1992	87.1	8.8	4.1	100
1993	81.5	13.0	5.5	100
1994	81.5	12.6	5.9	100
1995	81.9	12.7	5.5	100
1996	82.5	12.7	4.8	100
1997	82.7	12.9	4.4	100
1998	85.7	10.0	4.3	100
1999	84.8	11.8	3.4	100
2000	84.4	12.7	2.8	100
2001	87.1	10.3	2.6	100
2002	90.1	7.6	2.3	100
2003	91.3	6.2	2.5	100
2004	93.0	5.1	1.9	100
2005	95.3	3.4	1.3	100
2006	95.2	3.5	1.3	100
2007	92.5	5.6	1.9	100
2008	74.3	21.5	4.2	100

NOTE: Includes home-purchase and refinance loans for 1–4 family, owner-occupied properties.

1. Includes loans guaranteed by the U.S. Department of Veterans Affairs, the Farm Service Agency, or the Rural Housing Service.

FHA Federal Housing Administration.

The VA guarantees a percentage of the loan amount up to a certain limit (but with no cap on the loan size), while the FHA cannot insure mortgages that are larger than legislated limits. Historically, these limits have been set at levels that were sufficiently low that many homebuyers in areas with high home prices have not been able to use these programs. Under the Economic Stimulus Act of 2008, the limits were raised in high-cost areas. In a later section, "The Surge in FHA and VA Lending," we will analyze more closely the contribution of increased limits to the increase in FHA and VA-backed lending. We will also examine whether difficulties facing PMI companies contributed to the shift to government-backed lending.

Loan Sales

The HMDA data document the importance of the secondary market for home loans. Just over 73 percent of the first-lien home loans reported in 2008 were sold during the same year (table 4).[20] Notably, the rise in government-backed lending between 2007 and 2008 described earlier has resulted in a sharp increase in the proportion of loans sold into pools

16. An estimate of the underreporting of first liens for single-family properties can be made using quarterly financial data filed with the Office of Thrift Supervision for the two largest institutions, Washington Mutual Bank and IndyMac Bank. These institutions accounted for 88 percent of the loans made in 2007 by the 15 nonreporting institutions. Assuming the first liens on one- to four-family properties originated by these thrifts in 2008 were of the same average loan amount as those originated in the corresponding quarters in the 2007 HMDA data, the 2008 HDMA data is underreported because of these two institutions by about 1.7 percent for the year: 59,000 loans in the first quarter (3.2 percent), 39,500 in the second (2.2 percent), 2,900 in the third (0.2 percent), and 4,000 in the fourth (0.3 percent). These values may not be evenly distributed across loan purposes. In 2007, Washington Mutual originated refinance loans as a higher proportion of all of its lending in all quarters than did all HMDA lenders (a 15 percentage point average difference). IndyMac's relative shares were similar to those of HMDA lenders overall. Most of the loans originated by Washington Mutual in 2008 were included in the HMDA data as purchased loans by JPMorgan Chase Bank and not as originations.

17. Market shares reported in this article are based on the number of loans and not the dollar amounts.

18. Loans are for owner-occupied, one- to four-family properties. Junior-lien loans and loans for manufactured homes are included because the HMDA data prior to 2004 do not separately identify these loans. The FHA share of home-purchase and refinance lending in 2008, excluding junior-lien and manufactured-home loans, was 22.5 percent. For more information about the reporting details, see Robert B. Avery, Glenn B. Canner, and Robert E. Cook (2005), "New Information Reported under HMDA and Its Application in Fair Lending Enforcement," *Federal Reserve Bulletin*, vol. 91 (Summer), pp. 344–94.

19. For more details about PMI, see appendix B, "Private Mortgage Insurance Data."

20. Loans that are sold in a different calendar year than the year of origination are recorded as being held in the lender's portfolio in the HMDA data.

4. Distribution of loans sold during year of origination, by type of purchaser, number of loans, and amount of loans, 2006–08

Percent

Type of purchaser	2006		2007		2008	
	By number of loans	By amount of loans	By number of loans	By amount of loans	By number of loans	By amount of loans
Fannie Mae	17.2	14.3	23.4	21.2	25.8	27.1
Ginnie Mae	2.2	1.4	3.5	2.4	11.4	9.5
Freddie Mac	10.7	8.9	15.3	13.4	16.2	16.2
Farmer Mac	.0	.0	.0	.0	.0	.0
Private securitization	9.0	11.0	3.6	5.0	.5	.6
Commercial bank or savings institution	6.9	7.6	6.8	7.6	8.8	8.8
Insurance company	15.7	15.5	10.5	10.3	9.7	9.4
Affiliate of institution	14.5	16.2	21.4	23.4	12.3	13.5
Other	23.8	25.0	15.6	16.7	15.4	14.8
Total	100	100	100	100	100	100
MEMO						
Share of all originations sold	72.2	71.9	69.5	67.0	73.2	72.0

NOTE: Includes only first-lien loans.

guaranteed by the Government National Mortgage Association (Ginnie Mae).

More prominent in the secondary market are Fannie Mae and Freddie Mac. For the most part, the purchases made by Fannie Mae and Freddie Mac consist of conventional loans originated to purchase homes or to refinance existing loans. Fannie Mae and Freddie Mac are restricted by law to purchase mortgages with origination balances below a specific amount, known as the conforming loan limit. As with the FHA loan limits mentioned earlier, the Economic Stimulus Act of 2008 increased the conforming loan limits.[21]

In 2008, sales to Fannie Mae and Freddie Mac accounted for about 42 percent of the loans reported as sold, compared with about 28 percent in 2006. At least in part, this increase in market share reflects the reduction during this period in the higher-priced share of loans, which the GSEs typically do not purchase directly. Higher-priced loans were often sold through the private securitization process; indeed, loans sold through this process diminished considerably, from about 10 percent of sold loans in 2006 to less than 1 percent in 2008.

Credit Unions

A credit union is a cooperative financial institution formed by a group of people with a common bond, such as employees of a firm or members of a religious organization, university, or governmental entity.[22] Members of a credit union pool their funds to extend credit to their fellow members. In 2008, about 7,700 credit unions across the country served upward of 90 million members. The vast majority of credit unions are small measured by asset size, and many do little home lending. As such, only about 2,000 credit unions report under HMDA each year (table 1).

Unlike other types of lenders, credit unions have not experienced a significant reduction in home-lending activity over the past couple of years (table 5.A). As a consequence, their share of one- to four-family, site-built HMDA loans has risen, particularly for junior liens (a 28.2 percent share in 2008). Their high market share of junior liens can be explained, in part, by the collapse of the piggyback market, discussed later in the section "Piggyback Lending." Piggyback junior-lien home-purchase loans are issued as part of a purchase package. Less than 5 percent of credit union junior liens have been for home purchases, so they were not particularly affected by this collapse.

The credit union data afford a unique opportunity to benchmark the HMDA data. Unlike other depositories, all credit unions are required to report their aggregate first- and junior-lien mortgage originations by number each year as part of their regulatory filings. Savings and loan institutions that report to the Office of Thrift Supervision also report aggregated information, but in dollar amounts instead of number of loans (table 5.B). These data allow a determination of the HMDA-filer coverage relative to all credit union and savings and loan mortgage lending. The credit union data show that for 2008, almost 90 percent of all credit union mortgage originations were made by lenders who reported under HMDA. For first liens, the numbers reported in regulatory filings by these lenders corresponded relatively closely to the number reported in HMDA (93 percent of first-lien loan originations are reported in HMDA, data derived

21. For more on the conforming loan limit, see www.fhfa.gov/Default.aspx?Page=185.

22. The notion of a common bond has been expanded some in recent years, for example, to include individuals from broad geographic areas.

5. Home lending, 2004–08

A. By credit unions, number of loans

Year	First liens		Junior liens		Unsecured		MEMO: Originations in credit union reports of condition and income				
							First liens		Closed-end junior liens		Number of HELOCs originated by HMDA reporters
	Number	HMDA percent distribution	Number	HMDA percent distribution	Number	HMDA percent distribution	Number originated by HMDA reporters	HMDA share of all such liens	Number originated by HMDA reporters	HMDA share of all such liens	
2004	357,433	2.7	166,028	9.9	21,940	13.7	381,683	87.2	343,150	88.1	740,962
2005	341,307	2.7	197,070	7.6	20,382	12.9	372,517	88.1	412,253	89.9	651,507
2006	291,863	2.7	237,361	7.8	19,053	11.7	329,108	87.7	497,898	90.8	539,658
2007	313,447	3.7	205,231	12.0	19,128	12.0	336,229	88.7	424,611	90.8	461,292
2008	359,645	5.5	145,500	28.2	18,656	11.4	386,079	89.8	305,204	89.6	451,725

NOTE: Excludes loans for multifamily properties.
HELOC Home equity line of credit.

SOURCE: Credit union reports of condition and income from National Credit Union Administration.

5. Home lending, 2004–08

B. By savings and loan institutions, thousands of dollars

Year	First liens		Junior liens		Unsecured		MEMO: Originations in thrift reports of condition and income			
							First liens[1]		Closed-end junior liens[1]	
	Thousands of dollars	HMDA percent distribution	Thousands of dollars	HMDA percent distribution	Thousands of dollars	HMDA percent distribution	Thousands of dollars originated by HMDA reporters	HMDA share of all such liens	Thousands of dollars originated by HMDA reporters	HMDA share of all such liens
2004	581,777,825	23.4	11,797,538	15.4	48,902	3.6	596,252,410	98.7	...	...
2005	582,083,085	21.1	22,907,264	17.4	65,940	4.4	648,433,523	98.7	...	...
2006	457,429,907	18.7	22,984,024	13.5	135,685	8.2	436,043,072	78.6	...	...
2007	486,826,148	24.7	16,573,910	16.8	155,330	9.8	562,351,440	98.9	63,642,622	97.9
2008	313,662,849	22.7	3,973,576	13.4	189,703	11.3	265,559,705	86.1	30,351,849	85.9

NOTE: Excludes loans for multifamily properties and those originated by institutions that did not report origination data to the Office of Thrift Supervision for the full calendar year.

1. Prior to 2007, data from the Office of Thrift Supervision did not differentiate between first and junior liens. As a result, the column for first liens for 2004–06 includes junior liens.

. . . Not available.

SOURCE: Thrift reports of condition and income from the Office of Thrift Supervision.

from table 5.A). However, for closed-end junior liens, only about 48 percent appear to be reported, which suggests that many of these loans are junior liens not reportable under HMDA rules because they are neither for home purchase, home improvement, or refinancing of an existing lien.

Lending for Manufactured Homes

Since 2004, the HMDA data have distinguished between loans secured by site-built properties and those related to manufactured homes. Manufactured-home lending differs from lending for site-built properties along a number of dimensions, including typical loan amounts, borrower incomes, and the share of such loans that are higher priced.

The reported number of manufactured-home loans fell by about the same proportion as for site-built homes from 2007 through 2008 (table 6). However, when measured from 2005 (a year when mortgage markets were quite robust), the decline in loan activity was much steeper for site-built homes than for manufactured homes. Over this longer period, the number of loans to buy site-built homes fell 48 percent, and the number to buy manufactured homes fell 25 percent.

The mean loan amount used to purchase manufactured homes in 2008 was $75,000, which was much smaller than the mean loan amount of $217,000 for site-built homes. Similarly, the mean income of borrowers purchasing manufactured homes in 2008 was $48,400, which was much smaller than the mean income of $93,300 for purchasers of site-built homes for the same period.

Lending for Non-Owner-Occupied Properties

One factor contributing to the strong performance of housing markets over the first half of this decade was the growth in sales of homes to investors or individuals purchasing second or vacation homes, which are collectively referred to here as non-owner-occupied

6. Manufactured and site-built home lending, 2004–08

Year	Manufactured homes		Site-built homes	
	Number	Percent distribution	Number	Percent distribution
2004	129,150	2.7	4,654,243	97.3
2005	127,336	2.6	4,830,594	97.4
2006	131,188	3.0	4,290,023	97.0
2007	122,834	3.6	3,325,082	96.4
2008	95,895	3.7	2,511,827	96.3
MEMO				
Borrower income (thousands of dollars)[1]				
Mean	48.4	...	93.3	...
Median	42.0	...	69.0	...
Loan amount (thousands of dollars)[1]				
Mean	74.6	...	216.9	...
Median	62.0	...	176.0	...

NOTE: Includes only first-lien, owner-occupied home-purchase loans for 1–4 family homes.

1. For loans originated in 2008.

... Not applicable.

properties.[23] From 1996 through 2005, the share of one- to four-family, site-built home purchase loans for non-owner-occupied properties rose each year, increasing from 6.4 percent to 17.3 percent over the period (table 7). This share has since fallen to 13.5 percent in 2008.

Currently, loans for non-owner-occupied properties are not eligible for the FHA or VA programs. However, the GSEs can purchase non-owner-occupied property loans that otherwise meet their requirements, but they typically demand interest rates that are about 3/8 of a percentage point higher than the interest rates on loans for similar owner-occupied properties. Perhaps reflecting less of an appetite for such loans on the part of private lenders, the GSE market share of both home-purchase and refinance non-owner-occupied property lending grew about 10 percentage points from 2007 to 2008 (33.8 percent to 43.1 percent for home-purchase lending and 28.4 percent to 39.2 percent for refinance lending). Nevertheless, non-owner-occupied property lending remained a comparatively small part of overall GSE lending in 2008 (17.9 percent of home-purchase lending and 11.3 percent of refinance lending; data not shown in tables).

Piggyback Lending

Since the early 2000s, piggyback loans emerged as an important segment of the conventional mortgage market, particularly regarding loans to purchase homes.

7. Non-owner-occupied lending as a share of all first liens to purchase or refinance one- to four-family, site-built homes, by number and dollar amount of loans, 1990–2008

Percent

Year	Home purchase		Refinance	
	Number	Dollar amount	Number	Dollar amount
1990	6.6	5.9	9.0	8.4
1991	5.6	4.5	5.8	4.9
1992	5.2	4.0	4.7	4.0
1993	5.1	3.8	5.1	4.3
1994	5.7	4.3	8.0	6.6
1995	6.4	5.0	7.8	6.4
1996	6.4	5.1	6.7	5.8
1997	7.0	5.8	6.8	5.7
1998	7.1	6.0	5.2	4.4
1999	7.4	6.4	6.7	5.9
2000	8.0	7.2	7.4	7.0
2001	8.6	7.6	5.8	5.2
2002	10.5	9.2	6.1	5.3
2003	11.9	10.6	6.2	5.6
2004	14.9	13.1	8.3	7.2
2005	17.3	15.7	8.8	7.9
2006	16.5	14.8	10.7	9.9
2007	14.9	13.8	11.3	10.6
2008	13.5	12.3	10.0	9.5

In piggyback lending, borrowers simultaneously receive a first-lien mortgage and a junior-lien (piggyback) loan. The piggyback loan finances the portion of the purchase price not being financed by the first mortgage and sometimes any cash payment that might have been made; the junior-lien loan may amount to as much as 20 percent of the purchase price. In many cases, borrowers used piggyback loans to avoid the need to obtain PMI.[24] Sometimes, piggyback loans were used to keep the size of the first-lien

23. An investment property is a non-owner-occupied dwelling that is intended to be rented or resold for a profit. Some non-owner-occupied units—vacation homes and second homes—are for the primary use of the owners and thus would not be considered investment properties. The HMDA data do not, however, distinguish between these two types of non-owner-occupied dwellings.

24. One advantage of piggyback loans over those backed by PMI insurance was that PMI payments made by the borrower did not qualify as deductible interest under Internal Revenue Service (IRS) guidelines, whereas interest payments on many piggyback loans did.

8. Piggyback home-purchase lending, 2004–08

Year	Number	Incidence	Memo	
			Higher-priced proportion of piggyback loans	Piggyback proportion of higher-priced loans
2004	530,740	12.9	19.1	22.5
2005	950,965	21.5	53.2	46.7
2006	950,408	24.3	44.4	42.8
2007	356,959	12.2	16.0	13.9
2008	43,017	2.7	3.0	1.1

NOTE: Conventional first-lien mortgages for owner-occupied, 1–4 family, site-built properties.

loan within the Fannie Mae and Freddie Mac conforming loan limits so the borrower could take advantage of the lower interest rates available on conforming loans.

The HMDA data help document the extent of piggyback lending over time. However, because not all lenders submit HMDA data, some of the junior-lien loans that are reported may not have the corresponding first-lien loan reported, and some of the first-lien loans that are reported may not have the associated junior-lien loan reported. Also, some piggyback loans may be open-end loans that do not need to be reported under HMDA.

The HMDA data for 2005 and 2006 show that lenders extended about 1.2 million junior-lien loans to help individuals purchase one- to four-family, site built homes for owner-occupied properties in each of these years. The number of reported junior-lien loans contracted sharply in 2007 to about 550,000 such loans. This contraction continued as the number of junior-lien loans declined by 83 percent from the 2007 level to only about 92,000 loans in 2008.

A loan-matching process can be undertaken to determine which reported junior-lien loans in the HMDA data appear to be associated with the appropriate reported first-lien loans.[25] Our matching algorithm indicates that in 2008, 2.7 percent of the nearly 1.6 million first-lien conventional loans to purchase one- to four-family, site-built owner-occupied homes involved a piggyback loan reported by the *same* lender, a proportion that was down 77 percent from 2007 (table 8).

The Disposition Of Applications By Loan Characteristics In 2008

Thus far, our analysis of the HMDA data has focused primarily on how the mortgage market has evolved over the past few years. In this section, we examine the information provided by HMDA about what home lending looked like in 2008.

Table 9 categorizes every loan application reported in 2008 into 25 distinct product categories characterized by loan and property type, purpose of the loan, and lien and owner-occupancy status. Each product category contains information on the number of total applications, application denials, originated loans, loans with prices above the reporting thresholds established by HMDA reporting rules for identifying higher-priced loans, loans covered by the Home Ownership and Equity Protection Act (HOEPA), and the mean and median APR spreads for loans reported as higher priced.[26]

The 2008 HMDA data include information on 14 million loan applications, about 12 million of which were acted upon by the lender. The vast majority of these applications were for first-lien loans on one- to four-family, site-built homes. Among these applications, about two-thirds of home-purchase applications and four-fifths of refinance applications were for conventional loans. These shares of applications for conventional loans are considerably lower than were observed in earlier years (data not shown in tables).

The Congress allowed the deductibility of PMI premiums of some borrowers starting in 2007, which reduced the relative attractiveness of piggybacks.

25. For the analysis here, a junior-lien loan was identified as a piggyback loan to a reported first-lien loan if both loans (1) were conventional loans involving property in the same census tract; (2) were originated by the same lender with approximately the same dates of loan application and closing; and (3) had the same owner-occupancy status and identical borrower income, race or ethnicity, and sex.

26. The type of information provided in tables 9 and 10 is identical to that provided in analyses of earlier years of HMDA data. Comparisons of the numbers in these two tables with earlier years can be made by consulting the following articles: Robert B. Avery, Kenneth P. Brevoort, and Glenn B. Canner (2008), "The 2007 HMDA Data," *Federal Reserve Bulletin*, vol. 94, pp. A107–A146; Robert B. Avery, Kenneth P. Brevoort, and Glenn B. Canner (2007), "The 2006 HMDA Data," *Federal Reserve Bulletin*, vol. 93, pp. A73–A109; Robert B. Avery, Kenneth P. Brevoort, and Glenn B. Canner (2006), "Higher-Priced Home Lending and the 2005 HMDA Data," *Federal Reserve Bulletin*, vol. 92, pp. A123–A166; and Avery, Canner, and Cook, "New Information Reported under HMDA."

9. Disposition of applications for home loans, and origination and pricing of loans, by type of home and type of loan, 2008

Type of home and loan	Applications				Loans originated							
	Number submitted	Acted upon by lender			Number	Loans with APR spread above the threshold[1]						
		Number	Number denied	Percent denied		Number	Percent	Distribution, by percentage points of APR spread				
								3–3.99	4–4.99	5–6.99	7–8.99	9 or more
1–4 FAMILY												
NONBUSINESS RELATED[3]												
Owner occupied												
Site-built												
Home purchase												
Conventional												
First lien	2,491,474	2,166,315	391,045	18.1	1,565,612	113,767	7.3	69.9	16.4	11.7	1.7	.4
Junior lien	146,420	127,818	22,858	17.9	90,232	9,899	11.0	...	...	93.1	6.2	.7
Government backed												
First lien	1,369,879	1,211,975	209,886	17.3	941,575	89,882	9.5	93.1	5.0	1.3	.6	.1
Junior lien	1,301	1,161	95	8.2	1,043	4	.4	...	...	100.0	.0	.0
Refinance												
Conventional												
First lien	5,227,940	4,395,340	1,627,991	37.0	2,328,102	245,118	10.5	47.7	18.3	20.9	12.6	.6
Junior lien	471,860	419,789	173,203	41.3	214,579	31,571	14.7	...	...	55.2	23.0	21.9
Government backed												
First lien	1,189,774	944,697	387,460	41.0	498,271	65,784	13.2	92.7	6.1	.9	.2	.0
Junior lien	937	752	262	34.8	372	4	1.1	...	...	75.0	25.0	.0
Home improvement												
Conventional												
First lien	451,561	389,513	187,249	48.1	172,328	53,476	31.0	41.6	19.9	21.5	15.5	1.5
Junior lien	421,964	373,086	165,662	44.4	179,313	22,670	12.6	...	...	59.0	21.1	19.9
Government backed												
First lien	21,632	17,866	6,770	37.9	9,834	1,360	13.8	81.7	10.1	5.8	2.3	.2
Junior lien	2,928	2,493	524	21.0	1,602	1,211	75.6	...	...	33.2	40.7	26.1
Unsecured (conventional or government backed)	384,490	378,389	188,293	49.8	151,475	...	...	...	...	...	...	...
Manufactured												
Conventional, first lien												
Home purchase	296,213	287,601	156,475	54.4	68,147	51,354	75.4	19.6	21.6	31.2	17.3	10.3
Refinance	114,728	103,996	51,076	49.1	42,098	26,791	63.6	22.2	19.7	33.5	20.9	3.7
Other	137,052	121,464	45,691	37.6	65,414	16,599	25.4	52.0	10.2	22.0	11.0	4.9
Non-owner occupied[4]												
Conventional, first lien												
Home purchase	592,174	521,870	104,761	20.1	368,595	57,323	15.6	74.0	15.4	7.5	1.9	1.2
Refinance	593,296	507,391	167,245	33.0	293,490	34,433	11.7	68.1	16.0	12.1	3.1	.8
Other	118,535	106,634	44,147	41.4	55,145	8,259	15.0	35.3	17.1	36.6	8.2	2.9
BUSINESS RELATED[3]												
Conventional, first lien												
Home purchase	49,316	47,546	2,091	4.4	44,217	2,317	5.2	39.9	29.4	19.3	5.7	5.7
Refinance	46,847	44,599	3,095	6.9	39,935	1,865	4.7	43.2	33.6	18.6	4.2	.5
Other	20,828	17,529	2,522	14.4	14,374	972	6.8	47.4	8.1	38.2	4.7	1.5
MULTIFAMILY[5]												
Conventional, first lien												
Home purchase	13,921	12,625	1,913	15.2	10,065	474	4.7	56.8	24.9	16.7	1.3	.4
Refinance	23,244	21,580	3,488	16.2	17,089	634	3.7	53.6	24.3	20.2	1.9	.0
Other	5,627	5,327	800	15.0	4,355	125	2.9	47.2	19.2	24.8	8.0	.8
Total	**14,193,941**	**12,227,356**	**3,944,602**	**32.3**	**7,177,262**	**835,892**	**11.6**	**55.1**	**14.1**	**19.1**	**8.9**	**2.8**

1. Annual percentage rate (APR) spread is the difference between the APR on the loan and the yield on a comparable-maturity Treasury security. The threshold for first-lien loans is a spread of 3 percentage points; for junior-lien loans, it is a spread of 5 percentage points.

2. Loans covered by the Home Ownership and Equity Protection Act of 1994 (HOEPA), which does not apply to home-purchase loans.

3. Business-related applications and loans are those for which the lender reported that the race, ethnicity, and sex of the applicant or co-applicant are not applicable; all other applications and loans are nonbusiness related.

4. Includes applications and loans for which occupancy status was missing.

5. Includes business-related and nonbusiness-related applications and loans for owner-occupied and non-owner-occupied properties.

. . . Not applicable.

Patterns in the denial rates are consistent with what has been observed in earlier years. Denial rates on applications for home-purchase loans are generally lower than those observed for either refinance or home-improvement loans. Denial rates on applications backed by manufactured housing are generally higher than those backed by site-built homes.

Furthermore, requests for a first-lien, conventional, home-purchase loan backed by a manufactured home

9. Disposition of applications for home loans, and origination and pricing of loans, by type of home and type of loan, 2008—*Continued*

Type of home and loan	Loans originated: Loans with APR spread above the threshold[1]: APR spread (percentage points): Mean	Median	Number of HOEPA-covered loans[2]
1–4 FAMILY			
NONBUSINESS RELATED[3]			
Owner occupied			
Site-built			
Home purchase			
Conventional			
First lien	3.9	3.5	...
Junior lien	5.7	5.5	...
Government backed			
First lien	3.4	3.2	...
Junior lien	5.9	5.7	...
Refinance			
Conventional			
First lien	4.7	4.1	2,686
Junior lien	7.2	6.6	873
Government backed			
First lien	3.4	3.3	583
Junior lien	6.2	5.8	0
Home improvement			
Conventional			
First lien	5.0	4.4	1,085
Junior lien	7.1	6.4	854
Government backed			
First lien	3.7	3.3	8
Junior lien	7.8	7.7	27
Unsecured			
(conventional or government backed)	...	...	...
Manufactured			
Conventional, first lien			
Home purchase	6.0	5.5	...
Refinance	5.7	5.5	1,650
Other	4.9	3.9	614
Non-owner occupied[4]			
Conventional, first lien			
Home purchase	3.9	3.5	...
Refinance	4.0	3.6	128
Other	5.1	4.8	76
BUSINESS RELATED[3]			
Conventional, first lien			
Home purchase	4.9	4.3	...
Refinance	4.4	4.2	4
Other	4.6	4.2	3
MULTIFAMILY[5]			
Conventional, first lien			
Home purchase	4.2	3.8	...
Refinance	4.2	3.9	0
Other	4.6	4.1	2
Total	**4.6**	**3.8**	**8,593**

is the only one of the 25 product categories for which the majority of applications are denied.

In addition to the application data provided under HMDA, about 734,000 requests for preapprovals that were acted on by the lender were reported under HMDA (table 10). Almost one-quarter of these requests for preapproval were denied by the lender. Of the applications acted on by the lender and preceded by requests for preapproval, more than 88 percent were approved (data derived from table 10).

The HMDA data also indicate which loans were covered by HOEPA. Under HOEPA, certain types of mortgage loans that have rates or fees above specified levels require additional disclosures to consumers and are subject to various restrictions on loan terms.[27] For 2008, 2,281 lenders reported extending about 8,600 loans covered by HOEPA (data regarding lenders not shown in tables). In comparison,

27. The requirement to report HOEPA loans in HMDA relates to whether the loan is subject to the original protections of HOEPA, as determined by the coverage test in the Federal Reserve Board's Regulation Z, 12 C.F.R. pt. 226.32(a). The required reporting is not triggered by the more recently adopted protections for "higher-priced mortgage loans" under Regulation Z, notwithstanding that those protections were adopted under authority given to the Board by HOEPA. See 73 Fed. Reg. 44522 (July 30, 2008). The more recent HOEPA regulations do not take effect until October 1, 2009.

10. Home-purchase lending that began with a request for preapproval: Disposition and pricing, by type of home, 2008

Type of home	Requests for preapproval			Applications preceded by requests for preapproval[1]		
	Number acted upon by lender	Number denied	Percent denied	Number submitted	Acted upon by lender: Number	Acted upon by lender: Number denied
1–4 FAMILY NONBUSINESS RELATED[3]						
Owner occupied						
Site-built						
Conventional						
First lien	455,565	103,025	22.6	275,844	245,481	33,303
Junior lien	24,846	5,767	23.2	15,112	14,394	1,820
Government backed						
First lien	172,217	54,004	31.4	107,065	97,422	12,461
Junior lien	81	30	37.0	47	38	11
Manufactured						
Conventional, first lien	21,908	1,600	7.3	20,102	17,155	8,027
Other	4,955	1,541	31.1	3,173	2,926	417
Non-owner occupied[4]						
Conventional, first lien	51,442	9,970	19.4	34,662	30,768	4,669
Other	2,003	530	26.5	1,328	1,009	284
BUSINESS RELATED[3]						
Conventional, first lien	1,059	62	5.9	960	842	71
Other	268	9	3.4	255	203	24
MULTIFAMILY[5]						
Conventional, first lien	117	6	5.1	105	91	9
Other	17	0	.0	17	15	3
Total	**734,478**	**176,544**	**24.0**	**458,670**	**410,344**	**61,099**

1. These applications are included in the total reported in table 9.
2. See note 1, table 9.
3. See note 3, table 9.
4. See note 4, table 9.
5. See note 5, table 9.
. . Not applicable.

lenders reported on about 11,500 loans covered by HOEPA in 2007. In the aggregate, HOEPA-related lending made up less than 0.2 percent of all the originations of home-secured refinance mortgages and home-improvement loans reported for 2008 (data derived from table 9).[28]

Relative to previous years, a smaller proportion of loans were reported as higher priced in 2008, and a larger proportion of reported higher-priced loans had an APR less than 1 percentage point above the reporting threshold. Furthermore, a substantial fraction of loans in 2008 were likely reported as higher priced because of atypical changes in the interest rate environment, rather than because the loans represented relatively high credit risk. We discuss this issue in detail in the next section and formulate an adjusted measure of higher-priced loans that is more consistent over time.

THE 2008 HMDA DATA ON LOAN PRICING

A number of factors can alter the incidence of reported higher-priced lending without any corresponding changes in subprime lending activity. In 2008, we identify two factors related to the overall interest rate environment—a steepening of the yield curve and widening spreads between Treasury rates and the interest rates on prime mortgage loans—that may have led to variation over time in whether a loan was reported as higher priced in HMDA. Understanding how these changes in the interest rate environment affected the reported incidence of higher-priced lending is important when attempting to draw inferences about how lending to high-risk borrowers has changed.

In the following sections, we discuss how changes in the interest rate situation during 2007 and 2008 may have affected the reported incidence of higher-priced lending. We then present the methodology we use to adjust for changes in the interest rate environment in a manner that provides a clearer picture of how home lending to high-credit-risk borrowers has changed. We then discuss what the 2008 HMDA data indicate about lending to high-risk borrowers.

How the Interest Rate Situation Affected the Reporting of Higher-Priced Loans

The reporting rules governing HMDA require lenders to use the yield on a Treasury security with a comparable term to maturity in determining whether a loan was required to be reported as higher priced under HMDA. Because most mortgages prepay well before the stated term of the loan, lenders typically use relatively shorter-term interest rates when setting the price of mortgage loans. For example, lenders often

28. HOEPA does not apply to home-purchase loans.

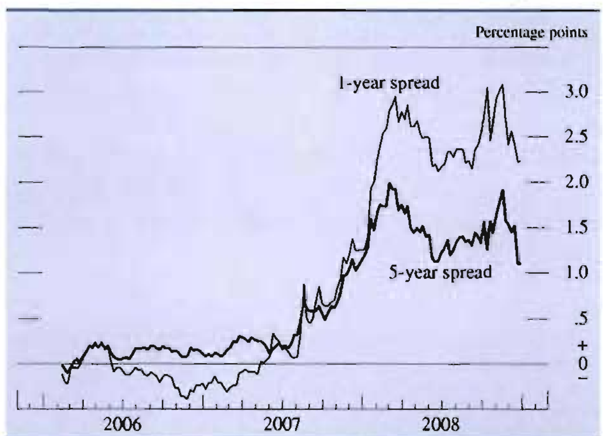
10. Home-purchase lending that began with a request for preapproval: Disposition and pricing, by type of home, 2008—*Continued*

Type of home	Loan originations whose applications were preceded by requests for preapproval									
	Number	Loans with APR spread above the threshold[2]								
		Number	Percent	Distribution, by percentage points of APR spread					APR spread (percentage points)	
				3-3.99	4-4.99	5-6.99	7-8.99	9 or more	Mean spread	Median spread
1–4 FAMILY NONBUSINESS RELATED[3]										
Owner occupied										
Site-built										
Conventional										
First lien	190,583	6,881	3.6	84.6	11.4	3.4	.4	.1	3.5	3.3
Junior lien	10,987	1,279	11.6	...	...	97.3	2.7	.1	5.6	5.4
Government backed										
First lien	80,369	7,844	9.8	94.4	4.9	.5	.1	.1	3.4	3.2
Junior lien	27	1	3.7	...	...	100.0	.0	.0	5.8	5.8
Manufactured										
Conventional, first lien	6,928	4,592	66.3	12.6	21.4	40.6	19.5	5.9	6.0	6.0
Other	2,293	594	25.9	86.7	8.1	4.4	.8	.0	3.6	3.3
Non-owner occupied[4]										
Conventional, first lien	23,382	2,086	8.9	82.2	12.4	3.8	1.0	.6	3.7	3.4
Other	646	33	5.1	24.2	.0	72.7	3.0	.0	5.0	5.2
BUSINESS RELATED[3]										
Conventional, first lien	731	53	7.3	50.9	32.1	15.1	1.9	.0	4.2	3.9
Other	172	15	8.7	86.7	13.3	.0	.0	.0	3.4	3.2
MULTIFAMILY[5]										
Conventional, first lien	71	1	1.4	.0	.0	100.0	.0	.0	6.0	6.0
Other	11	1	9.1	100.0	.0	.0	.0	.0	3.0	3.0
Total	**316,200**	**23,380**	**7.4**	**68.8**	**10.6**	**15.1**	**4.2**	**1.3**	**4.1**	**3.5**

price 30-year fixed-rate mortgages based on the yields on securities with maturities of fewer than 10 years, and they typically set interest rates on adjustable-rate mortgages (ARMs) on the basis of securities with much shorter terms. Thus, a change in the relationship between shorter-term and longer-term yields can affect the reported incidence of higher-priced lending. For example, if short-term interest rates fall relative to long-term rates, then the number and proportion of loans reported as higher priced will fall even if other factors, such as lenders' underwriting practices or borrowers' characteristics, are unchanged. For ARMs, this effect is further exacerbated by the manner in which APRs are calculated. The interest rates on most ARM loans, after the initial interest rate reset date, are typically set based on interest rates for one-year securities. As a result, the APRs for ARMs—which take into account the expected interest rates on a loan, assuming that the loan does not prepay and that the index rates used to establish interest rates after the reset do not change—will be particularly sensitive to changes in one-year interest rates. Consequently, higher-priced lending reported for ARMs will fall when one-year interest rates decline relative to other rates even if the relationship between long-term and intermediate-term rates is constant.

The relationship between shorter- and longer-term interest rates can be seen in the yield curve for Treasury securities, which displays how the yields on these securities vary with the term to maturity. Through the first seven months of 2007, the yield curve was relatively flat and then began to steepen, so that the differences between the yield on a 30-year Treasury security and the yields on the five-year and one-year Treasury securities increased (figure 2). Overall, this steepening continued in 2008; while

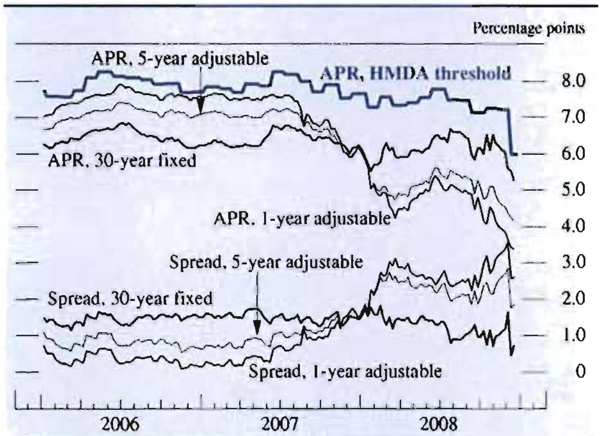
2. Spread between interest rates on 30-year and 5-year as well as 30-year and 1-year Treasury bonds, 2006–08



NOTE: The data are weekly. Prior to mid-February 2006, the 30-year Treasury bond was not available, and the data are missing.

SOURCE: Federal Reserve Board, Statistical Release H.15, www.federalreserve.gov/releases/h15/data.htm.

3. HMDA price-reporting threshold, interest rates for fixed- and adjustable-rate loans, and spreads between the threshold and such rates, 2006–08



NOTE: For explanation of Home Mortgage Disclosure Act (HMDA) price-reporting threshold, see text. The threshold and annual percentage rates (APRs) are for conventional first-lien 30-year prime loans.
SOURCE: APRs from the Freddie Mac Primary Mortgage Market Survey; see notes to figure 1.

spreads did narrow during the spring and at the very end of 2008, they remained consistently above the spreads observed in 2007. As discussed earlier, this change would be expected to *decrease* the incidence of reported higher-priced lending, particularly for ARMs, even in the absence of any changes in high-risk lending activity.

In addition to the steepening yield curve, a second change in the interest rate environment affected the likelihood that a loan was reported as higher priced in HMDA in 2008. As a result of the "flight to quality" and liquidity concerns caused by the financial crisis late in 2008, the spreads between the yields on Treasury securities and other securities and loans, including 30-year fixed-rate loans, widened considerably. At the beginning of 2008, the HMDA reporting threshold was 7.66 percent, and the APR on a 30-year fixed-rate prime loan, based on the rates reported by Freddie Mac's Primary Mortgage Market Survey (PMMS), was 6.12 percent (figure 3).[29] This difference resulted in a gap between the HMDA reporting threshold and the APR on a prime 30-year fixed-rate loan of 1.54 percentage points.

By the end of 2008, this gap had narrowed to approximately 0.77 percentage points, as the falling yields on Treasury securities pulled the HMDA reporting threshold closer to the prime mortgage rate. As a result, an increasing share of near-prime loans would have been reported as higher priced toward the end of 2008 over what had been reported earlier in the year. Widening spreads between the interest rates on Treasury securities and the rates on prime mortgage loans would be expected to *increase* the overall incidence of higher-priced lending, even if the credit-risk profile of borrowers remained unchanged.

These two changes in the interest rate environment in 2008, therefore, worked in opposite directions. The expected net effect of these two competing forces can be discerned from figure 3. The top line in that figure shows the HMDA reporting threshold in effect from 2006 through 2008. The middle three lines show the APRs calculated from the interest rates reported in Freddie Mac's PMMS for the three 30-year loan products reported in that survey: a fixed-rate loan, a 5-year ARM, and a 1-year ARM. As expected, the steepening of the yield curve had a much larger effect on the APRs associated with ARMs than on fixed-rate loans, though rates on all three products were generally lower in 2008 than they had been in earlier years.

The change during 2008 in the spreads between the APRs on these prime loans and the HMDA reporting threshold (shown by the bottom three lines in figure 3) suggests that the net effect of these changes depended on whether the loan had a fixed or adjustable rate. For ARMs, the spreads appeared to have widened substantially in 2008, suggesting that the incidence of reported higher-priced lending for these loans should have decreased in 2008 even without changes in borrower characteristics. For fixed-rate loans, spreads appear to have narrowed relative to earlier years. Consequently, the incidence of reported higher-priced lending for fixed-rate loans should have increased.

The difference in the net effects of the changes in the interest rate environment between fixed- and adjustable-rate loans complicates an analysis of the HMDA data, because one cannot determine whether a loan in the HMDA data is a fixed- or adjustable-rate loan. Using industry data, however, it is possible to estimate the monthly volume of both loan types.[30] These data show that at the beginning of 2007, ARMs

29. The weekly Freddie Mac Primary Mortgage Market Survey reports the average contract interest rates and discount points for all loans and the margin for adjustable-rate loans for loans offered to prime borrowers (those with the lowest credit risk). The survey currently reports information for two fixed-rate mortgage products (30 year and 15 year) and two ARM products (one-year adjustable rate and a five-year adjustable rate). For more information, see www.freddiemac.com/dlink/html/PMMS/display/PMMSOutputYr.jsp.

30. Source: Lender Processing Services, Inc. (LPS). LPS claims coverage of about 70 percent of the mortgage market, including all loans of 9 of the top 10 mortgage servicers (see www.lpsvcs.com). Their coverage is nonrandom and appears to overrepresent government-related lending and underrepresent jumbo and subprime lending.

11. Share of mortgage originations, by type and length of loan and by month of closing, 2006–08

Percent

Year	Month	30-year FRM	15-year FRM	Less than 5-year ARM	5-year or longer ARM	Total
2006	January	55.9	10.1	16.7	17.3	100
	February	58.4	10.1	14.6	17.0	100
	March	58.7	9.0	15.8	16.5	100
	April	59.7	8.1	16.0	16.2	100
	May	59.1	7.3	16.7	17.0	100
	June	59.4	6.8	15.6	18.2	100
	July	58.4	6.7	17.4	17.6	100
	August	60.6	6.9	16.5	15.9	100
	September	63.7	7.5	13.5	15.3	100
	October	65.2	7.9	12.3	14.6	100
	November	69.8	7.8	10.5	11.9	100
	December	71.6	7.9	8.9	11.6	100
2007	January	73.8	8.4	7.4	10.4	100
	February	75.8	8.0	7.2	9.0	100
	March	77.6	7.9	4.8	9.7	100
	April	79.0	8.4	3.7	8.9	100
	May	79.7	8.1	3.5	8.8	100
	June	79.8	7.5	3.8	9.0	100
	July	77.3	7.1	4.5	11.1	100
	August	77.7	7.3	3.9	11.1	100
	September	83.2	7.9	2.3	6.5	100
	October	83.4	8.8	1.6	6.1	100
	November	82.5	9.0	1.5	7.1	100
	December	82.5	10.1	1.5	6.0	100
2008	January	81.9	12.6	.9	4.6	100
	February	76.1	17.8	1.0	5.1	100
	March	70.1	19.7	1.9	8.3	100
	April	71.2	20.7	2.2	5.8	100
	May	76.7	17.6	1.2	4.5	100
	June	75.4	15.6	1.3	7.6	100
	July	76.2	14.2	1.5	8.1	100
	August	75.7	14.5	1.9	7.8	100
	September	79.9	14.0	1.7	4.4	100
	October	84.0	13.4	1.1	1.5	100
	November	85.3	12.4	1.0	1.3	100
	December	88.4	10.4	.6	.6	100

NOTE: Restricted to conventional first liens for owner-occupied, 1–4 family, site-built properties.

FRM Fixed-rate mortgage.

ARM Adjustable-rate mortgage.

SOURCE: Lender Processing Services, Inc.

accounted for about 17.8 percent of the market, falling to a range of between 5 and 6 percent at the beginning of 2008 (table 11). During 2008, ARM activity continued to fall (particularly in the latter portion of the year) to less than 2 percent. Given the small share of ARMs in the marketplace in 2008, the majority of distortions in the incidence of reported higher-priced lending caused by changes in the interest rate environment can be attributed to fixed-rate lending.

Adjusting for Changes in the Interest Rate Environment, 2006–08

The changes in the interest rate environment discussed in the previous section can result in loans of a given level of credit risk being reported as higher priced in the HMDA data at some points in time but not others. This variation makes drawing inferences about changes in high-credit-risk lending based upon changes in the incidence of reported higher-priced lending much more complicated. To better isolate the credit-risk component of pricing so that we have a definition of a "higher-priced loan" that is more constant over time and, therefore, more fully reflective of high-risk lending activity, we construct an adjusted measure.

We define the credit-risk component of a loan as the difference between the APR on that loan and the APR available to the lowest-risk prime borrowers at that time. This credit-risk component is assumed to be constant over time.[31] In other words, we assume that a nonprime borrower who received a loan with an APR that was 0.25 percentage points above the APR available to prime borrowers at that time would receive a loan that was 0.25 percentage points above the available rate for prime borrowers at all other times, regardless of any changes in the interest rate environment. We then examine the share of loans over time with credit-risk components above specific

31. The credit-risk component that we are defining here may include other risk components besides credit risk (for example, prepayment risk).

thresholds. This approach should provide a more accurate depiction of how the extent of high-risk lending has changed that is relatively free of the distortions introduced in the incidence of reported higher-priced lending by changes in the interest rate environment.

In estimating the credit-risk component of loans in the HMDA data, we use, as the measure of the rate available to prime borrowers, the APR derived from the information reported in the Freddie Mac PMMS for a 30-year fixed-rate loan.[32] As an approximation of the APR on loans in HMDA, we add the reported spread (for higher-priced loans) to the appropriate HMDA reporting threshold for a 30-year loan. We refer to the resulting estimate of the credit-risk component as the PMMS spread.[33]

PMMS spreads can only be calculated for loans with reported spreads in HMDA. Loans with PMMS spreads below 0.95 percentage points would not have been reported as higher priced at any time between 2006 and 2008. We are therefore unable to identify these loans in the data. Loans with PMMS spreads between 0.95 and 1.75 percentage points would have been reported as higher priced at some points during the three years but not at others, so we can only identify these loans at some points in time. Only those loans with a PMMS spread of more than 1.75 percentage points have been consistently identified in the HMDA data as higher priced. Therefore, we focus on loans with a PMMS spread greater than 1.75 percentage points in examining how high-risk lending has changed over time, as this measure should be free of the distortions introduced by changes in the interest rate environment and should more accurately reflect changes in high-risk lending activity over time. We refer to loans with a PMMS spread in excess of 1.75 percentage points as adjusted higher-priced loans.

32. By using the APR for the 30-year fixed-rate mortgage, we are implicitly treating all loans in the HMDA data as though they were 30-year fixed rate loans. Because of the small market share for ARMs and the prevalence of 30-year loans, we do not expect this simplifying assumption to have a substantive effect on our analysis of 2008 data. However, note that the share of loans that were ARMs in 2006 and early 2007 was much higher than in 2008. As such, one should exercise caution when comparing incidences of adjusted higher-priced lending across these periods.

33. Under new rules adopted by the Federal Reserve Board in 2008, the spread between a loan's APR and the APR of comparable prime PMMS loan will be used to determine whether a loan is reported as higher priced in HMDA. The new rules take effect for all loans with application dates on or after October 1, 2009, and for loans regardless of application date if originated in 2010. APRs of first-lien loans with a PMMS-APR spread of 1.50 percentage points or more must be reported. For second-lien loans, the reporting threshold is a PMMS-APR spread of 3.50 percentage points.

Incidence of Higher-Priced Lending

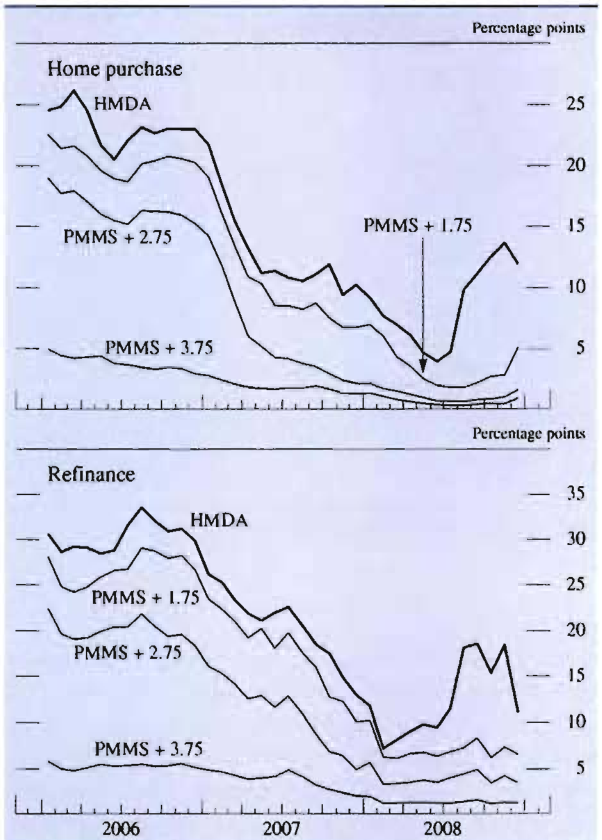
As in earlier years, most loans reported in 2008 were not higher priced as defined under HMDA reporting rules. Among all the HMDA-reported loans secured by one- to four-family properties, 11.6 percent were higher priced in 2008, down significantly from the historic high point of 28.7 percent in 2006 and from 18.3 percent in 2007 (data for 2008 shown in table 3; data for 2006 and 2007 are not shown in tables). The incidence of higher-priced lending fell from the 2007 levels for all conventional loan product categories, with the exception of those related to manufactured homes.

Looking exclusively at changes in the annual rates of higher-priced lending can obscure the information about how the mortgage market is developing over time. To better illustrate how changes in higher-priced lending have played out in recent years, we examine monthly patterns in higher-priced lending activity. The top line in the upper panel of figure 4 shows the incidence of reported higher-priced, home-purchase lending. The monthly data show that the overall annual decline in the incidence of higher-priced lending between 2007 and 2008 obscures a substantial rebound in the incidence of reported higher-priced lending in the second half of 2008. A similar rebound in the incidence of reported higher-priced lending is observed for the refinance loans (shown in the bottom panel of figure 4).

This rebound in the incidence of reported higher-priced lending appears to reflect changes in the interest rate environment and not changes in actual high-risk lending activity. Using our methodology to correct for distortions caused by changes in the interest rate environment, we see that the share of adjusted higher-priced loans (shown in figure 4 as "PMMS + 1.75") continued to decline in 2008 and remained at historically low levels, even when the incidence of *reported* higher-priced lending in HMDA began to increase. There does appear to have been something of a rebound in the share of adjusted higher-priced home-purchase loans at the very end of 2008, though, even after this increase, the incidence of adjusted higher-priced lending remained below the levels observed throughout 2007.

The pattern for refinance lending appears somewhat different than that for home-purchase lending. The incidence of adjusted higher-priced refinance lending fell at the beginning of 2008 and then remained relatively flat throughout the rest of the year. The timing of this decline, and the fact that a similar decline was not observed for home-purchase lending, suggests that this may be the result of a

4. Higher-priced share of lending, by annual percentage rate threshold, 2006–08



NOTE: The data are monthly. Loans are first-lien mortgages for site-built properties and exclude business loans. Annual percentage rates are for conventional 30-year fixed-rate prime mortgages.
PMMS Freddie Mac Primary Mortgage Market Survey.
HMDA Home Mortgage Disclosure Act.

changing mix of borrowers caused by the refinancing boom in early 2008. This refinancing boom, which coincided with a sharp decline in the prime mortgage rate, may have encouraged a large number of high-credit-quality borrowers to refinance their prime mortgages in order to take advantage of relatively low mortgage rates. A tendency of high-credit-quality borrowers to refinance when rates are low and to refrain when rates are high may explain why the incidence of adjusted higher-priced refinancing lending exhibits more variation than home-purchase lending. A comparison of the incidence of adjusted higher-priced lending and volume of refinancing suggests that increases (decreases) in refinancing activity often occur at the same time as decreases (increases) in the incidence of adjusted higher-priced lending (figures 3 and 4).

Figure 4 also shows the share of home-purchase and refinance lending that was composed of loans with PMMS spreads of more than 2.75 percentage points (shown in the figure as "PMMS + 2.75") and more than 3.75 percentage points ("PMMS + 3.75"). Most of the adjusted higher-priced loans had PMMS spreads in excess of 2.75 percentage points for most of 2006. In 2007, this circumstance changed dramatically as the shares of both home-purchase and refinance lending accounted for by these loans fell precipitously. While starting 2008 from much lower levels than previous years, the share of loans made up of these loans that were very higher priced continued to fall in 2008, though the decline seems to have slowed somewhat. Nevertheless, loans with PMMS spreads in excess of 2.75 percentage points now account for a negligible share of home-purchase lending and for a very small share of refinance lending. This suggests that, as in 2007, the decline in the incidence of adjusted higher-priced lending has been greater for the highest-risk borrowers.

Higher-Priced Lending by Lender Type

Higher-priced lending activity can also differ by type of lender. Three types of lender are considered here: depository institutions, subsidiaries or affiliates of depository institutions, and independent mortgage companies. In 2006, independent mortgage companies originated almost one-half of all higher-priced loans and accounted for 31.7 percent of all first-lien loans (table 12). For that year, depository institutions accounted for a smaller share of higher-priced lending (26.8 percent of adjusted higher-priced lending) than independent mortgage companies.

Since 2006, the share of higher-priced loans originated by independent mortgage companies has fallen dramatically. Independent mortgage companies accounted for 18.2 percent of reported higher-priced loans in HMDA in 2008, down from 45.7 percent of such loans in 2006. When using the adjusted higher-priced loan definition, the decline has been even steeper (particularly between 2007 and 2008), with the share of higher-priced loans extended to independent mortgage companies falling to 11.9 percent.

The share of adjusted higher-priced loans originated by depository institutions has increased substantially from 26.8 percent in 2006 to 61.6 percent in 2008, though the incidence of adjusted higher-priced lending has also fallen for depository institutions over this period from 14.7 percent to 5.6 percent. These numbers suggest that the increased share of adjusted higher-priced lending of depository institutions reflects the sharp decline in high-risk lending by independent mortgage companies and not an increased focus on high-risk lending by depository institutions. Some of the increased share for the depository insti-

12. Distribution of reported higher-priced lending, by type of lender, and incidence at each type of lender, 2006–08

Percent except as noted

Type of lender	Higher-priced loans			Adjusted higher-priced loans[1]			Memo: All loans	
	Number	Distribution	Incidence	Number	Distribution	Incidence	Number	Distribution
	2006							
Independent mortgage company	1,287,869	45.7	39.1	1,163,602	47.7	35.3	3,292,281	31.7
Depository	802,125	28.5	18.0	653,985	26.8	14.7	4,455,331	42.9
Affiliate or subsidiary of depository	725,953	25.8	27.6	624,179	25.6	23.7	2,633,237	25.4
Total	2,815,947	100	27.1	2,441,766	100	23.5	10,380,849	100
	2007							
Independent mortgage company	306,675	21.1	18.2	264,893	21.7	15.7	1,685,948	20.5
Depository	660,744	45.5	14.2	519,662	42.6	11.2	4,648,082	56.5
Affiliate or subsidiary of depository	485,287	33.4	25.7	436,425	35.7	23.1	1,888,347	23.0
Total	1,452,706	100	17.7	1,220,980	100	14.8	8,222,377	100
	2008							
Independent mortgage company	120,605	18.2	9.1	43,894	11.9	3.3	1,319,714	21.3
Depository	401,594	60.8	9.9	228,252	61.6	5.6	4,044,889	65.3
Affiliate or subsidiary of depository	138,709	21.0	16.8	98,232	26.5	11.9	826,848	13.4
Total	660,908	100	10.7	370,378	100	6.0	6,191,451	100

NOTE: First-lien mortgages for site-built properties; excludes business loans. For definition of higher-priced lending, see text.

1. Adjusted higher-priced loans are those with annual percentage rates (APRs) 1.75 percentage points or more above the 30-year fixed-rate APR from the Freddie Mac Primary Mortgage Market Survey.

tutions may reflect acquisitions of previously independent mortgage companies.

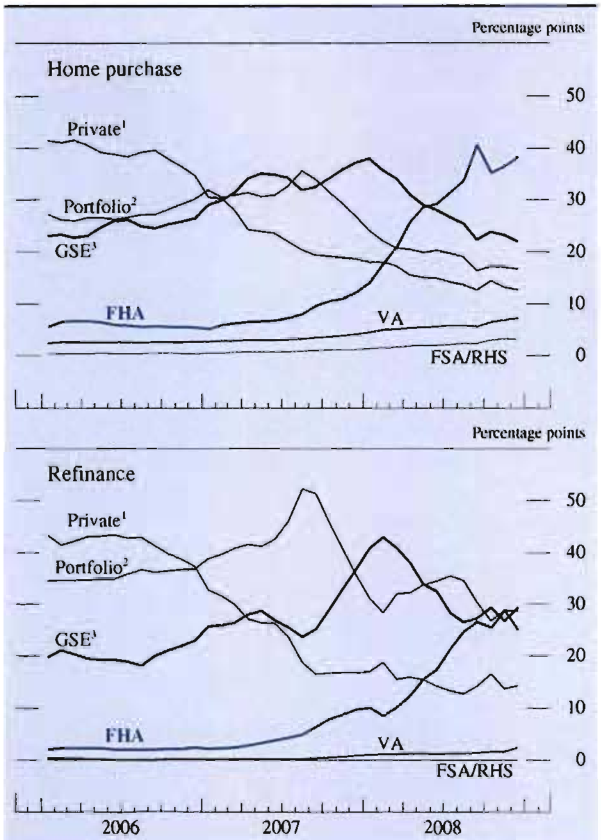
The Surge In FHA and VA Lending

Figure 5 illustrates the changing structure of the mortgage market between 2006 and 2008. It groups first-lien owner-occupied site-built mortgages for home purchase and refinance into six distinct categories: (1) loans sold to an affiliate or held in the portfolio of the originating lender ("Portfolio"), (2) loans sold into the private securitization market or to unaffiliated institutions ("Private"), (3) loans sold to Fannie Mae or Freddie Mac (GSEs), (4) loans insured by the FHA, (5) loans backed by the VA, and (6) loans insured by the Farm Service Agency or Rural Housing Service. The data show that approximately 40 percent of loans in early 2006 were sold into the private securitization market or to an unaffiliated institution.[34] By the end of 2008, nearly one-half of home-purchase loans and one-quarter of refinance loans were backed by either the FHA or the VA, and fewer than 15 percent of originations were sold to unaffiliated institutions or into the private securitization market (however, recall table 4, which indicates that almost no loans were sold into the private securitization market in 2008). The two GSEs increased their market share in 2007, but then relinquished much of these gains during 2008.

While the decline of the subprime-based private securitization market was well under way by 2007, FHA and VA lending did not surge until 2008. At least two events in early 2008 may help explain the timing of this surge. First, as part of the Economic Stimulus Act passed in February, the Congress authorized an increase in the loan-size limits applicable for the FHA and VA programs and GSE purchases. Second, beginning in the early part of 2008, PMI companies started limiting their issuance of insurance and raising prices because of rising claims and binding capital restrictions in certain states. As a consequence, Fannie Mae and Freddie Mac substantially reduced their purchases of loans with loan-to-value ratios (LTV) above 80 percent, which by statute require PMI (or other credit enhancement). Both GSEs also raised their credit guarantee fees for such loans at this time as well. We examine the effects of these events in the following two sections.

34. Classifying loans by their ultimate disposition is complicated by HMDA reporting rules. A loan is classified as sold if the sale takes place within the HMDA reporting year. In other words, a loan originated in December must be sold within the same month to be classified as sold. Since lenders often hold loans for several months before selling them, there is an "underreporting" in loan sales in HMDA for loans originated toward the end of the year. Analysis of the HMDA data indicates that most loans are sold within three months if they were sold. To adjust for the underreporting in October-December, we used an imputation formula based on the allocation of loans originated in September (and the following January for 2006 and 2007 data) to allocate conventional loans among the first three groups shown in figure 5. Data in all of the tables presented in this section are based on this imputation.

5. Adjusted share of owner-occupied first-lien lending, by type of loan, 2006–08



NOTE: The data are monthly. Loans are for site-built properties and exclude business loans. For each year, the fourth quarter is adjusted for the government-sponsored entity (GSE), private, and portfolio loans. See text note 34 for details.

1. Private loans are conventional loans sold to a nongovernment-related or non-affiliate institution.

2. Portfolio loans are conventional loans held by the lender or sold to an affiliate institution.

3. GSE loans are all originations categorized as conventional and sold to Fannie Mae, Freddie Mac, Ginnie Mae, or Farmer Mac.

FHA Federal Housing Administration-insured.

VA Department of Veterans Affairs-guaranteed.

FSA/RHS Farm Service Agency or Rural Housing Service-guaranteed.

The Effect of Higher Loan-Size Limits

New standards released on March 6, 2008, raised the GSE and FHA loan-size limits up to $729,750 in certain areas designated by the Department of Housing and Urban Development as "high cost."[35] FHA loan limits were also raised above their 2007 levels in many other areas to new levels. Prior to these changes, the GSEs could not purchase single-family home loans above $417,000 in most states, while the FHA could not insure single-family home loans above $271,050 in most areas of the country.[36]

VA loans do not have a size limit, but they do have a guarantee limit that is tied to GSE loan limits.[37] The VA guarantees the smaller of 25 percent of the loan amount or 25 percent of the applicable GSE loan limit. As such, increases to the GSE loan limit raise the maximum VA guarantee amount.

To understand the potential effect of the higher limits, we divided loans originated in 2008 into four categories based on the size of the loan and the location of the property securing the loan: (1) loans smaller than the applicable 2007 FHA limit; (2) loans larger than the applicable 2007 FHA loan limit, but less than $417,000 *and* the applicable 2008 FHA limit; (3) loans larger than $417,000 but under the 2008 high-cost area limit common to the FHA, VA, and GSEs; and (4) all other loans. Changes in the loan-size limits directly affected the options available to borrowers for loans in categories 2 and 3 but did not affect those in categories 1 and 4.

Table 13 displays the share of loans in these four categories by month, loan purpose, and loan product type (FHA, VA, GSE, and other).[38] Among FHA loans, there is a noticeable rise in the share of "newly FHA-eligible" loans (categories 2 and 3) in the first half of the year when the limits were increased for both home-purchase and refinance loans. For 2008 overall, the share of FHA-insured home-purchase loans in categories 2 and 3 was 9.7 percent, compared with 2.4 percent in 2007.[39] This increase implies that the limit changes lifted FHA home-purchase lending by 7.4 percent in 2008,

35. More than one-half of the 2008 loans in the high-cost areas were in California. One-third of the loans were in the mid-Atlantic states of New York, New Jersey, Maryland, and Virginia.

36. The GSE loan limits were higher in Alaska and Hawaii; the maximum loan size for the FHA program was as low as $201,160 in some low-cost areas.

37. VA loans larger than the GSE limits, however, cannot be sold into Ginnie Mae security pools.

38. The other category includes portfolio loans, private loans, and loans insured by the Farm Service Agency or the Rural Housing Service (a very small part of the category).

Loan growth during 2008 (particularly for the first half of the year), shown in table 13, is likely understated because of the omission of data from the 15 lenders who failed to report HMDA data, as discussed earlier. In December 2007, these lenders accounted for 3.4 percent of home-purchase loans and 6.0 percent of refinance loans in HMDA; however, these loans were not proportionately distributed among the four loan types examined here. For the same period, these lenders represented less than 2 percent of FHA loans and 0.01 percent of VA loans. Their market share of GSE loans was 3.1 percent for home-purchase loans and 5.7 percent for refinance loans; for "other" loans, their share was 4.1 percent for home-purchase loans and 6.7 percent for refinance loans.

39. FHA-insured loans in the 2007 HMDA data for amounts that exceed the single-family loan limit can be attributed to recording errors in the data or to loans for two-, three-, or four-family structures, which have higher loan limits and are not identified separately in the HMDA data.

13. Percent of home-purchase and refinance loans, by category of FHA and GSE eligibility, by type of loan and month of origination

Percent except as noted

Type of loan by month of origination	Home purchase: Number of loans	Growth	Market share	FHA eligible, no change	Newly FHA eligible	Newly GSE and FHA eligible	Other eligibility or no change[1]	Refinance: Number of loans	Growth	Market share	FHA eligible, no change	Newly FHA eligible	Newly GSE and FHA eligible	Other eligibility or no change[1]
FHA														
2008														
January	21,857	100.0	14.1	96.0	3.1	.2	.7	25,634	100.0	9.9	93.9	5.0	.3	.9
February	31,099	142.3	17.6	95.7	3.4	.2	.7	35,100	136.9	8.5	93.8	5.1	.3	.8
March	43,193	197.6	20.9	94.1	4.8	.3	.7	38,896	151.7	10.1	92.2	6.5	.4	.9
April	56,654	259.2	25.7	90.3	7.5	1.1	1.0	43,173	168.4	12.4	85.7	12.0	.9	1.4
May	70,554	322.8	28.5	88.1	9.1	1.6	1.3	39,700	154.9	15.5	83.6	13.4	1.3	1.7
June	75,493	345.4	29.1	87.0	9.5	1.8	1.6	37,073	144.6	17.4	83.4	13.1	1.4	2.2
July	79,949	365.8	31.4	87.1	9.4	1.9	1.6	35,697	139.3	21.4	83.5	12.8	1.4	2.2
August	80,968	370.4	33.7	87.3	9.0	1.9	1.8	34,773	135.7	24.7	83.7	12.6	1.6	2.1
September	90,597	414.5	40.5	88.2	8.4	1.8	1.7	37,068	144.6	26.6	83.5	12.8	1.6	2.2
October	72,304	330.8	35.3	87.3	8.6	2.1	2.0	46,682	182.1	25.5	82.6	13.3	1.3	2.9
November	54,914	251.2	36.5	88.0	8.2	1.9	1.9	33,774	131.8	28.8	83.0	13.2	1.2	2.7
December	64,245	293.9	38.2	87.3	8.5	2.1	2.2	51,327	200.2	24.9	80.8	14.5	1.2	3.5
Total	741,827	...	29.6	88.7	8.1	1.6	1.6	458,897	...	16.2	85.4	11.5	1.1	2.0
2007														
Second half	149,428	...	9.4	96.3	2.7	.2	.8	108,094	...	7.0	94.5	4.3	.3	1.0
Total	257,674	...	7.8	96.7	2.4	.2	.7	164,063	...	4.6	94.9	3.9	.3	1.0
VA														
2008														
January	6,976	100.0	4.5	77.2	17.4	.6	4.8	2,625	100.0	1.0	74.7	17.9	.3	7.2
February	8,747	125.4	5.0	76.7	17.4	.6	5.3	5,026	191.5	1.2	70.7	21.8	.2	7.2
March	10,661	152.8	5.2	75.8	18.0	1.1	5.0	4,709	179.4	1.2	71.7	21.0	.4	6.9
April	11,710	167.9	5.3	75.1	17.9	1.4	5.7	4,437	169.0	1.3	74.8	18.2	.4	6.7
May	13,651	195.7	5.5	73.6	18.5	1.3	6.5	3,441	131.1	1.3	77.5	16.4	.6	5.5
June	14,707	210.8	5.7	72.0	19.8	1.2	7.1	2,565	97.7	1.2	77.4	16.4	.4	5.8
July	14,948	214.3	5.9	73.0	18.8	1.3	6.9	2,071	78.9	1.2	80.6	14.1	.6	4.7
August	14,071	201.7	5.9	73.7	18.5	1.4	6.5	1,746	66.5	1.2	82.4	12.8	.5	4.4
September	12,532	179.6	5.6	75.2	17.4	1.4	6.0	1,906	72.6	1.4	78.5	14.4	.7	6.4
October	13,202	189.2	6.4	76.0	16.2	1.5	6.3	3,111	118.5	1.7	73.9	18.1	.9	7.2
November	10,307	147.7	6.9	77.0	15.7	1.6	5.6	1,939	73.9	1.7	73.4	16.8	1.4	8.4
December	12,131	173.9	7.2	76.2	15.4	1.8	6.7	4,953	188.7	2.4	67.5	21.6	.9	10.0
Total	143,643	...	5.7	74.9	17.7	1.3	6.1	38,529	...	1.4	74.0	18.4	.6	7.0
2007														
Second half	56,002	...	3.5	75.8	18.8	.1	5.3	8,129	...	.5	79.6	15.3	.2	4.8
Total	106,710	...	3.2	76.2	18.7	.1	5.1	15,019	...	.4	80.5	14.9	.2	4.4
GSE[2]														
2008														
January	59,029	100.0	38.0	72.1	19.9	.6	7.4	105,505	100.0	40.9	74.3	18.6	.2	6.9
February	63,165	107.0	35.8	71.9	20.1	.5	7.5	177,617	168.3	43.0	71.9	20.1	.2	7.8
March	70,510	119.4	34.1	70.9	20.9	.4	7.8	157,348	149.1	40.9	74.9	18.0	.2	6.8
April	68,462	116.0	31.1	70.6	20.8	.6	8.0	132,992	126.1	38.1	76.3	16.9	.2	6.5
May	71,840	121.7	29.0	69.4	20.6	1.2	8.8	86,447	81.9	33.9	76.7	16.3	.5	6.6
June	72,736	123.2	28.1	68.0	20.1	2.4	9.5	69,358	65.7	32.6	74.6	15.8	2.7	6.8
July	67,790	114.8	26.6	68.3	19.2	3.3	9.2	47,377	44.9	28.4	76.9	14.3	2.5	6.4
August	61,150	103.6	25.4	68.4	18.6	3.7	9.3	37,482	35.5	26.6	77.3	13.7	2.2	6.7
September	50,053	84.8	22.4	70.4	17.3	3.8	8.4	38,002	36.0	27.3	76.0	14.5	2.4	7.1
October	48,782	82.6	23.8	71.0	16.3	4.2	8.4	54,018	51.2	29.5	71.4	16.6	3.9	8.2
November	34,849	59.0	23.2	71.2	16.7	3.9	8.3	31,474	29.8	26.8	75.1	14.8	2.6	7.5
December	36,962	62.6	22.0	70.3	17.1	3.8	8.9	60,730	57.6	29.5	68.2	19.8	2.3	9.7
Total	705,328	...	28.1	70.1	19.3	2.2	8.5	998,350	...	35.3	74.3	17.4	1.1	7.2
2007														
Second half	539,637	...	32.5	75.4	17.8	.3	6.4	449,999	...	25.2	78.3	16.1	.3	5.3
Total	1,109,069	...	32.6	77.1	16.7	.3	6.0	995,889	...	26.2	79.4	15.1	.3	5.1

assuming that the *share* of FHA lending in each of these categories would have remained at its 2007 level in the absence of limit changes (derived from table). This same assumption would imply that FHA refinance lending was 8.9 percent higher because of the limit changes.

In contrast to the patterns for FHA lending, the proportion of VA loans in the four categories changed little over the course of the year, suggesting that the limit increases had little effect on VA lending. GSE lending showed only a modest boost from the limit increases (category 3). Under the same assumption used above, we estimate that GSE home-purchase lending would have been 1.9 percent lower and GSE refinance lending only 0.8 percent lower in 2008 had the GSE limits not been changed.

In sum, the effect of the limit increases on FHA, VA, and GSE lending appears to have been modest; the vast majority of the overall growth in both FHA and VA lending was in the categories in which there was no change in the eligibility standards.

13. Percent of home-purchase and refinance loans, by category of FHA and GSE eligibility, by type of loan and month of origination—*Continued*

Percent except as noted

Type of loan by month of origination	Home purchase							Refinance						
	Number of loans	Growth	Market share	FHA eligible, no change	Newly FHA eligible	Newly GSE and FHA eligible	Other eligibility or no change[1]	Number of loans	Growth	Market share	FHA eligible, no change	Newly FHA eligible	Newly GSE and FHA eligible	Other eligibility or no change[1]
Other[3]														
2008														
January	67,503	100.0	43.4	67.8	14.3	3.9	13.9	124,272	100.0	48.2	72.5	13.9	2.8	7.2
February	73,628	109.1	41.7	68.4	14.7	3.3	13.7	195,520	157.3	47.3	71.0	15.7	2.1	10.7
March	82,163	121.7	39.8	67.7	14.9	3.3	14.1	183,400	147.6	47.7	72.4	13.9	2.3	11.2
April	83,434	123.6	37.9	68.2	14.5	3.4	13.9	168,781	135.8	48.3	74.1	13.2	2.0	11.4
May	91,289	135.2	36.9	67.9	14.7	3.2	14.2	125,791	101.2	49.3	75.1	12.3	2.2	10.7
June	96,353	142.7	37.2	66.4	15.2	3.3	15.2	103,786	83.5	48.8	75.3	11.6	2.7	10.4
July	91,786	136.0	36.1	67.5	14.5	3.5	14.5	81,715	65.8	49.0	76.3	10.6	2.7	10.4
August	84,186	124.7	35.0	68.1	13.9	3.6	14.3	66,685	53.7	47.4	78.1	9.8	2.6	10.4
September	70,329	104.2	31.5	70.1	13.4	3.4	13.1	62,133	50.0	44.7	77.2	10.6	2.6	9.6
October	70,623	104.6	34.5	70.8	13.3	3.2	12.7	79,514	64.0	43.4	74.0	13.2	2.9	9.6
November	50,385	74.7	33.5	71.5	12.6	3.3	12.6	50,156	40.4	42.7	75.9	11.0	2.9	9.8
December	54,709	81.1	32.6	71.0	12.8	3.2	13.0	88,828	71.5	43.2	70.3	15.4	2.8	10.2
Total	916,388	...	36.6	68.5	14.2	3.4	13.9	1,330,581	...	47.1	73.8	13.1	2.4	11.5
2007														
Second half	838,703	...	54.6	67.6	14.3	5.1	13.1	983,519	...	67.3	74.4	12.0	4.6	9.1
Total	1,847,598	...	56.4	67.5	13.2	6.3	13.0	2,396,004	...	68.7	72.1	11.4	6.5	9.9
Total market														
2008														
January	155,365	100.0	100	73.8	15.0	2.0	9.2	258,036	100.0	100	75.4	15.0	1.5	8.1
February	176,639	113.7	100	74.9	14.8	1.6	8.8	413,263	160.2	100	73.3	16.7	1.1	8.8
March	206,527	132.9	100	74.8	15.0	1.6	8.7	384,353	149.0	100	75.4	14.9	1.2	8.4
April	220,260	141.8	100	75.0	14.9	1.8	8.3	349,383	135.4	100	76.4	14.5	1.2	7.9
May	247,334	159.2	100	74.4	15.0	2.0	8.5	255,379	99.0	100	77.0	13.9	1.5	7.7
June	259,289	166.9	100	73.2	15.1	2.5	9.2	212,782	82.5	100	76.5	13.3	2.4	7.8
July	254,473	163.8	100	74.2	14.4	2.8	8.6	166,860	64.7	100	78.1	12.2	2.3	7.4
August	240,375	154.7	100	75.0	13.7	2.9	8.4	140,686	54.5	100	79.3	11.6	2.2	6.9
September	223,511	143.9	100	77.8	12.5	2.7	7.0	139,109	53.9	100	78.6	12.3	2.2	6.9
October	204,911	131.9	100	77.0	12.5	3.0	7.5	183,325	71.0	100	75.4	14.3	2.8	7.5
November	150,455	96.8	100	77.8	12.1	2.8	7.2	117,343	45.5	100	77.7	12.7	2.3	7.3
December	168,047	108.2	100	77.4	12.3	2.8	7.5	205,838	79.8	100	72.3	16.6	2.2	8.9
Total	2,507,186	...	100	75.3	14.0	2.4	8.3	2,826,357	...	100	75.8	14.5	1.7	8.0
2007														
Second half	1,583,770	...	100	73.1	14.5	2.9	9.5	1,549,741	...	100	76.8	12.5	3.2	7.6
Total	3,321,051	...	100	73.2	13.7	3.6	9.5	3,570,975	...	100	75.1	12.0	4.6	8.3

NOTE: First-lien mortgages for owner-occupied, 1–4 family, site-built properties; excludes business loans. Government-sponsored entity (GSE) and other loans have been adjusted for the fourth quarter of 2008; for more details, see text.

1. Includes loans that were not FHA or GSE eligible or were always GSE eligible.

2. GSE loans include all originations categorized as conventional and sold to Fannie Mae, Freddie Mac, Ginnie Mae, or Farmer Mac by the end of the calendar year.

3. Other loans include loans originated with a Farm Service Agency or Rural Housing Service guarantee and conventional loans not sold to a government-related institution.

... Not applicable.

Pullback by PMI Companies and Its Implication for FHA and VA Lending

With losses mounting in 2007 and 2008, PMI companies started raising prices and limiting coverage in some areas in the spring of 2008. These changes likely reduced the ability of the GSEs to purchase higher-LTV loans (loans with LTVs above 80 percent) because of the statutory requirement that such loans carry PMI (or a comparable credit enhancement) in order to be eligible for GSE purchase. The GSEs also raised their own underwriting fees for relatively high-LTV loans in March 2008 and further in June.[40]

Both the FHA and VA loan programs offer a form of credit insurance and, consequently, compete with the PMI companies. The two government programs likely increased their market share, at least to some extent, because the PMI and GSE price increases pushed the price of conventional higher-LTV loans above that for the FHA and VA programs for some

40. PMI annual premiums for loans with LTVs above 80 percent range from 0.50 percentage points to greater than 1.00 percentage point. On March 1, 2008, Fannie Mae and Freddie Mac raised their one-time delivery fees for 30-year loans with LTVs above 70 percent to a range of 0.75 to 2.00 percentage points, depending on the borrower's credit score. On March 9, 2008, both GSEs added a 0.25 percentage point additional fee for "market conditions." In June 2008, the GSEs raised their fees again, by an average of 0.50 percentage points. In the summer of 2008, many PMI companies announced further increases in their rates, particularly in markets they defined as "distressed." In some areas, it became almost impossible to obtain PMI for loans with LTVs of greater than 90 percent.

14. Disposition of home-purchase and refinance applications for private mortgage insurance, conventional loans, and nonconventional loans, by month of action taken, 2008

Purpose of loan and month of origination	Private mortgage insurance				Conventional			
	Number of applications	Number of loans covered	Percent withdrawn	Percent denied	Number of applications	Number of loans	Percent withdrawn	Percent denied
Home purchase								
January	102.859	73,644	3.2	3.0	217,027	124,433	14.2	21.2
February	89,047	59,372	3.9	4.2	217,777	134,085	13.0	19.4
March	95,190	61,160	4.7	7.1	238,353	149,236	11.9	18.6
April	96,396	65,874	4.2	4.8	239,885	147,684	13.2	19.7
May	86,310	56,563	4.9	5.7	241,888	158,238	12.3	16.5
June	83,544	54,739	3.8	6.4	246,414	163,806	11.8	16.1
July	82,427	53,663	3.7	6.7	238,464	154,109	12.9	16.4
August	71,505	45,766	4.5	6.2	213,776	139,688	12.8	16.3
September	59,115	36,044	7.1	7.3	183,792	115,074	13.5	18.0
October	69,844	32,936	12.6	7.6	183,889	113,280	14.3	18.4
November	47,634	26,140	7.9	7.3	133,188	80,344	14.3	19.2
December	44,118	24,680	6.3	8.4	138,183	86,176	14.0	17.6
Refinance								
January	53,565	37,895	3.3	3.1	562,486	229,794	16.7	40.6
February	56,450	39,379	5.6	3.9	721,408	373,119	15.4	30.3
March	65,040	45,036	5.9	5.4	675,958	340,698	14.0	31.8
April	56,452	36,362	6.5	5.6	632,885	301,741	14.6	34.2
May	46,880	27,504	7.6	6.5	481,145	212,236	15.0	36.6
June	35,281	17,956	5.6	6.7	401,895	173,151	14.9	37.5
July	31,766	13,779	6.8	7.5	344,968	129,109	16.6	43.0
August	25,533	8,976	7.2	6.9	281,635	104,170	16.8	44.6
September	19,050	7,310	9.2	8.8	266,415	100,132	16.7	45.2
October	30,028	8,841	17.7	7.1	311,590	133,495	15.9	41.0
November	17,166	6,464	12.4	7.5	216,267	81,625	18.4	44.6
December	16,166	7,187	11.8	15.9	332,578	149,506	21.2	34.6

NOTE: First-lien mortgages for owner-occupied, 1–4 family, site-built properties; excludes business loans.

borrowers.[41] Consistent with this account, figure 5 indicates that the increase in FHA's home-purchase and refinance market shares accelerated just as GSE market shares began falling in early 2008. VA market shares, however, rose more steadily over time.

To further examine the potential link between PMI issuance and FHA and VA lending, we take advantage of the HMDA data filed by the PMI industry (appendix B). These data reflect the disposition of applications for mortgage insurance received by the eight large PMI companies in 2008. These applications are arrayed by month, disposition, and loan type (table 14). For context, we also provide monthly information on application disposition for conventional (GSE, portfolio, and private) and nonconventional (FHA, VA, and Farm Service Agency or Rural Housing Service) lending.

The data on PMI denial and withdrawal rates reveal only mild evidence of a change in PMI companies' underwriting practices. Nevertheless, the sharp reduction in PMI issuance during 2008 (for instance, the ratio of PMI issuance to conventional home-purchase lending was almost 0.60 in January and fell to 0.27 in December) is consistent with the view that much of the high-LTV market shifted from the conventional market to the FHA and VA during 2008. In fact, on a county-by-county basis, we find a strong correlation between declines in PMI issuance and increases in FHA lending.[42]

41. For the first half of 2008, the FHA charged a flat delivery fee of 1.50 percentage points and an annual premium of 0.50 percentage points to insure 30-year mortgages. On July 14, 2008, the FHA implemented a risk-based insurance system with upfront fees for 30-year mortgages ranging from 1.25 to 2.25 percentage points and annual premiums from 0 to 0.55 percentage points, depending on the LTV and credit score of the borrower. The price changes were rolled back by the Congress, however, which passed legislation prohibiting the use of a risk-based pricing system after October 1, 2008. On that date, the FHA announced a new fee schedule with an upfront fee of 1.75 percentage points and an annual premium of 0.55 percentage points for 30-year loans with LTVs of 90 percent and higher and 0.50 percentage points for those with lower LTVs. During the period in which the FHA charged risk-based rates (and during the post-March fixed-rate period), FHA fees were lower than those of the GSEs with PMI for all borrowers except those with high credit scores.

The VA charged a 2.15 percentage point upfront fee and no annual premium for a veteran using the program for the first time with no down payment (the dominant choice); the fee was reduced to 1.50 percentage points with a 5 percent down payment and to 1.25 percentage points with a down payment of 10 percent or more. Fees were higher (at least 3.3 percentage points) for veterans using the program for a second or third time (there are also lifetime limits on coverage, which discourage or eliminate multiple usages). The VA has a streamlined refinance program that allows the refinancing of a VA loan into another VA loan with little documentation and a refinance fee of 0.50 percentage points (other refinance loans have the standard fees). VA statistics state that the average VA premium in 2008 was 2.13 percentage points.

42. Care must be exercised in comparing the PMI and loan data reported in HMDA. Only the largest PMI companies report HMDA data, but those that do report provide information on all their issuances, regardless of property location. HMDA loan reporting requirements favor urban areas, implying different underreporting patterns than the PMI data. Further, some PMI policies are written "after the fact" for loans that have already been originated, and as a result, the

14. Disposition of home-purchase and refinance applications for private mortgage insurance, conventional loans, and nonconventional loans, by month of action taken, 2008—*Continued*

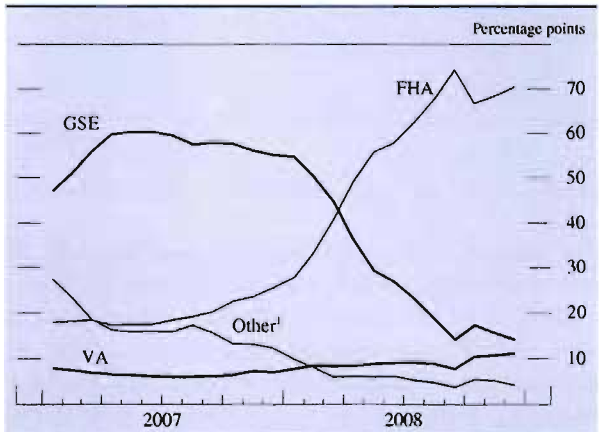
Purpose of loan and month of origination	Nonconventional			
	Number of applications	Number of loans	Percent withdrawn	Percent denied
Home purchase				
January	48,005	31,019	12.4	21.0
February	60,525	42,643	10.4	17.4
March	82,971	57,397	11.1	18.1
April	106,114	72,723	11.5	18.6
May	124,497	89,270	10.3	16.2
June	135,951	95,696	10.7	16.9
July	145,238	100,593	11.3	17.1
August	145,820	100,914	11.5	16.6
September	156,340	108,708	11.4	16.2
October	140,518	91,831	13.1	18.6
November	106,654	70,271	12.8	18.2
December	119,790	82,030	12.0	16.2
Refinance				
January	58,180	28,355	15.0	36.4
February	72,641	40,302	15.3	29.1
March	85,825	43,779	17.0	32.5
April	104,206	47,801	18.8	37.2
May	101,399	43,284	19.5	40.4
June	100,743	39,739	20.8	43.0
July	104,345	37,863	21.8	46.4
August	101,003	36,617	22.5	46.2
September	105,068	39,094	23.0	45.7
October	126,943	49,935	22.2	43.5
November	101,505	35,798	23.9	47.9
December	130,673	56,460	22.8	38.9

Data collected by LPS from the large mortgage servicers provide more direct evidence that high-LTV borrowers shifted to government-backed loans during 2008. These data show that the FHA share of first-lien, home-purchase loans with LTVs in excess of 80 percent rose sharply in 2008 from just over 20 percent to about 70 percent (figure 6). Similar to figure 5, the share of high-LTV loans sold to the GSEs began falling sharply just as the FHA's share began accelerating. The GSE share fell from more than 50 percent to 20 percent during 2008.

The FHA share of loans with LTVs of 80 percent or below in the LPS data also increased yet remained at a low level, rising from 1 percent to almost 9 percent in 2008 (data not shown in figure). At the same time, the share of loans with LTVs of 80 percent or below that were sold to the GSEs held relatively constant throughout this period (after a brief increase early in 2007) at levels just over 80 percent. These patterns observed for home-purchase loans are also generally observed for refinance loans in the LPS data.

The VA share of high-LTV home-purchase loans grew modestly during most of 2007 and 2008, with a somewhat sharper increase at the end of 2008. By December 2008, this share exceeded 11 percent. Somewhat differently, the VA share of high-LTV refinance loans peaked during the refinancing boom in early 2008. This share declined somewhat after that, but remained at higher levels than in 2007. For both home-purchase and refinance loans with LTVs of 80 percent or less, the VA market share was higher in 2008 than in 2007, but was consistently under 1 percent.

6. Share of LPS home-purchase lending with loan-to-value ratios greater than 80 percent, by type of loan, 2007–08



NOTE: The data are monthly. Loans are first liens. For more information about Lender Processing Services, Inc. (LPS), see text.

1. Other loans are Farm Service Agency or Rural Housing Service-guaranteed loans and conventional loans not sold to a GSE.

FHA Federal Housing Administration-insured.

GSE Government-sponsored entity-owned.

VA Department of Veterans Affairs-guaranteed.

SOURCE: Lender Processing Services, Inc.

timing of the two data sources may not align perfectly. Nevertheless, the general relationship patterns between the two series should be informative.

15. Percent of home-purchase and refinance loans that are higher priced, by threshold and by type of loan and month of origination, 2008

Percent

Type of loan by month of origination	Home purchase				Refinance			
	Above HMDA	Above PMMS + 1.75[1]	Above PMMS + 2.75[1]	High payment-to-income ratio	Above HMDA	Above PMMS + 1.75[1]	Above PMMS + 2.75[1]	High payment-to-income ratio
FHA								
2008								
January	5.8	3.3	.2	7.9	8.9	5.0	.2	9.8
February	4.6	3.0	.2	7.5	7.4	5.0	.2	8.2
March	4.0	1.7	.2	9.0	7.1	3.5	.3	10.5
April	4.4	1.7	.2	8.6	7.4	3.1	.2	10.1
May	3.8	1.3	.2	9.4	7.2	2.6	.3	10.8
June	4.1	1.2	.2	10.1	8.2	2.8	.2	12.0
July	6.0	1.3	.3	11.2	11.7	3.0	.3	13.3
August	15.7	1.3	.3	13.1	23.9	2.5	.2	16.0
September	17.3	1.9	.3	13.2	22.7	3.0	.2	15.4
October	20.7	2.8	.3	13.7	22.1	3.4	.2	15.6
November	23.2	3.1	.3	13.8	25.9	3.9	.2	16.1
December	19.1	6.7	1.0	11.6	17.1	6.3	.8	11.6
Total	11.6	2.3	.3	11.3	14.3	3.7	.3	12.5
2007								
Second half	5.2	2.4	.3	9.7	8.8	4.0	.4	11.8
Total	4.3	2.1	.3	9.4	7.2	3.4	.5	11.2
VA								
2008								
January	.4	.2	.0	15.9	.6	.3	.1	3.5
February	.3	.2	.0	14.2	.1	.1	.0	3.0
March	.2	.2	.1	16.2	.2	.1	.0	3.4
April	.4	.2	.2	14.9	.4	.2	.1	3.0
May	.3	.2	.2	14.9	.4	.1	.0	2.9
June	.3	.1	.1	16.3	.3	.1	.0	3.6
July	.5	.3	.2	17.2	.7	.1	.0	4.7
August	1.0	.2	.1	17.8	1.2	.2	.1	5.3
September	1.5	.3	.2	17.4	1.5	.1	.1	5.0
October	2.6	.3	.2	16.4	1.0	.2	.1	4.0
November	3.6	.2	.2	15.2	1.1	.1	.0	4.8
December	4.1	1.5	.3	12.5	1.4	.4	.1	4.1
Total	1.3	.3	.2	15.8	.7	.2	.1	3.7
2007								
Second half	.2	.1	.0	18.9	.3	.1	.0	6.7
Total	.2	.1	.1	17.9	.3	.1	.1	6.6
GSE[2]								
2008								
January	8.2	6.1	1.2	13.7	3.5	2.7	.5	13.8
February	7.2	5.3	1.0	12.3	1.9	1.5	.3	10.5
March	6.8	3.6	.5	13.3	2.4	1.4	.3	12.0
April	5.2	2.4	.2	12.5	2.7	1.5	.3	11.7
May	3.1	1.1	.1	12.8	3.1	1.5	.2	13.6
June	2.3	.8	.0	13.8	3.0	1.5	.2	15.1
July	2.3	.5	.0	14.7	2.8	.8	.1	16.6
August	5.3	.4	.0	14.7	5.6	.5	.0	17.0
September	5.1	.5	.0	14.4	5.7	.5	.0	15.8
October	6.4	.7	.0	14.0	4.8	.6	.0	14.2
November	5.8	.5	.0	13.6	5.4	.4	.0	14.6
December	4.1	.8	.0	12.2	2.1	.3	.0	10.4
Total	5.1	2.0	.3	13.5	3.0	1.4	.2	12.9
2007								
Second half	10.0	7.2	2.5	15.8	6.6	4.8	1.3	18.2
Total	9.0	6.6	2.2	14.9	5.1	3.6	.9	17.1

Evidence on the Quality of FHA and VA Loans

The HMDA data contain only limited information indicative of the credit risk posed by borrowers. First, a payment-to-income (PTI) ratio can be estimated using reported income and loan size (if assumptions are made about interest rates on loans based on the date of loan origination). Second, loan pricing information reported in the HMDA data might also be used to infer risk.

We examine the monthly profiles of both of these risk measures by loan purpose and by the four loan product types (table 15). For each loan purpose and type, we show the proportion of loans that were reported in HMDA as higher priced, those with a PMMS spread (defined earlier) of at least 1.75 percentage points, and those with a PMMS spread greater than 2.75 percentage points (likely subprime loans). We also show the proportion of loans with estimated PTIs above 30 percent—the edge of an acceptable range in many loan underwriting programs.

Table 15 shows a striking increase in the incidence of HMDA-reported higher-priced FHA home-purchase and refinance lending. However, these increases seem to be driven largely by the widening gap between Treasury and mortgage market interest rates during 2008. When incidence was calculated

15. Percent of home-purchase and refinance loans that are higher priced, by threshold and by type of loan and month of origination, 2008—*Continued*

Percent

Type of loan by month of origination	Home purchase: Above HMDA	Home purchase: Above PMMS + 1.75[1]	Home purchase: Above PMMS + 2.75[1]	Home purchase: High payment-to-income ratio	Refinance: Above HMDA	Refinance: Above PMMS + 1.75[1]	Refinance: Above PMMS + 2.75[1]	Refinance: High payment-to-income ratio
Other[3]								
2008								
January	12.0	9.6	3.7	15.6	19.7	17.8	11.3	16.1
February	10.2	8.5	3.2	13.4	12.1	10.9	6.6	12.4
March	9.5	6.9	3.1	14.7	13.3	10.8	6.7	13.9
April	8.7	6.2	2.9	13.9	14.6	11.7	7.0	12.8
May	7.1	4.9	2.3	13.8	15.5	11.8	7.3	13.2
June	5.6	3.7	1.7	13.8	14.5	11.0	6.9	14.1
July	5.9	3.5	1.6	14.4	16.8	12.1	7.9	14.8
August	8.9	3.6	1.6	14.7	22.7	13.7	9.2	14.5
September	9.2	4.2	2.0	14.5	24.5	16.5	10.8	14.6
October	10.2	4.4	2.1	13.6	19.2	11.8	7.8	14.2
November	10.7	4.6	2.5	13.6	22.2	14.2	9.7	14.5
December	10.4	6.9	3.6	11.8	14.3	11.2	7.4	11.8
Total	8.8	5.4	2.5	14.0	16.1	12.4	7.8	13.7
2007								
Second half	12.7	9.7	4.5	18.1	23.1	19.7	12.0	20.7
Total	16.8	14.1	8.7	17.8	28.0	24.7	16.3	21.9
Total market								
2008								
January	9.1	7.0	2.1	13.8	11.8	10.2	5.7	14.4
February	7.7	6.0	1.7	12.0	7.2	6.3	3.3	11.1
March	7.0	4.3	1.5	13.1	8.0	6.1	3.3	12.6
April	6.1	3.5	1.2	12.1	9.0	6.6	3.5	11.9
May	4.6	2.5	.9	12.3	9.8	6.7	3.7	12.8
June	3.9	2.0	.7	12.9	9.5	6.3	3.5	13.9
July	4.7	1.8	.7	13.7	11.5	6.8	4.0	14.8
August	9.8	1.8	.7	14.3	18.2	7.2	4.4	15.4
September	11.1	2.2	.8	14.1	18.6	8.3	4.9	15.0
October	12.5	2.7	.9	13.9	15.4	6.2	3.4	14.4
November	13.6	2.8	1.0	13.8	18.4	7.3	4.2	14.8
December	11.9	5.1	1.6	11.9	11.1	6.5	3.4	11.1
Total	8.1	3.3	1.1	13.2	11.0	6.9	3.8	13.1
2007								
Second half	10.7	7.8	3.3	16.6	17.8	14.7	8.5	19.4
Total	12.7	10.3	5.6	16.2	28.0	24.7	16.3	21.9

Note: First-lien mortgages for owner-occupied, 1–4 family, site-built properties; excludes business loans. Government-sponsored entity (GSE) and other loans have been adjusted for the fourth quarter of 2008; for more details, see text. For explanation of Home Mortgage Disclosure Act (HMDA) price-reporting threshold, see text. The threshold and annual percentage rates (APRs) are for conventional first-lien 30-year prime mortgages.

1. PMMS is the prime APR from the Freddie Mac Primary Mortgage Market Survey; see notes to figure 1.
2. See note 2, table 13.
3. See note 3, table 13.

using the PMMS-adjusted spreads, which better reflect the true credit-risk premium, higher-priced lending rose far less dramatically. While the incidence of HMDA reported higher-priced FHA home-purchase loans more than doubled between 2007 and 2008 (4.3 percent versus 11.6 percent), the incidence of loans with a PMMS spread greater than 1.75 percentage points was small and nearly unchanged (2.1 percent versus 2.3 percent). Virtually none of the FHA or VA loans had PMMS spreads above 2.75 percentage points.

Nevertheless, both FHA and VA show a significant percentage of their loans with APRs in the range of prime plus 1.00 to 1.75 percentage points, which results in their being flagged as "higher priced" in HMDA; these loans are clearly not priced as prime loans. Much of the pricing can be attributed to FHA and VA insurance and guarantee fees. By our estimates, the average FHA loan in October and November only had to be priced 0.25 percentage points above prime to be reported as higher priced in HMDA after insurance fees were factored into the APR.[43] VA loans only had to be priced 0.55 percentage points above prime to be reported as higher priced during this period.

Caution must be exercised in drawing too strong an inference about the quality of FHA and VA loans on the basis of a low incidence of PMMS-spread, higher-priced loans. The FHA (and to a lesser extent, the VA) cover most of the credit risk in a loan and, except for the brief period in the summer of 2008, charged flat rates. Consequently, pricing on FHA loans may not be particularly sensitive to the loan's credit risk.[44]

43. FHA fees added about 0.65 percentage points to an APR at the beginning of 2008 and rose slightly during the year.

44. Even though the FHA and VA cover most of the credit risk in a loan, they do not cover all of it. Lenders face recourse risk in the case

Table 15 also shows an increase in the percentage of FHA borrowers with high PTI ratios for both home-purchase and refinance lending during 2008 as well as relative to 2007, a potential sign of an increased risk profile for the FHA program. We note that this increase stems primarily from borrowers whose loans were newly eligible for FHA financing because of the limit increases. The incidence of high PTI ratios for borrowers that would have been eligible for FHA loans under 2007 limits rose only modestly (data not shown in tables).

LPS data provide more precise information on the credit quality of government-backed loans. In addition to LTV, these data provide borrower FICO scores, a commonly used credit score. Credit scores, such as FICO, provide a numeric ranking of the relative credit risk posed by a borrower and are a widely used measure of the credit risk of a loan.[45]

In 2007, the median FICO score of an FHA home-purchase loan in the LPS data at time of origination was approximately 625, just above the range of credit scores often associated with subprime borrowers and about 100 points below the median FICO score for conventional loans in the LPS data (data not shown in tables). Similarly, the median LTV on 2007 FHA loans was 97.6 percent—more than 15 percentage points higher than the median for conventional loans in 2007.[46]

A comparison of the FICO scores of FHA borrowers in 2007 and 2008 suggests that the growth of FHA loans has predominantly involved loans to borrowers with higher credit scores. The median credit score rose to 664 in 2008. The share of FHA home-purchase loans to prime borrowers (those with scores greater than 660) grew from 30 percent in 2007 to more than 50 percent in 2008. In addition, the LPS data suggest that over 60 percent of the increase in FHA home-purchase activity between 2007 and 2008 was to borrowers with prime-quality FICO scores.

The LPS data also indicate that FHA lending in 2008 continued to involve very low levels of borrower equity in the home. While the share of FHA home-purchase loans with LTVs exceeding 95 percent fell modestly from 72.3 percent in 2007 to 67.4 percent in 2008, the median LTV on these loans remained above 97 percent. Nevertheless, there is evidence that the credit scores of high-LTV borrowers improved as well. For example, while one-third of 2007 FHA home-purchase loans went to borrowers with LTVs in excess of 95 percent *and* FICO scores below 620, this share declined to 15 percent in 2008. The numbers for FHA-insured refinancing are somewhat different, but they show a very similar trend toward borrowers with higher credit scores. Taken together, the FICO scores and LTVs reported in the LPS data for 2008 suggest that the growth of FHA loans has predominantly involved loans with lower-risk characteristics than in 2007.

For VA loans, the LPS data indicate that 90 percent of VA first-lien, home-purchase loans had LTVs in excess of 95 percent in 2007, compared with 86 percent in 2008. Like FHA loans, while LTVs have remained high on VA loans, the credit scores of VA borrowers in the LPS data increased in 2008. The median credit score for first-lien, home-purchase VA borrowers was 672 in 2007 (within the range generally considered to be prime quality), and rose to 687 in 2008.

It is important to keep in mind when interpreting the LPS data on FICO scores and LTVs that while these data suggest that the expansion of the FHA and VA programs has been primarily to borrowers with higher credit scores, the performance of these loans depends on many factors, including the future path of house prices and economic activity. Predicting how FHA and VA loans will perform is beyond the scope of this article.

Changes In Total Lending By Borrower and Area Characteristics

As highlighted in a previous article, the mortgage market experienced a severe contraction in lending from the beginning of 2006 to the end of 2007 related primarily to the collapse of the subprime mortgage market.[47] As discussed above, 2008 was characterized by the increased role of FHA and VA as the overall mortgage market continued to decline. This section examines whether these changes had a differ-

of fraud and servicing costs in the case of borrowers who do not make their payments. VA coverage may also be limited if the loan size is above the loan's coverage cap.

45. FICO scores are one summary measure of the credit risk posed by an individual based solely on the information contained in the credit reports maintained by the three national credit reporting agencies. FICO scores are produced using statistical models developed by Fair Isaac Corporation. A FICO score of 660 or more is often viewed as a score range associated with prime quality borrowers; a score under 620 is often associated with borrowers with subprime credit quality. For more information, see www.myfico.com/CreditEducation.

46. The LPS data tend to underrepresent the share of subprime loans; therefore, the median FICO score for conventional loans may be overstated. Also, LPS does not collect information on the combined LTV ratio of loans in its database. Because conventional loans may be more likely to involve junior liens, median LTVs for conventional loans will not accurately reflect the amount of borrower equity in the home.

47. See Avery, Brevoort, and Canner, "The 2007 HMDA Data."

ential effect across borrower groups. As before, particular focus is paid to the effect of the surge in FHA and VA lending.

Overall Changes from 2006 through 2008

On the whole, lending for first-lien, site-built, owner-occupied home purchases reported in HMDA fell 22.3 percent from 2006 through 2007 and dropped an additional 24.5 percent from 2007 through 2008. Refinance lending fell 18.3 percent from 2006 through 2007, and 20.9 percent from 2007 through 2008.[48] Although lending to all groups fell considerably during these years, some groups experienced steeper declines than others. Market shares for both black and Hispanic white borrowers fell from 2006 through 2007 and further declined in 2008, implying that lending to these groups fell more quickly than average between 2006 and 2008 (column 1, labeled "market share" in tables 16.A and 16.B). In contrast, the share of lending to Asian and non-Hispanic white borrowers rose.

Overall patterns for lower-income lending (borrowers with incomes below 80 percent of the median family income in their area or borrowers who live in census tracts with median family incomes in the year 2000 that were less than 80 percent of the median family income of their area) differ between home-purchase and refinance lending and between lower-income borrowers and lower-income census tracts. The share of home-purchase loans made to lower-income borrowers increased each year, while the share made to borrowers living in lower-income census tracts consistently fell. The share of refinance lending made to both lower-income groups decreased each year with the exception of a slight uptick of lending to lower-income borrowers in 2008.[49]

Borrowers of different demographic groups showed large differences in their propensity to use different types of lenders with significant changes from year to year. All groups showed significant increases in their reliance on loans from banking institutions within their assessment areas.[50] The substantial increase in market share by banks in their assessment areas (see bottom three rows) appears to have come from a decline in independent mortgage companies' market share between 2006 and 2007, and then a significant shift by banks from outside their assessment areas (where their past lending activity was more similar to that of independent mortgage companies) to lending within assessment areas between 2007 and 2008.

Borrowers of different demographic groups showed large differences in their propensity to use different types of loans, with significant changes from year to year. All groups showed significant increases in their use of FHA and VA programs from 2006 through 2008, especially black and Hispanic white borrowers. In 2008, more than 60 percent of home-purchase loans and almost 40 percent of refinance loans to black borrowers were government-backed. For Hispanic white borrowers, nearly 50 percent of home-purchase loans and 21 percent of refinance loans in 2008 were government-backed.[51]

In contrast, the share of loans sold to a non-government entity fell sharply, particularly so among loans to black and Hispanic white borrowers. About one-half of their home-purchase and refinance loans were sold in the nongovernment secondary market in

48. The decline in lending from 2006 to 2007 is likely to be overstated and the decline from 2007 to 2008 understated because of a serious reporting problem in the 2007 data. Federal Reserve tracking reports indicated that 169 lenders that reported HMDA data for 2006 and ceased operations sometime in 2007 or 2008 did not report HMDA data for 2007 (in an earlier section, we discuss the more limited problem of 15 nonreporting lenders in the 2008 HMDA data). Overall, these lenders accounted for about 8 percent of the site-built conventional first-lien loans in 2006. Since many of these lenders went out of business at or before the middle of 2007, there is reason to believe that loan activity in the first half of 2007 is understated in the HMDA data (by up to 8 percent), though lending activity reported in HMDA in the second half of the year is likely to be more accurate. Since these lenders specialized in higher-priced subprime loans and disproportionately served blacks and Hispanic whites, the undercounts in the 2007 HMDA data were likely larger for these groups. For additional information, see Avery, Brevoort, and Canner, "The 2007 HMDA Data."

49. Monthly data suggest that the refinance boom in the beginning of 2008 may account for some of the overall decline in lower-income refinance lending for 2008. The overall incidence of lower-income refinance lending fell from 31.7 percent in January to 27.2 percent in February and increased to 28.7 percent in March, suggesting that the refinance boom disproportionately involved higher-income borrowers. The damping of the incidence of lower-income refinance lending during this period was sufficiently large to explain much of the difference in the 2007–08 overall changes between home-purchase and refinance lending.

50. The Community Reinvestment Act (CRA) requires commercial banks and savings institutions to identify the geographic areas that they designate as their assessment areas, which are areas in which the institution has special responsibilities under the CRA. Typically, assessment areas correspond to the counties or markets in which the institution has banking branches. Each year, larger banking institutions file a list of the census tracts that compose their assessment areas. We use this list to determine whether a loan originated by a banking institution (or an affiliate) and reported in HMDA is within the institution's assessment area. For smaller institutions who do not supply a list, we approximate their assessment area by taking into account the counties in which they have banking offices.

51. One can derive from table 16 that there was a disproportionate increase in higher-income FHA lending. The expansion of FHA loan limits helps explain this disproportionate increase. For instance, only 8.6 percent of the FHA home-purchase loans originated in 2008 that *would not* have been eligible under 2007 loan limits were made to lower-income borrowers or tracts. In contrast, 48.0 percent of the 2008 FHA home-purchase loans that *would* have been eligible in earlier years were deemed lower income, numbers largely unchanged from 2007 (47.5 percent and 41.5 percent, respectively).

16. Market share of home-purchase and refinance loans, by type of originator, type of loan, and loan pricing and by characteristic of borrower, of census tract, and of loan, 2006–08

A. Home purchase

Percent

Characteristic of borrower, of census tract, and of loan	Year	Market share	Originating institution: Depository (excluding credit unions), by property location: Within CRA assessment area[1]	Originating institution: Depository: Outside CRA assessment area	Originating institution: Credit union	Originating institution: Independent mortgage company	Type of loan: FHA	Type of loan: VA	Type of loan: RHS/FSA	Type of loan: GSE	Type of loan: Sold to a non-government entity[2]	Type of loan: Held in portfolio
Minority status[4]												
Black or African American	2006	8.7	20.8	33.3	1.3	44.4	9.1	4.2	.2	13.1	51.1	22.4
	2007	7.6	32.4	36.4	2.0	29.1	15.0	6.0	.6	25.9	20.8	31.6
	2008	6.3	40.8	21.2	2.7	35.3	51.4	10.8	2.1	15.0	7.9	12.9
Hispanic white	2006	12.1	23.8	32.0	.9	43.2	5.6	1.4	.3	13.8	52.4	26.5
	2007	9.5	38.0	34.0	1.6	26.5	9.7	2.2	.8	27.5	21.6	38.2
	2008	8.5	47.0	16.2	2.2	34.6	44.7	4.5	2.3	22.9	9.1	16.5
Asian	2006	4.5	31.8	32.3	1.4	34.4	1.5	.5	.0	26.4	41.4	30.2
	2007	4.5	41.7	32.4	2.1	23.7	1.9	.6	.1	33.9	23.3	40.3
	2008	4.9	55.7	17.2	3.2	24.0	11.9	1.3	.2	46.2	17.4	23.0
Other minority[5]	2006	1.0	24.5	33.6	1.7	40.0	6.4	2.5	.4	17.4	48.1	25.2
	2007	.9	37.5	35.4	2.8	24.5	10.1	3.6	.8	27.9	22.2	35.4
	2008	.9	46.3	21.2	3.7	28.8	39.1	7.3	2.1	25.3	11.2	14.9
Non-Hispanic white	2006	62.7	31.0	34.9	2.7	31.5	6.1	2.7	.6	28.5	35.1	26.9
	2007	66.8	36.5	36.3	3.5	23.7	7.3	3.1	1.0	34.3	23.9	30.4
	2008	69.1	44.6	24.8	4.4	26.2	27.4	5.5	2.6	28.2	16.3	20.1
Missing[6]	2006	10.9	23.5	30.3	3.0	43.0	4.0	2.6	.1	21.8	42.3	29.2
	2007	10.6	33.2	34.7	3.7	28.3	6.0	3.6	.3	31.5	23.4	35.1
	2008	10.4	47.2	21.3	4.7	26.7	26.7	7.1	.9	31.5	13.6	20.2
Borrower Income[7]												
Lower	2006	23.5	31.6	32.7	2.8	33.0	11.4	2.4	1.0	25.7	34.1	25.4
	2007	24.8	38.3	33.6	3.5	24.6	11.7	2.6	1.6	33.6	21.6	28.8
	2008	28.1	44.3	22.9	3.9	28.9	37.6	4.3	4.2	23.4	14.0	16.5
Middle	2006	24.7	26.2	35.1	2.6	36.0	8.0	4.0	.6	26.4	38.4	22.6
	2007	25.2	33.3	36.4	3.5	26.7	10.8	4.8	1.2	33.7	22.2	27.4
	2008	27.1	42.5	23.5	4.1	30.0	35.6	7.7	2.8	25.6	13.5	14.7
High	2006	46.8	28.9	34.6	2.1	34.4	2.6	2.2	.1	24.1	42.2	28.8
	2007	47.0	37.2	36.6	2.9	23.3	4.4	2.9	.3	32.2	24.2	36.1
	2008	43.1	48.4	23.0	4.2	24.3	20.6	5.5	.6	33.2	16.3	23.9
Missing[6]	2006	5.0	19.6	24.2	1.1	54.7	1.1	.4	.2	11.6	50.9	35.8
	2007	3.1	29.0	33.1	2.2	35.8	3.3	.9	.5	21.7	33.2	40.4
	2008	1.7	33.2	19.2	4.4	43.2	30.4	3.8	3.0	17.2	16.5	29.1
Census-tract income[8]												
Lower	2006	15.7	25.6	33.0	1.7	39.6	7.6	1.7	.3	18.3	46.0	26.2
	2007	14.4	37.7	34.8	2.6	24.9	10.8	2.3	.7	30.1	21.3	34.9
	2008	13.1	46.8	20.6	3.4	29.2	39.2	4.5	1.9	24.4	11.8	18.2
Middle	2006	49.6	27.8	34.9	2.5	34.8	6.9	3.2	.7	24.9	38.7	25.7
	2007	49.7	35.0	37.1	3.4	24.5	9.0	3.9	1.2	33.0	22.4	30.4
	2008	49.9	44.1	24.3	4.2	27.3	32.8	6.6	3.3	25.8	13.6	17.9
High	2006	33.8	31.4	33.0	2.2	33.5	3.7	2.2	.2	27.0	38.5	28.5
	2007	35.1	38.2	34.3	2.9	24.6	4.7	2.6	.3	33.4	25.2	33.8
	2008	35.9	48.0	22.1	3.9	26.0	21.6	5.0	.8	33.1	17.6	21.8
Missing[6]	2006	1.0	2.1	15.2	9.6	72.3	3.8	2.2	1.2	11.2	43.5	38.1
	2007	.8	2.5	23.9	14.5	59.2	10.2	3.3	2.3	19.0	32.5	32.8
	2008	1.1	2.3	24.4	12.3	61.1	33.4	3.9	5.1	15.0	18.7	23.9
Subprime indicators												
High PTI[9]	2006	16.4	25.4	31.8	2.0	40.6	3.7	2.8	.3	17.7	47.3	28.1
	2007	16.2	35.1	34.6	2.9	27.4	4.5	3.6	.6	30.0	25.9	35.5
	2008	13.2	43.4	21.7	3.2	31.7	25.4	6.9	1.8	28.8	17.9	19.2
Piggyback	2006	22.2	15.9	34.0	.4	49.4	.0	.0	.0	13.4	66.1	20.4
	2007	10.8	33.3	38.5	1.0	27.4	.0	.0	.0	33.0	33.6	33.4
	2008	1.7	68.3	18.0	4.8	8.9	.0	.0	.0	56.7	18.6	24.7
Total	2006	100	28.4	33.8	2.3	35.5	5.9	2.6	.4	24.4	39.8	26.8
	2007	100	36.2	35.7	3.2	24.9	7.8	3.2	.8	32.6	23.3	32.2
	2008	100	45.4	23.0	4.1	27.5	29.6	5.7	2.2	28.1	14.9	19.4

NOTE: First-lien mortgages for owner-occupied, 1–4 family, site-built properties; excludes business loans.

1. Includes lending by nondepository affiliates in the assessment areas of depository institutions covered by the Community Reinvestment Act of 1977 (CRA).

2. Includes loans sold into a private security, to another commercial bank, savings bank or savings association, or a life insurance company.

3. Freddie Mac Primary Mortgage Market Survey annual percentage rate (PMMS APR) is for a 30-year fixed-rate mortgage; for more details, see text.

4. Categories for race and ethnicity reflect revised standards established in 1997 by the Office of Management and Budget. Applicants are placed under only one category for race and ethnicity, generally according to the race and ethnicity of the person listed first on the application. However, under race, the application is designated joint if one applicant reported the single designation of white and the other reported one or more minority races. If the application is not joint but more than one race is reported, the following designations are made: If at least two minority races are reported, the application is designated as two or more minority races; if the first person listed on the application reports as two races, and one is white, the application is categorized under the minority race. For loans with two or more applicants, lenders covered under the Home Mortgage Disclosure Act report data on only two.

5. Other minority consists of American Indian or Alaskan Native, and Native Hawaiian or other Pacific Islander.

6. Information for the characteristic was missing on the application.

7. Borrower income is the total income relied upon by the lender in the loan underwriting. Income is expressed relative to the median family income of the metropolitan statistical area (MSA) or statewide non-MSA in which the property being purchased is located. "Lower" is less than 80 percent of the median; "middle" is 80 to 119 percent; and "high" is 120 percent or more.

8. The income category of a census tract is the median family income of the tract relative to that of the MSA or statewide non-MSA in which the tract is located. "Lower" is less than 80 percent of the median; "middle" is 20 to 119 percent; and "high" is 120 percent or more.

9. High payment-to-income ratio (PTI) is 30 percent or more.

FSA Farm Service Agency.

RHS Rural Housing Service.

16. Market share of home-purchase and refinance loans, by type of originator, type of loan, and loan pricing and by characteristic of borrower, of census tract, and of loan, 2006–08

A. Home purchase—*Continued*

Percent

Characteristic of borrower, of census tract, and of loan	Year	Market share	Loan pricing			
			Lower priced	Higher priced, by percentage points above PMMS APR[3]		
				Less than 1.75	1.75–2.74	2.75 or more
Minority status[4]						
Black or African American	2006	8.7	53.3	3.4	5.8	37.6
	2007	7.6	72.3	3.9	8.4	15.3
	2008	6.3	85.6	8.8	4.2	1.5
Hispanic white	2006	12.1	57.6	4.6	6.8	31.0
	2007	9.5	75.1	4.7	9.1	11.1
	2008	8.5	84.8	9.3	4.2	1.6
Asian	2006	4.5	83.6	2.5	2.9	11.0
	2007	4.5	92.4	1.8	3.0	2.8
	2008	4.9	96.0	2.6	1.0	.4
Other minority[5]	2006	1.0	68.8	3.8	5.3	22.1
	2007	.9	83.4	3.3	6.0	7.3
	2008	.9	90.5	5.8	2.3	1.4
Non-Hispanic white	2006	62.7	83.9	2.4	3.3	10.4
	2007	66.8	90.4	2.1	3.7	3.8
	2008	69.1	92.8	4.2	1.9	1.1
Missing[6]	2006	10.9	74.4	2.5	3.6	19.6
	2007	10.6	87.6	2.2	4.1	6.1
	2008	10.4	93.6	4.2	1.7	.6
Borrower income[7]						
Lower	2006	23.5	74.5	2.9	4.3	18.3
	2007	24.8	85.0	3.1	5.6	6.3
	2008	28.1	89.0	6.8	3.0	1.2
Middle	2006	24.7	75.6	2.4	3.5	18.6
	2007	25.2	87.4	2.4	4.2	6.0
	2008	27.1	92.1	5.0	2.0	.9
High	2006	46.8	79.0	2.3	3.2	15.5
	2007	47.0	89.3	1.9	3.6	5.1
	2008	43.1	93.7	3.5	1.7	1.1
Missing[6]	2006	5.0	74.4	8.9	11.4	5.3
	2007	3.1	74.0	6.2	14.5	5.3
	2008	1.7	91.7	3.7	2.2	2.5
Census-tract income[8]						
Lower	2006	15.7	62.5	3.7	5.5	28.3
	2007	14.4	79.1	3.7	7.3	9.9
	2008	13.1	87.0	7.9	3.7	1.4
Middle	2006	49.6	75.8	3.0	4.2	17.1
	2007	49.7	86.4	2.7	5.0	5.9
	2008	49.9	91.0	5.4	2.4	1.2
High	2006	33.8	84.7	2.1	2.8	10.3
	2007	35.1	91.7	1.7	3.1	3.5
	2008	35.9	94.8	3.1	1.3	.8
Missing[6]	2006	1.0	90.2	2.2	3.4	4.2
	2007	.8	93.1	1.7	3.5	1.7
	2008	1.1	92.4	4.1	1.8	1.7
Subprime indicators						
High PTI[9]	2006	16.4	63.2	1.6	2.6	32.6
	2007	16.2	82.4	2.4	4.7	10.6
	2008	13.2	93.9	3.2	1.6	1.3
Piggyback	2006	22.2	55.3	3.4	4.8	36.5
	2007	10.8	84.0	2.0	2.9	11.0
	2008	1.7	97.0	1.5	1.1	.4
Total	2006	100	76.9	2.8	3.9	16.4
	2007	100	87.3	2.5	4.6	5.6
	2008	100	91.9	4.9	2.2	1.1

2006, compared to less than 10 percent in 2008. In 2007, the GSEs and portfolio lenders captured market share among virtually all demographic groups. In 2008, the GSEs and portfolio lenders gave way in the home purchase lending market to the FHA and VA; however, the GSEs continued increasing their share of refinance loans made to all demographic groups that year.

The share of borrowers with income missing from home purchase loan applications fell from 2006 through 2008, but rose slightly for refinance loans in 2008 from 2007. Almost 60 percent of these refinance loans were FHA- or VA-backed, indicative of "streamlined" refinance programs in both agencies for which income data are not used.

The incidence of higher-priced lending significantly declined among all groups from 2006 to 2008 (last three columns, tables 16.A and 16.B). In total, the share of home-purchase loans priced 1.75 percentage points over PMMS fell from 20.3 percent in 2006

16. Market share of home-purchase and refinance loans, by type of originator, type of loan, and loan pricing and by characteristic of borrower, of census tract, and of loan, 2006–08

B. Refinance

Percent

Characteristic of borrower, of census tract, and of loan	Year	Market share	Originating institution: Depository (excluding credit unions), by property location: Within CRA assessment area[1]	Originating institution: Depository, by property location: Outside CRA assessment area	Originating institution: Credit union	Originating institution: Independent mortgage company	Type of loan: FHA	Type of loan: VA	Type of loan: RHS/FSA	Type of loan: GSE	Type of loan: Sold to a non-government entity[2]	Type of loan: Held in portfolio
Minority status[4]												
Black or African American	2006	9.5	20.9	37.3	2.1	39.5	3.7	.7	.0	12.5	48.9	34.3
	2007	8.3	27.9	44.2	3.2	24.6	9.1	1.1	.0	19.7	23.1	47.0
	2008	6.0	39.9	27.8	5.4	26.9	35.1	4.0	.0	22.4	8.5	29.9
Hispanic white	2006	10.5	29.4	28.7	1.6	40.2	1.8	.1	.0	14.7	49.2	34.2
	2007	9.2	40.4	34.6	2.7	22.3	3.8	.2	.0	24.7	23.9	47.3
	2008	5.7	52.9	19.0	5.7	22.5	19.5	1.2	.0	36.3	11.8	31.2
Asian	2006	3.0	34.8	30.6	1.8	32.6	.5	.0	.0	20.2	41.5	37.8
	2007	3.1	42.3	33.8	2.8	21.0	.9	.1	.0	26.8	22.8	49.5
	2008	3.1	55.4	20.5	5.7	18.4	4.4	.3	.0	48.4	16.2	30.7
Other minority[5]	2006	1.2	29.0	32.3	2.3	36.4	2.0	.2	.0	16.5	44.8	36.4
	2007	1.0	37.4	38.5	3.4	20.7	3.7	.3	.0	23.8	23.3	48.9
	2008	.7	47.9	25.2	6.6	20.2	16.0	1.5	.0	35.2	13.1	34.2
Non-Hispanic white	2006	61.3	29.5	35.2	3.7	31.8	2.3	.3	.0	22.4	38.2	36.8
	2007	64.4	33.8	39.1	4.8	22.3	4.5	.4	.0	27.7	23.9	43.6
	2008	72.5	44.7	27.1	7.4	20.7	14.7	1.2	.0	35.3	16.9	31.8
Missing[6]	2006	14.5	21.4	32.7	3.0	42.6	1.6	.3	.0	17.4	49.4	31.3
	2007	14.0	27.7	40.5	3.7	28.1	3.8	.5	.0	24.3	28.4	43.0
	2008	12.0	45.2	25.2	7.1	22.6	17.5	1.7	.0	37.8	14.4	28.6
Borrower income[7]												
Lower	2006	24.6	27.1	34.9	3.8	34.2	2.8	.1	.0	20.5	40.7	35.9
	2007	23.3	32.0	40.0	4.8	23.2	5.6	.2	.0	26.5	22.9	44.8
	2008	23.5	44.0	26.7	7.3	22.1	17.9	.3	.1	32.7	15.2	33.9
Middle	2006	26.2	25.5	34.8	3.4	36.2	2.5	.2	.0	21.3	42.3	33.7
	2007	25.6	30.7	40.2	4.6	24.6	6.0	.2	.0	27.7	24.0	42.2
	2008	25.5	43.3	26.4	7.4	22.9	19.2	.4	.0	35.3	15.8	29.3
High	2006	43.8	29.5	33.3	2.9	34.4	1.0	.1	.0	18.7	43.3	37.0
	2007	46.2	35.8	38.0	4.0	22.2	2.5	.1	.0	25.6	25.6	46.2
	2008	44.9	48.3	25.5	7.5	18.7	10.2	.3	.0	38.4	17.6	33.5
Missing[6]	2006	5.4	24.8	35.1	1.2	38.8	7.7	3.5	.0	17.9	40.1	30.7
	2007	5.0	31.2	40.9	1.7	26.5	11.7	5.5	.0	23.1	23.2	36.5
	2008	6.2	37.0	29.3	2.1	31.7	41.7	17.0	.0	23.3	5.0	13.0
Census-tract income[8]												
Lower	2006	17.9	24.9	33.1	2.4	39.3	2.6	.2	.0	15.2	47.2	34.7
	2007	16.0	33.0	39.5	3.5	24.0	5.9	.3	.0	22.9	24.3	46.6
	2008	11.9	44.8	25.6	6.4	23.3	23.4	1.2	.0	30.5	12.5	32.3
Middle	2006	52.0	26.9	35.2	3.3	34.6	2.5	.4	.0	20.6	41.1	35.5
	2007	52.2	31.9	40.6	4.4	23.1	5.3	.5	.0	26.7	23.7	43.8
	2008	52.0	43.7	27.6	7.3	21.4	18.6	1.6	.0	33.9	14.9	31.0
High	2006	29.5	31.1	33.2	3.0	32.8	1.4	.2	.0	21.4	40.8	36.2
	2007	31.0	36.8	37.0	3.9	22.3	2.7	.3	.0	27.3	25.6	44.1
	2008	35.1	49.2	24.5	6.5	19.8	10.2	1.1	.0	39.5	18.1	31.1
Missing[6]	2006	.6	2.7	21.1	17.8	57.2	1.6	1.0	.1	10.3	57.7	29.4
	2007	.7	2.4	24.6	19.1	54.1	8.2	.6	.0	19.1	29.1	43.1
	2008	1.0	2.2	24.9	22.3	50.9	22.1	1.6	.1	20.5	19.7	36.0
Subprime indicators												
High PTI[9]	2006	24.0	20.3	32.9	1.6	44.8	.9	.1	.0	13.5	56.2	29.3
	2007	20.1	28.2	40.5	2.5	28.6	2.6	.1	.0	22.3	31.6	43.4
	2008	13.1	39.5	27.3	4.5	28.6	15.5	.4	.0	34.8	20.3	29.0
Piggyback[10]	2006	...	...	...	...	...	...	...	...	...	...	...
	2007	...	...	...	...	...	...	...	...	...	...	...
	2008	...	...	...	...	...	...	...	...	...	...	...
Total	2006	100	27.6	34.2	3.1	35.1	2.2	.3	.0	19.8	42.2	35.5
	2007	100	33.4	39.2	4.2	23.2	4.6	.4	.0	26.2	24.4	44.3
	2008	100	45.3	26.2	7.1	21.3	16.3	1.4	.0	35.3	15.8	31.3

NOTE: See notes to table 16.A.

10. Piggyback data for refinance loans are omitted due to possibly significant underreporting of such loans.

... Not applicable.

to 10.2 percent in 2007 and further to 3.3 percent in 2008, reflecting the collapse of the subprime market. This trend was driven primarily by the striking decline in very high-priced lending (2.75 percentage points or more above PMMS). Black and Hispanic white borrowers and borrowers in lower-income tracts recorded the highest incidence of very high-priced home-purchase lending in 2006, and saw outsized declines in the incidence of these loans by 2008.

Other indicators of subprime lending also show declines from 2006 through 2008. For example, there was a reduction in the number of borrowers with PTIs above 30 percent and a virtual elimination of piggyback loans. In 2006, more than 22 percent of home-

16. Market share of home-purchase and refinance loans, by type of originator, type of loan, and loan pricing and by characteristic of borrower, of census tract, and of loan, 2006–08

B. Refinance—*Continued*

Percent

Characteristic of borrower, of census tract, and of loan	Year	Market share	Loan pricing: Lower priced	Higher priced, by percentage points above PMMS APR[3]: Less than 1.75	1.75–2.74	2.75 or more
Minority status[4]						
Black or African American	2006	9.5	49.4	4.2	9.5	37.0
	2007	8.3	62.1	3.7	9.9	24.3
	2008	6.0	77.1	7.4	5.6	9.9
Hispanic white	2006	10.5	63.5	4.6	7.6	24.3
	2007	9.2	74.1	4.2	8.5	13.3
	2008	5.7	85.3	5.5	4.4	4.9
Asian	2006	3.0	80.5	3.2	4.8	11.4
	2007	3.1	87.6	2.4	5.4	4.6
	2008	3.1	96.8	1.4	1.0	.7
Other minority[5]	2006	1.2	67.4	4.0	7.4	21.2
	2007	1.0	75.6	3.4	7.7	13.3
	2008	.7	84.5	4.3	3.9	7.3
Non-Hispanic white	2006	61.3	75.0	3.2	6.1	15.7
	2007	64.4	82.5	2.4	5.9	9.3
	2008	72.5	89.8	3.8	2.9	3.6
Missing[6]	2006	14.5	63.2	3.6	7.7	25.6
	2007	14.0	75.3	3.1	7.5	14.2
	2008	12.0	90.3	4.4	3.1	2.3
Borrower income[7]						
Lower	2006	24.6	62.4	3.6	7.9	26.1
	2007	23.3	73.8	3.0	7.7	15.6
	2008	23.5	82.9	5.9	4.7	6.5
Middle	2006	26.2	66.7	3.3	6.9	23.1
	2007	25.6	77.3	2.8	6.6	13.3
	2008	25.5	88.0	4.6	3.3	4.0
High	2006	43.8	74.2	3.3	6.0	16.6
	2007	46.2	82.1	2.6	6.1	9.2
	2008	44.9	91.8	3.1	2.4	2.7
Missing[6]	2006	5.4	81.2	5.8	8.0	4.9
	2007	5.0	84.7	3.7	7.7	3.9
	2008	6.2	95.7	2.1	1.1	1.1
Census-tract income[8]						
Lower	2006	17.9	57.7	4.3	8.6	29.5
	2007	16.0	69.1	3.7	9.0	18.1
	2008	11.9	81.2	6.5	5.2	7.1
Middle	2006	52.0	68.6	3.6	7.2	20.6
	2007	52.2	77.9	2.9	7.0	12.2
	2008	52.0	87.3	4.7	3.6	4.5
High	2006	29.5	78.7	2.9	5.0	13.5
	2007	31.0	85.9	2.2	4.9	7.0
	2008	35.1	94.1	2.4	1.8	1.7
Missing[6]	2006	.6	85.0	3.0	5.3	6.7
	2007	.7	90.3	1.8	4.6	3.3
	2008	1.0	91.8	3.0	2.4	2.8
Subprime indicators						
High PTI[9]	2006	24.0	54.3	2.4	5.4	37.9
	2007	20.1	70.6	2.3	6.3	20.7
	2008	13.1	89.7	3.0	2.6	4.7
Piggyback[10]	2006	...	...	...	...	...
	2007	...	...	...	...	...
	2008	...	...	...	...	...
Total	2006	100	69.7	3.5	6.8	20.0
	2007	100	79.1	2.8	6.7	11.5
	2008	100	89.0	4.1	3.1	3.8

purchase loans had piggyback loans. Two-thirds of these loans were sold into the private secondary market, and more than 36 percent were very high priced (PMMS spread of more than 2.75 percentage points). By 2008, virtually none of the piggyback loans that remained were higher priced, and most were sold to the GSEs.

Borrower Incomes and Loan Sizes

More detailed information on borrower incomes and loan sizes by year and loan type is shown in tables 17.A, 17.B, 18.A, and 18.B. The data show that the mean income for borrowers using FHA, VA, and "other" loans (almost all of which are conventional

17. Cumulative distribution of home loans, by borrower income and by purpose, type, and pricing of loan, 2007–08

A. Home purchase

Percent

Upper bound of borrower income (thousands of dollars)[1]	FHA		VA		Other[2]		Total		Higher priced		Adjusted higher priced[3]	
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
24	4.6	3.0	.8	.6	2.9	3.0	3.0	2.9	5.4	6.6	5.4	8.1
49	43.5	35.7	28.2	24.1	26.2	25.1	27.6	28.2	35.6	42.2	35.2	42.8
74	78.1	68.9	66.3	60.5	50.4	48.2	53.1	55.1	61.6	68.8	61.3	67.2
99	92.4	86.5	87.5	82.3	67.7	65.5	70.3	72.7	77.1	82.9	76.9	80.7
124	96.9	93.9	95.7	92.5	78.7	76.9	80.7	82.9	85.7	89.7	85.6	87.7
149	98.4	96.9	98.5	96.8	85.1	83.8	86.6	88.4	90.3	93.2	90.3	91.4
199	99.3	99.0	99.8	99.3	92.0	91.2	92.9	94.0	95.0	96.3	95.1	95.1
249	99.6	99.6	99.9	99.8	95.1	94.5	95.6	96.3	97.0	97.6	97.1	96.7
299	99.7	99.8	100.0	99.9	96.6	96.2	96.9	97.5	97.8	98.2	97.9	97.6
More than 299	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MEMO *Borrower income by selected loan type (thousands of dollars)*[1]												
Mean	59.8	67.1	68.3	73.7	102.2	107.1	97.7	93.3	84.6	77.0	84.6	83.1
Median	53.0	59.0	62.0	66.0	74.0	77.0	71.0	69.0	62.0	55.0	62.0	55.0

NOTE: Includes only first-lien originations for owner-occupied, 1–4-family, site-built properties; excludes business-related loans. For loans with two or more applicants, lenders covered under the Home Mortgage Disclosure Act (HMDA) report data on only two. Income for two applicants is reported jointly. For definitions of lower- and higher-priced lending, see text.

1. Income amounts are reported under HMDA to the nearest $1,000.

2. Other loans include loans originated with a Farm Service Agency or Rural Housing Service guarantee and conventional loans.

3. Adjusted higher-priced loans are those with annual percentage rates (APRs) 1.75 percentage points or more above the 30-year fixed-rate APR from the Freddie Mac Primary Mortgage Market Survey.

17. Cumulative distribution of home loans, by borrower income and by purpose, type, and pricing of loan, 2007–08

B. Refinance

Percent

Upper bound of borrower income (thousands of dollars)[1]	FHA		VA		Other[2]		Total		Higher priced		Adjusted higher priced[3]	
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
24	2.9	2.6	3.6	2.7	3.2	3.3	3.2	3.2	5.1	8.5	5.2	9.9
49	34.2	30.5	29.4	23.9	25.0	23.1	25.4	24.2	33.7	42.1	34.5	44.4
74	72.2	65.9	65.9	57.3	51.2	47.7	52.1	50.4	62.1	70.5	63.2	71.7
99	91.1	86.3	86.4	80.1	69.9	66.5	70.8	69.5	79.1	85.5	80.0	86.0
124	97.4	94.8	95.5	91.6	81.2	78.8	81.9	81.2	87.9	82.3	88.6	92.5
149	99.1	97.8	98.5	96.4	87.3	85.7	87.8	87.5	92.1	95.4	92.6	95.4
199	96.7	99.5	99.6	99.2	93.5	92.8	93.7	93.8	96.1	97.7	96.4	97.7
249	99.8	99.8	99.9	99.7	96.0	95.7	96.2	96.3	97.7	98.6	97.9	98.6
299	99.8	99.9	99.9	99.8	97.2	97.1	97.3	97.5	98.4	99.0	98.5	99.0
More than 299	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MEMO *Borrower income by selected loan type (thousands of dollars)*[1]												
Mean	64.2	68.3	67.7	75.3	96.8	101.7	95.3	96.7	80.3	69.1	78.7	67.5
Median	59.0	62.0	63.0	68.0	73.0	77.0	72.0	74.0	62.0	55.0	62.0	54.0

NOTE: See notes to table 17.A.

loans) increased for both home-purchase and refinance lending from 2007 through 2008. Though the income of FHA and VA borrowers rose relative to borrowers using other loans, FHA and VA borrowers continued to have relatively low income levels. Meanwhile, the incomes of borrowers with higher-priced loans, already lower than that of borrowers with lower-priced loans, fell relatively more in 2008.

Loan amounts also differed across loan types, with government-insured or guaranteed loans generally being smaller than conventional loans. In 2008, though, the upward shift in the distribution of loan amounts for both FHA-insured and VA-guaranteed loans contrasted with a downward shift in the distribution for other loans. Overall, average loan amounts for all loans fell for both home-purchase and refinance lending, but the drop was largest among higher-priced loans.

18. Cumulative distribution of home loans, by loan amount and by type, 2007–08

A. Home purchase

Percent

Upper bound of borrower income (thousands of dollars)[1]	FHA		VA		Other[2]		Total		Higher priced		Adjusted higher priced[3]	
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
24	.1	.1	.0	.0	.4	.5	.3	.3	1.0	2.0	1.1	3.9
49	2.2	1.5	.4	.3	2.3	2.8	2.3	2.3	5.6	10.0	5.8	15.0
74	11.4	7.9	2.5	2.2	7.8	8.4	7.9	7.9	15.9	23.6	16.3	29.6
99	26.6	18.9	8.8	7.3	15.5	16.0	16.1	16.3	27.1	37.8	27.6	42.5
149	60.6	47.6	32.9	28.7	35.9	35.6	37.7	38.7	48.1	61.8	48.7	63.3
199	85.1	71.4	60.6	55.4	53.4	52.4	56.1	58.2	63.1	76.4	63.5	75.8
274	96.3	89.1	85.0	80.2	71.4	70.6	73.8	76.6	77.7	87.1	78.0	86.1
417	99.8	98.2	98.9	97.0	88.6	89.0	89.8	92.2	91.2	95.3	91.4	94.4
625	100.0	99.7	100.0	99.8	96.1	96.5	96.5	97.6	97.5	98.4	97.7	98.0
729	100.0	99.9	100.0	100.0	97.4	97.6	97.7	98.4	98.5	98.9	98.7	98.6
More than 799	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MEMO												
Loan amount (thousands of dollars)												
Mean	142.3	171.3	193.1	207.3	241.1	238.4	231.9	216.8	205.5	164.5	202.6	164.6
Median	134.0	154.0	179.0	188.0	188.0	190.0	180.0	176.0	155.0	124.0	152.0	116.0

NOTE: Includes only first-lien originations for owner-occupied, 1–4 family, site-built properties; excludes business-related loans. For definitions of lower- and higher-priced lending, see text.

1. Loan amounts are reported under the Home Mortgage Disclosure Act to the nearest $1,000.

2. See note 2, table 17.A.

3. See note 3, table 17.A.

18. Cumulative distribution of home loans, by loan amount and by type, 2007–08

B. Refinance

Percent

Upper bound of borrower income (thousands of dollars)[1]	FHA		VA		Other[2]		Total		Higher priced		Adjusted higher priced[3]	
	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
24	.1	.0	.1	.0	1.1	1.1	1.0	.9	2.2	5.3	2.3	7.1
49	1.0	.7	.9	.7	4.1	4.8	3.9	4.0	7.0	17.7	7.1	21.5
74	6.1	4.7	4.7	4.0	10.5	11.7	10.3	10.5	16.0	33.1	16.3	37.7
99	17.3	13.5	13.5	10.9	18.5	20.2	18.4	19.0	26.2	46.8	26.8	51.1
149	50.2	41.3	40.1	32.6	37.2	39.7	37.8	39.8	47.2	68.7	48.4	71.6
199	76.5	66.7	64.5	56.1	53.7	56.4	54.8	58.1	63.2	81.8	64.4	83.5
274	93.4	88.1	87.5	81.1	71.4	74.2	72.5	76.5	78.2	91.1	79.3	91.8
417	99.7	98.7	99.3	98.1	88.9	92.0	89.4	93.1	91.5	97.2	92.1	97.3
625	100.0	99.8	100.0	99.9	96.4	97.7	96.6	98.1	97.7	99.1	97.9	99.1
729	100.0	100.0	100.0	100.0	97.7	98.4	97.8	98.7	98.6	99.4	98.8	99.4
More than 799	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
MEMO												
Loan amount (thousands of dollars)												
Mean	160.3	179.6	181.7	200.2	235.0	217.2	231.4	210.8	202.3	138.0	197.0	130.6
Median	149.0	164.0	168.0	186.0	186.0	178.0	183.0	175.0	157.0	105.0	153.0	97.0

NOTE: See notes to table 18.A.

Differences in Lending Outcomes by Race, Ethnicity, and Sex of the Borrower

Analyses of HMDA data from earlier years revealed substantial differences in the incidence of higher-priced lending and in denial rates across racial and ethnic lines; analyses further showed that such differences could not be fully explained by factors included in the HMDA data.[52] Studies also found that differences across groups in mean APR spreads paid by those with higher-priced loans were generally small.[53] Here we examine the 2008 HMDA data to determine the extent to which these differences persist, comparing results for 2008 with those for 2007.

Although the HMDA data include a variety of detailed information about mortgage transactions,

52. See Avery, Brevoort, and Canner, "The 2006 HMDA Data"; Avery, Brevoort, and Canner, "Higher-Priced Home Lending and the 2005 HMDA Data"; and Avery, Canner, and Cook, "New Information Reported under HMDA."

53. See, for example, Andrew Haughwout, Christopher Mayer, and Joseph Tracy (2009), *Subprime Mortgage Pricing: The Impact of Race, Ethnicity, and Gender on the Cost of Borrowing*, Staff Report no. 368 (New York: Federal Reserve Bank of New York, April); and Marsha Courchane (2007), "The Pricing of Home Mortgage Loans to Minority Borrowers: How Much of the APR Differential Can We Explain?" *Journal of Real Estate Research*, vol. 29 (4), pp. 400–39.

many key factors that are considered by lenders in credit underwriting and pricing are not included. Accordingly, it is not possible to determine from HMDA data alone whether racial and ethnic pricing disparities reflect illegal discrimination. However, analysis using the HMDA data can account for some factors that are likely related to the lending process. Given that lenders offer a wide variety of loan products for which basic terms can differ substantially, the analysis here can only be viewed as suggestive.

Comparisons of average outcomes for each racial, ethnic, or gender group are made both before and after accounting for differences in the borrower-related factors contained in the HMDA data (income, loan amount, location of the property or MSA, and presence of a co-applicant) and for differences in borrower-related factors *plus* the specific lending institution used by the borrower.[54] Comparisons for lending outcomes across groups are of three types: gross (or "unmodified"), modified to account for borrower-related factors (or "borrower modified"), and modified to account for borrower-related factors plus lender (or "lender modified").

As described earlier, changes in the interest rate environment over the course of 2008 may have affected whether a loan's APR exceeded the reporting threshold set by the rules governing HMDA, making comparisons of unadjusted data on reported higher-priced lending potentially misleading. To correct for the distortions introduced by these changes, we rely on the PMMS spread, which was defined in an earlier section as the difference between the APR on a loan and the interest rate available on loans to prime borrowers with the best credit quality, assuming the loan is a 30-year fixed-rate loan. In the tables presented in this section, we report disparities in the incidence and level of pricing using the reported HMDA pricing definition of higher-priced lending, labeled "unadjusted," and the PMMS-spread definition, labeled "PMMS-spread adjusted." A loan with a PMMS spread of greater than 1.75 percentage points is treated as higher priced in the adjusted analysis.

Finally, in previous years, analyses were conducted only for conventional loans, because the incidence of higher-priced lending for FHA and VA loans was so low that a meaningful statistical comparison across different groups was not possible. As discussed earlier, this was not the case in 2008 when at least the unadjusted incidence levels for nonconventional lending were at almost the same levels as conventional lending. Consequently, the analysis for 2008 (but not 2007) was conducted separately for both conventional and nonconventional lending.[55]

Incidence of Higher-Priced Lending by Race and Ethnicity

The frequency of reported higher-priced lending varies across racial and ethnic groups. The 2008 HMDA data, like those from earlier years, indicate that black and Hispanic white borrowers are more likely, and Asian borrowers less likely, to obtain conventional loans with prices above the HMDA price-reporting thresholds than are non-Hispanic white borrowers (tables 19.A and 19.B). These relationships hold for both home-purchase and refinance lending and persist whether the analysis focuses on unadjusted or PMMS-spread-adjusted data. However, relative to 2007, incidences declined in 2008, and differences among groups appear to be narrowing. For example, the gross PMMS-spread-adjusted home-purchase incidence was 29.7 percent for black borrowers in 2007, falling to 10.5 percent in 2008. The PMMS-spread-adjusted incidence declined as well for non-Hispanic white borrowers but by a smaller amount, from 8.4 percent to 3.7 percent.

---

54. Excluded from the analysis are applicants residing outside the 50 states and the District of Columbia as well as applications deemed to be business related.

Borrower-related factors are controlled for as follows: Loans are placed in cells based on their size (arrayed into buckets), the borrower's income (also arrayed into buckets), the product type, MSA, number of applicants (one or two), whether the loan was originated through a preapproval program, and, for home-purchase loans, whether a piggyback junior lien was associated with it. The applicant's (and co-applicant's) gender was further used to define cells in the analyses of differences among racial and ethnic groups, and the applicant's (and co-applicant's) race was used in the analyses of gender differences.

Once loans are placed in cells, "within cell" differences in the incidence of higher-priced lending (or APR spreads or denial rates) are computed. These differences are averaged across cells to create a modified disparity controlling for borrower-related characteristics. For the second stage of the analyses, cells are further defined by the HMDA lender, and again, average within-cell disparities are computed. These disparities control for both borrower-related characteristics and lender.

For purposes of presentation, the average borrower- and lender-controlled within-cell disparities for each comparison group are added to the average gross incidence (or APR spread or denial rate) of the *base comparison group* (non-Hispanic whites in the case of comparison by race and ethnicity, and males in the case of comparison by sex). An interpretation of this number is that it is the best guess as to the incidence of higher-priced lending (or APR or denial rate) that the comparison group would have if it had the same average borrower characteristics (and lender) as the base comparison group.

55. Although results are reported for nonconventional lending as a whole, the analysis controls for the specific type of government-backed loan program (FHA, VA, or Farm Service Agency/Rural Housing Service) used.

19. Incidence of higher-priced lending, unmodified and modified for borrower- and lender-related factors, for first liens on owner-occupied, one- to four-family, site-built homes, by race, ethnicity, and sex of borrower

A. Conventional home purchase, adjusted and unadjusted for changes in interest rates, 2007–08

Percent except as noted

Race, ethnicity, and sex	Number of loans	Unmodified incidence	Modified incidence, by modification factor: Borrower-related	Modified incidence, by modification factor: Borrower-related plus lender	Number of loans	Unmodified incidence	Modified incidence, by modification factor: Borrower-related	Modified incidence, by modification factor: Borrower-related plus lender
	2007							
	Unadjusted spread				Adjusted spread			
Race other than white only								
American Indian or Alaska Native	13,678	19.9	17.9	15.8	13,678	16.4	15.0	13.0
Asian	146,411	7.7	8.3	9.5	146,411	5.9	6.5	7.6
Black or African American	196,967	34.1	29.7	22.5	196,967	29.7	25.9	18.6
Native Hawaiian or other Pacific Islander	11,757	17.7	17.0	14.2	11,757	14.1	14.0	11.4
Two or more minority races	1,876	13.0	12.8	13.3	1,876	10.8	10.4	10.7
Joint	36,550	8.9	13.4	12.0	36,550	7.3	11.1	9.6
Missing	277,348	14.2	18.7	14.4	277,348	11.7	15.9	11.8
White, by ethnicity								
Hispanic white	261,935	28.7	21.3	16.5	261,935	23.6	17.5	13.0
Non-Hispanic white	1,950,566	10.6	10.6	10.6	1,950,566	8.4	8.4	8.4
Sex								
One male	906,127	18.6	18.6	18.6	906,127	15.2	15.2	15.2
One female	664,102	17.1	16.4	17.2	664,102	13.9	13.4	14.1
Two males	28,649	14.6	14.6	14.6	28,649	11.9	11.9	11.9
Two females	24,439	15.3	13.3	14.0	24,439	12.9	11.0	12.0
	2008							
	Unadjusted spread				Adjusted spread			
Race other than white only								
American Indian or Alaska Native	5,969	11.7	10.1	9.4	5,969	7.2	5.7	5.0
Asian	105,156	3.3	5.9	6.4	105,156	1.4	3.2	3.6
Black or African American	55,987	17.1	14.4	14.0	55,987	10.5	8.7	8.0
Native Hawaiian or other Pacific Islander	4,986	7.2	8.3	8.9	4,986	3.2	4.5	4.6
Two or more minority races	1,132	5.0	5.4	8.6	1,132	2.0	3.0	4.1
Joint	21,215	4.9	7.3	7.3	21,215	2.8	4.2	4.1
Missing	146,339	4.9	7.2	7.5	146,339	2.4	3.9	4.3
White, by ethnicity								
Hispanic white	91,804	15.4	11.9	11.1	91,804	8.5	6.8	5.8
Non-Hispanic white	1,109,587	6.5	6.5	6.5	1,109,587	3.7	3.7	3.7
Sex								
One male	440,197	8.9	8.9	8.9	440,197	5.0	5.0	5.0
One female	314,078	7.7	7.5	7.9	314,078	4.1	4.0	4.4
Two males	17,547	9.6	9.6	9.6	17,547	5.6	5.6	5.6
Two females	13,498	7.6	7.7	9.1	13,498	4.1	4.1	5.4

NOTE: Excludes transition-period loans (those for which the application was submitted before 2004). For definition of higher-priced lending and explanations of spread adjustment and modification factors, see text. Loans taken out jointly by a male and female are not tabulated here because they would not be directly comparable with loans taken out by one borrower or by two borrowers of the same sex.

The gross differences in the incidence of higher-priced lending between non-Hispanic white borrowers, on the one hand, and black or Hispanic white borrowers, on the other, are relatively large; these differences are reduced some, but not completely, after controlling for borrower-related factors plus lender. For example, the gross 2008 PMMS-spread-adjusted difference for home-purchase lending between Hispanic white and non-Hispanic white borrowers falls 2.7 percentage points when other factors are accounted for (8.5 percent minus 3.7 percent versus 5.8 percent minus 3.7 percent). Differences in the incidences of higher-priced lending between Asian and non-Hispanic white borrowers are generally small and largely disappear after adjusting for borrower-related factors and lender.

As noted, changes in the interest rate environment had a particularly distortive effect on the incidence of higher-priced lending reported for FHA and VA loans. These distortions are apparent in comparisons across racial and ethnic groups (table 19.C). The unadjusted incidence of higher-priced home-purchase lending is 12.0 percent for black borrowers, almost 4 percentage points higher than the incidence of 8.1 percent for non-Hispanic whites. However, the PMMS-spread-adjusted incidences are only 2.6 percent and 1.5 percent for the two groups, respectively. Like conventional lending, controlling for borrower characteristics and lender narrows the differences among groups, but they do not entirely disappear. Overall, the results suggest that racial and ethnic disparities in the incidence of higher-priced lending may be less of an issue

19. Incidence of higher-priced lending, unmodified and modified for borrower- and lender-related factors, for first liens on owner-occupied, one- to four-family, site-built homes, by race, ethnicity, and sex of borrower

B. Conventional refinance, adjusted and unadjusted for changes in interest rates, 2007–08

Percent except as noted

Race, ethnicity, and sex	Number of loans	Unmodified incidence	Modified incidence, by modification factor		Number of loans	Unmodified incidence	Modified incidence, by modification factor	
			Borrower-related	Borrower-related plus lender			Borrower-related	Borrower-related plus lender
	2007							
	Unadjusted spread				Adjusted spread			
Race other than white only								
American Indian or Alaska Native	19,508	26.4	29.2	20.3	19,508	23.1	26.1	17.6
Asian	108,317	12.5	15.8	17.3	108,317	10.1	13.4	14.8
Black or African American	266,661	41.4	38.8	25.1	266,661	37.8	35.3	22.0
Native Hawaiian or other Pacific Islander	15,801	23.0	26.9	21.9	15,801	19.5	23.9	19.0
Two or more minority races	2,556	17.5	19.3	20.6	2,556	15.3	17.5	17.8
Joint	34,305	18.6	23.3	19.0	34,305	16.4	20.7	16.6
Missing	438,423	25.9	31.4	22.7	438,423	22.8	28.2	19.8
White, by ethnicity								
Hispanic white	302,012	27.0	25.3	21.4	302,012	22.8	21.9	18.5
Non-Hispanic white	2,174,308	18.2	18.2	18.2	2,174,308	15.8	15.8	15.8
Sex								
One male	927,344	23.8	23.8	23.8	927,344	20.6	20.6	20.6
One female	778,477	24.9	23.8	23.6	778,477	21.6	20.5	20.4
Two males	23,147	19.4	19.4	19.4	23,147	17.0	17.0	17.0
Two females	25,363	26.6	22.2	20.7	25,363	23.8	19.6	18.3
	2008							
	Unadjusted spread				Adjusted spread			
Race other than white only								
American Indian or Alaska Native	9,693	19.7	18.8	12.6	9,693	15.7	15.4	9.3
Asian	83,697	2.9	8.0	9.3	83,697	1.7	5.6	6.8
Black or African American	102,119	27.9	24.8	15.2	102,119	22.7	20.4	11.0
Native Hawaiian or other Pacific Islander	6,924	10.7	14.9	11.0	6,924	7.9	11.2	7.7
Two or more minority races	2,050	6.2	10.4	10.6	2,050	4.3	7.4	7.1
Joint	26,145	8.1	11.6	10.4	26,145	6.1	8.6	7.7
Missing	244,501	7.8	10.9	10.9	244,501	5.4	7.6	8.0
White, by ethnicity								
Hispanic white	118,457	14.4	13.2	11.4	118,457	10.2	9.5	8.1
Non-Hispanic white	1,708,479	9.9	9.9	9.9	1,708,479	7.1	7.1	7.1
Sex								
One male	542,449	11.2	11.2	11.2	542,449	8.0	8.0	8.0
One female	441,113	12.6	10.9	10.8	441,113	9.2	7.9	7.8
Two males	16,661	10.3	10.3	10.3	16,661	7.3	7.3	7.3
Two females	17,633	14.4	11.9	11.1	17,633	10.9	8.9	7.7

NOTE: See notes to table 19.A.

for FHA or VA lending than for conventional lending, particularly when corrections are made for the distortions created by the interest rate environment.[56]

56. It is difficult to know how to interpret pricing disparities across groups in FHA and VA lending programs. For the most part, neither program's fees have been risk based, so it is tempting to attribute any differences in rates across groups to discrimination or other factors unrelated to credit risk. However, this may be an unwarranted simplification. Even though the FHA and VA cover most of the credit risk in a loan, they do not cover all of it. Lenders face recourse risk in the case of fraud, and elevated servicing costs in the case of borrowers who do not make their payments. Thus, FHA and VA loan rates are still likely to vary with credit risk, albeit not as much as they would if the program fees were fully risk based. Beyond credit risk, other risk factors, such as prepayment risk, may influence FHA and VA loan pricing.

Rate Spreads by Race and Ethnicity

The 2008 data indicate that among borrowers with higher-priced loans, the gross mean prices paid relative to prime (the PMMS-adjusted spread) are similar across groups for both home-purchase and refinance lending (tables 20.A, 20.B, and 20.C). This circumstance holds for both conventional and nonconventional lending. For example, for conventional home-purchase loans, the gross mean PMMS-adjusted spread was 2.76 percentage points for both Hispanic white and black borrowers, while the mean APR spread for non-Hispanic white borrowers was somewhat higher at 2.89 percentage points. Accounting for borrower-related factors or the specific lender used by

19. Incidence of higher-priced lending, unmodified and modified for borrower- and lender-related factors, for first liens on owner-occupied, one- to four-family, site-built homes, by race, ethnicity, and sex of borrower

C. Nonconventional home purchase and refinance, 2008

Percent except as noted

Race, ethnicity, and sex	Number of loans	Unmodified incidence	Modified incidence, by modification factor		Number of loans	Unmodified incidence	Modified incidence, by modification factor	
			Borrower-related	Borrower-related plus lender			Borrower-related	Borrower-related plus lender
	Unadjusted spread							
	Home purchase				Refinance			
Race other than white only								
American Indian or Alaska Native	7,546	8.1	9.8	10.5	2,270	10.8	13.3	12.8
Asian	19,360	7.9	9.1	9.2	4,758	8.2	9.3	10.4
Black or African American	111,375	12.0	11.9	11.2	73,007	13.8	16.1	14.7
Native Hawaiian or other Pacific Islander	4,782	8.8	10.4	9.9	1,566	12.0	16.5	15.1
Two or more minority races	802	11.3	12.4	10.6	305	15.7	20.5	13.1
Joint	20,081	7.0	9.8	9.7	7,692	8.8	11.2	11.3
Missing	87,225	8.4	10.7	9.6	63,069	15.4	16.8	12.9
White, by ethnicity								
Hispanic white	107,031	12.4	9.6	9.7	32,361	10.3	12.0	12.3
Non-Hispanic white	719,687	8.1	8.1	8.1	368,192	11.7	11.7	11.7
Sex								
One male	328,082	9.6	9.6	9.6	148,319	12.5	12.5	12.5
One female	213,682	10.6	8.8	8.9	107,427	13.4	11.9	12.2
Two males	21,843	12.1	12.1	12.1	5,988	12.5	12.5	12.5
Two females	17,412	12.3	11.8	6.8	7,148	13.8	12.0	10.8
	Adjusted spread							
	Home purchase				Refinance			
Race other than white only								
American Indian or Alaska Native	7,546	1.4	1.7	2.3	2,270	2.6	3.2	2.8
Asian	19,360	1.1	1.2	1.5	4,758	1.4	1.7	2.0
Black or African American	111,375	2.6	2.4	2.2	73,007	3.9	4.6	3.7
Native Hawaiian or other Pacific Islander	4,782	1.5	1.8	1.8	1,566	3.6	3.5	2.7
Two or more minority races	802	3.1	4.9	2.3	305	6.2	9.7	3.3
Joint	20,081	1.4	2.0	1.9	7,692	2.4	3.4	3.7
Missing	87,225	1.6	2.5	2.0	63,069	4.3	4.1	3.3
White, by ethnicity								
Hispanic white	107,031	2.3	1.7	1.7	32,361	2.3	2.9	2.9
Non-Hispanic white	719,687	1.5	1.5	1.5	368,192	2.7	2.7	2.7
Sex								
One male	328,082	1.8	1.8	1.8	148,319	3.1	3.1	3.1
One female	213,682	2.1	2.1	1.6	107,427	3.4	2.9	3.0
Two males	21,843	2.3	2.3	2.3	5,988	2.7	2.7	2.7
Two females	17,412	2.3	2.2	2.0	7,148	3.3	2.9	2.9

NOTE: Excludes transition-period loans (those for which the application was submitted before 2004). For definition of higher-priced lending and explanation of modification factors, see text. Loans taken out jointly by a male and female are not tabulated here because they would not be directly comparable with loans taken out by one borrower or by two borrowers of the same sex.

the borrowers alters the relationships, but in unpredictable ways; black and Hispanic white borrowers now have higher modified spreads relative to non-Hispanic white borrowers. Patterns are similar when the analysis focuses on nonconventional loans.

Pricing Differences by Sex

The 2008 HMDA data, like those in previous years, reveal relatively little difference in pricing outcomes (PMMS-spread adjusted or spread unadjusted) when borrowers are distinguished by sex. This holds for both incidence and rate-spread comparisons (tables 19 and 20).

Denial Rates by Race, Ethnicity, and Sex

Analyses of the HMDA data from earlier years have consistently found that denial rates vary across applicants grouped by race or ethnicity. In 2008, for both home-purchase and refinance conventional lending, black and Hispanic white applicants had notably higher gross denial rates than non-Hispanic white applicants. Generally, denial rates for black applicants have been the highest, and denial rates for Hispanic white applicants were between those for black and those for non-Hispanic white applicants (tables 21.A and 21.B). The pattern for Asians was somewhat different, as the gross denial rate for this

20. Mean APR spreads, unmodified and modified for borrower- and lender-related factors, for higher-priced loans on one- to four-family homes, by type of loan and by race, ethnicity, and sex of borrower

A. Coventional home purchase, adjusted and unadjusted for changes in interest rates, 2007–08

Percent except as noted

Race, ethnicity, and sex	Number of higher-priced loans	Unmodified mean spread	Modified mean spread, by modification factor: Borrower-related	Modified mean spread, by modification factor: Borrower-related plus lender	Number of higher-priced loans	Unmodified mean spread	Modified mean spread, by modification factor: Borrower-related	Modified mean spread, by modification factor: Borrower-related plus lender
	2007							
	Unadjusted spread				Adjusted spread			
Race other than white only								
American Indian or Alaska Native	2,727	4.46	4.48	4.49	2,244	3.27	3.26	3.34
Asian	11,263	4.29	4.33	4.39	8,627	3.18	3.22	3.27
Black or African American	67,231	4.94	4.92	4.67	58,491	3.73	3.71	3.49
Native Hawaiian or other Pacific Islander	2,086	4.52	4.59	4.53	1,654	3.42	3.42	3.40
Two or more minority races	243	4.78	4.83	4.75	203	3.62	3.64	3.67
Joint	3,264	4.65	4.64	4.52	2,667	3.52	3.47	3.38
Missing	39,267	4.68	4.80	4.60	32,511	3.52	3.63	3.43
White, by ethnicity								
Hispanic white	75,103	4.52	4.49	4.45	61,754	3.35	3.31	3.30
Non-Hispanic white	206,469	4.42	4.42	4.42	164,132	3.28	3.28	3.28
Sex								
One male	168,684	4.55	4.55	4.55	138,085	3.39	3.39	3.39
One female	113,427	4.54	4.54	4.55	92,374	3.39	3.40	3.40
Two males	4,189	4.54	4.54	4.54	3,397	3.40	3.40	3.40
Two females	3,743	4.81	4.63	4.59	3,153	3.65	3.46	3.41
	2008							
	Unadjusted spread				Adjusted spread			
Race other than white only								
American Indian or Alaska Native	700	4.16	4.17	4.23	427	3.12	3.19	3.34
Asian	3,465	3.65	3.85	3.86	1,460	2.63	2.69	2.63
Black or African American	9,601	3.88	4.02	4.10	5,855	2.76	2.90	2.99
Native Hawaiian or other Pacific Islander	357	3.70	3.87	4.01	159	2.73	2.80	3.24
Two or more minority races	57	3.73	4.39	4.35	23	2.85	3.59	3.74
Joint	1,045	4.05	3.93	4.06	596	3.02	2.88	2.93
Missing	7,241	3.69	3.79	4.01	3,540	2.64	2.72	2.92
White, by ethnicity								
Hispanic white	14,130	3.83	3.96	4.05	7,776	2.76	2.84	2.98
Non-Hispanic white	72,549	3.97	3.97	3.97	41,588	2.89	2.89	2.89
Sex								
One male	39,093	3.87	3.87	3.87	21,852	2.79	2.79	2.79
One female	24,189	3.80	3.81	3.83	12,907	2.72	2.75	2.76
Two males	1,683	3.99	3.99	3.99	985	2.87	2.87	2.87
Two females	1,023	3.88	3.86	4.05	547	2.83	2.82	2.86

NOTE: Unadjusted-spread annual percentage rate (APR) is the difference between the APR on the loan and the yield on a comparable-maturity Treasury security. Adjusted-spread APR is the difference between the APR on the loan and the estimated APR reported by Freddie Mac for a 30-year fixed-rate loan in its Primary Mortgage Market Survey. Excludes transition-period loans (those for which the application was submitted before 2004). For definition of higher-priced lending and explanation of modification factors, see text. Loans taken out jointly by a male and female are not tabulated here because they would not be directly comparable with loans taken out by one borrower or by two borrowers of the same sex.

group was higher for home-purchase loans than for non-Hispanic whites, but about the same for refinancing.

Controlling for borrower-related factors in the HMDA data reduces the differences among racial and ethnic groups. Accounting for the specific lender used by the applicant reduces differences further, although unexplained differences remain between non-Hispanic whites and other racial and ethnic groups. For home-purchase conventional lending, denial rates increased only modestly for virtually all groups from 2007 through 2008 with differences between groups also changing little. Patterns for conventional refinancing are less straightforward. Denial rates for virtually all minority groups (with the exception of Asians) increased by about one-tenth over the previous year while the denial rate fell for non-Hispanic white applicants. As a result, denial-rate differences between minorities and non-Hispanic whites widened.

The rank ordering of denial rates across groups is similar for nonconventional lending in 2008 (table 21.C). However, differences among groups are narrower because denial rates are uniformly lower for black and Hispanic white applicants and higher for Asians and non-Hispanic whites as compared with conventional lending. Group differences are reduced, but do not disappear, when borrower characteristics and lender are controlled for. With

20. Mean APR spreads, unmodified and modified for borrower- and lender-related factors, for higher-priced loans on one- to four-family homes, by type of loan and by race, ethnicity, and sex of borrower

B. Conventional refinance, adjusted and unadjusted for changes in interest rates, 2007–08

Percent except as noted

Race, ethnicity, and sex	Number of higher-priced loans	Unmodified mean spread	Modified mean spread, by modification factor		Number of higher-priced loans	Unmodified mean spread	Modified mean spread, by modification factor	
			Borrower-related	Borrower-related plus lender			Borrower-related	Borrower-related plus lender
	2007							
	Unadjusted spread				Adjusted spread			
Race other than white only								
American Indian or Alaska Native	5,145	4.77	4.77	4.79	4,515	3.52	3.50	3.54
Asian	13,581	4.29	4.62	4.69	10,950	3.11	3.41	3.47
Black or African American	110,464	5.06	5.04	4.86	100,695	3.77	3.75	3.61
Native Hawaiian or other Pacific Islander	3,639	4.63	4.82	4.81	3,075	3.44	3.55	3.56
Two or more minority races	447	4.83	4.84	4.75	392	3.59	3.58	3.51
Joint	6,365	4.79	4.90	4.82	5,631	3.53	3.63	3.58
Missing	113,472	4.88	4.97	4.75	100,081	3.64	3.71	3.51
White, by ethnicity								
Hispanic white	81,628	4.68	4.77	4.80	68,909	3.50	3.54	3.57
Non-Hispanic white	396,194	4.71	4.71	4.71	344,009	3.47	3.47	3.47
Sex								
One male	221,043	4.77	4.77	4.77	191,322	3.55	3.55	3.55
One female	193,694	4.78	4.75	4.76	167,975	3.56	3.53	3.53
Two males	4,502	4.77	4.77	4.77	3,937	3.52	3.52	3.52
Two females	6,750	4.91	4.82	4.79	6,046	3.64	3.57	3.52
	2008							
	Unadjusted spread				Adjusted spread			
Race other than white only								
American Indian or Alaska Native	1,914	5.12	5.00	4.68	1,525	3.93	3.79	3.58
Asian	2,429	4.08	4.47	4.59	1,450	3.08	3.43	3.47
Black or African American	28,476	5.28	5.38	4.89	23,191	4.11	4.17	3.75
Native Hawaiian or other Pacific Islander	743	4.71	4.91	4.70	549	3.62	3.74	3.66
Two or more minority races	128	4.76	5.12	4.83	88	3.89	4.28	3.99
Joint	2,115	4.72	4.78	4.73	1,584	3.58	3.64	3.58
Missing	19,179	4.46	4.58	4.67	13,155	3.42	3.54	3.52
White, by ethnicity								
Hispanic white	17,025	4.63	4.69	4.71	12,080	3.58	3.57	3.63
Non-Hispanic white	168,484	4.66	4.66	4.66	122,082	3.54	3.54	3.54
Sex								
One male	60,584	4.63	4.63	4.63	43,232	3.56	3.56	3.56
One female	55,666	4.77	4.72	4.63	40,779	3.69	3.64	3.54
Two males	1,710	4.50	4.50	4.50	1,221	3.36	3.36	3.36
Two females	2,540	4.84	4.68	4.39	1,921	3.72	3.45	3.28

NOTE: See notes to table 20.A.

regard to the sex of applicants, there are no notable differences for either conventional or nonconventional lending.

Some Limitations of the Data in Assessing Fair Lending Compliance

Information in the HMDA data, including borrower and loan characteristics, property location, loan origination date, and the lender identity, does not account fully for racial or ethnic differences in the incidence of higher-priced conventional lending or in denial rates for all lending types; significant differences remain unexplained. In contrast, only small differences across groups were found in the mean APR spreads paid by those receiving higher-priced loans and in the incidence of higher-priced lending for nonconventional lending. The latter finding is reassuring given the apparent increase in higher-priced nonconventional lending in 2008. However, removing the effects of the reporting distortions created by changes in the interest rate environment eliminates much of the difference in incidence rates among groups in nonconventional lending. Regarding the sex of borrowers, only very small differences were found in lending outcomes.

Both previous research and experience gained in the fair lending enforcement process show that unexplained differences in the incidence of higher-priced lending and in denial rates among racial or ethnic groups often stem, at least in part, from credit-related factors not available in the HMDA data, such as measures of credit history (including credit scores), loan-to-value and debt-to-income ratios, and differences in choice of loan products. Differential costs of loan origination and the competitive environment

20. Mean APR spreads, unmodified and modified for borrower- and lender-related factors, for higher-priced loans on one- to four-family homes, by type of loan and by race, ethnicity, and sex of borrower

C. Nonconventional home purchase and refinance, 2008

Percentage points except as noted

Race, ethnicity, and sex	Number of higher-priced loans	Unmodified mean spread	Modified mean spread, by modification factor		Number of higher-priced loans	Unmodified mean spread	Modified mean spread, by modification factor	
			Borrower-related	Borrower-related plus lender			Borrower-related	Borrower-related plus lender
	Unadjusted spread							
	Home purchase				Refinance			
Race other than white only								
American Indian or Alaska Native	610	3.34	3.34	3.38	245	3.38	3.43	3.45
Asian	1,527	3.32	3.31	3.37	392	3.31	3.31	3.49
Black or African American	13,388	3.39	3.40	3.41	10,103	3.40	3.39	3.41
Native Hawaiian or other Pacific Islander	422	3.36	3.39	3.38	188	3.62	3.32	3.35
Two or more minority races	91	3.38	3.37	3.31	48	3.37	3.51	3.30
Joint	1,399	3.49	3.39	3.39	674	3.38	3.39	3.45
Missing	7,335	3.34	3.39	3.40	9,712	3.38	3.35	3.41
White, by ethnicity								
Hispanic white	13,267	3.40	3.38	3.37	3,334	3.44	3.82	3.37
Non-Hispanic white	58,517	3.37	3.37	3.37	42,901	3.37	3.37	3.37
Sex								
One male	31,483	3.37	3.37	3.37	18,522	3.38	3.38	3.38
One female	22,722	3.39	3.40	3.37	14,403	3.40	3.50	3.36
Two males	2,650	3.37	3.37	3.37	751	3.36	3.36	3.36
Two females	2,138	3.36	3.35	3.35	985	3.37	3.39	3.44
	Adjusted spread							
	Home purchase				Refinance			
Race other than white only								
American Indian or Alaska Native	109	2.26	2.14	2.36	58	2.07	2.30	2.32
Asian	211	2.30	2.08	2.27	67	2.11	1.62	2.45
Black or African American	2,906	2.26	2.38	2.45	2,831	2.19	2.13	2.25
Native Hawaiian or other Pacific Islander	71	2.41	2.16	2.27	56	2.88	2.02	2.35
Two or more minority races	25	2.17	1.74	2.21	19	2.03	2.34	2.34
Joint	277	2.91	2.31	2.29	181	2.20	2.16	2.42
Missing	1,401	2.19	2.37	2.40	2,713	2.09	2.02	2.32
White, by ethnicity								
Hispanic white	2,411	2.47	2.35	2.27	731	2.61	3.42	2.23
Non-Hispanic white	10,553	2.36	2.36	2.36	10,057	2.24	2.24	2.24
Sex								
One male	5,992	2.30	2.30	2.30	4,600	2.20	2.20	2.20
One female	4,386	2.36	2.50	2.28	3,634	2.27	2.27	2.11
Two males	498	2.30	2.30	2.30	162	2.21	2.21	2.21
Two females	392	2.26	2.28	2.37	238	2.13	1.71	2.72

NOTE: Spread annual percentage rate (APR) is the difference between the APR on the loan and the yield on a comparable-maturity Treasury security. Excludes transition-period loans (those for which the application was submitted before 2004). For definition of higher-priced lending and explanation of modification factors, see text. Loans taken out jointly by a male and female are not tabulated here because they would not be directly comparable with loans taken out by one borrower or by two borrowers of the same sex.

also may bear on the differences in pricing, as may differences across populations in credit-shopping activities.

Differences in pricing and underwriting outcomes may also be due to discriminatory treatment of minorities or other actions by lenders, including marketing practices. The HMDA data are regularly used to facilitate the fair lending examination and enforcement processes. When examiners for the federal banking agencies evaluate an institution's fair lending risk, they analyze HMDA price data in conjunction with other information and risk factors, as directed by the Interagency Fair Lending Examination Procedures.[57]

57. The Interagency Fair Lending Examination Procedures are available at www.ffiec.gov/PDF/fairlend.pdf.

21. Denial rates on applications, unmodified and modified for borrower- and lender-related factors, for first liens on owner-occupied, one- to four-family, site-built homes, by race, ethnicity, and sex of applicant

A. Conventional home purchase, 2007–08

Percent except as noted

Race, ethnicity, and sex	2007: Number of applications acted upon by lender	2007: Unmodified denial rate	2007: Modified denial rate, by modification factor: Borrower-related	2007: Modified denial rate, by modification factor: Borrower-related plus lender	2008: Number of applications acted upon by lender	2008: Unmodified denial rate	2008: Modified denial rate, by modification factor: Borrower-related	2008: Modified denial rate, by modification factor: Borrower-related plus lender
Race other than white only								
American Indian or Alaska Native	22,627	27.9	24.8	20.7	9,939	29.7	24.6	21.0
Asian	210,828	17.4	15.0	15.1	152,213	18.7	16.6	16.8
Black or African American	364,887	35.3	30.4	23.5	105,001	36.1	29.7	25.4
Native Hawaiian or other Pacific Islander	19,436	27.5	21.9	20.2	8,016	26.9	22.7	21.0
Two or more minority races	2,824	23.5	21.7	21.4	1,669	23.6	21.9	23.8
Joint	48,325	14.5	18.2	15.5	28,195	14.8	17.6	15.3
Missing	441,246	24.5	23.2	17.8	220,395	21.5	19.9	17.0
White, by ethnicity								
Hispanic white	448,973	29.9	22.1	19.5	160,823	31.1	22.7	22.0
Non-Hispanic white	2,495,779	13.2	13.2	13.2	1,425,869	13.6	13.6	13.6
Sex								
One male	1,349,211	22.7	22.7	22.7	640,030	21.3	21.3	21.3
One female	967,818	21.6	21.3	21.7	443,753	19.8	19.4	19.9
Two males	41,128	21.0	21.0	21.0	25,195	21.1	21.1	21.1
Two females	35,184	21.1	19.3	19.5	19,148	20.4	19.3	19.6

NOTE: Includes transition-period applications (those submitted before 2004). For explanation of modification factors, see text. Applications made jointly by a male and female are not tabulated here because they would not be directly comparable with applications made by one applicant or by two applicants of the same sex.

21. Denial rates on applications, unmodified and modified for borrower- and lender-related factors, for first liens on owner-occupied, one- to four-family, site-built homes, by race, ethnicity, and sex of applicant

B. Conventional refinance, 2007–08

Percent except as noted

Race, ethnicity, and sex	2007: Number of applications acted upon by lender	2007: Unmodified denial rate	2007: Modified denial rate, by modification factor: Borrower-related	2007: Modified denial rate, by modification factor: Borrower-related plus lender	2008: Number of applications acted upon by lender	2008: Unmodified denial rate	2008: Modified denial rate, by modification factor: Borrower-related	2008: Modified denial rate, by modification factor: Borrower-related plus lender
Race other than white only								
American Indian or Alaska Native	59,774	57.0	53.7	42.5	36,265	65.4	56.7	43.0
Asian	202,414	32.6	37.2	38.0	150,970	31.6	35.4	36.1
Black or African American	737,786	53.3	53.5	43.6	343,389	61.2	59.9	44.9
Native Hawaiian or other Pacific Islander	38,851	46.3	48.5	43.0	19,275	51.8	52.2	43.4
Two or more minority races	6,204	51.0	51.2	44.6	4,682	50.5	49.7	42.0
Joint	70,982	41.4	46.5	38.5	53,200	41.8	46.0	36.8
Missing	1,147,462	49.4	49.8	40.4	532,425	41.5	42.5	37.8
White, by ethnicity								
Hispanic white	695,537	43.4	44.0	41.6	320,845	50.6	45.3	41.3
Non-Hispanic white	3,917,492	34.0	34.0	34.0	2,894,154	31.7	31.7	31.7
Sex								
One male	2,016,750	42.2	42.2	42.2	1,125,624	41.5	41.5	41.5
One female	1,606,563	40.6	39.5	40.6	889,334	40.7	39.0	39.6
Two males	48,099	41.5	41.5	41.5	32,014	38.2	38.2	38.2
Two females	55,312	44.7	42.2	40.9	35,706	41.7	38.5	36.9

NOTE: See notes to table 21.A.

21. Denial rates on applications, unmodified and modified for borrower- and lender-related factors, for first liens on owner-occupied, one- to four-family, site-built homes, by race, ethnicity, and sex of applicant

C. Nonconventional home purchase and refinance, 2008

Percent except as noted

Race, ethnicity, and sex	Home purchase: Number of applications acted upon by lender	Home purchase: Unmodified denial rate	Home purchase: Modified denial rate, by modification factor: Borrower-related	Home purchase: Modified denial rate, by modification factor: Borrower-related plus lender	Refinance: Number of applications acted upon by lender	Refinance: Unmodified denial rate	Refinance: Modified denial rate, by modification factor: Borrower-related	Refinance: Modified denial rate, by modification factor: Borrower-related plus lender
Race other than white only								
American Indian or Alaska Native	10,154	19.7	20.6	18.6	5,229	49.7	49.6	43.6
Asian	26,711	21.3	19.2	18.6	11,836	51.5	49.0	45.1
Black or African American	161,187	25.0	24.0	22.6	155,665	45.0	47.2	46.1
Native Hawaiian or other Pacific Islander	6,581	21.7	18.9	18.3	3,643	49.7	47.7	47.2
Two or more minority races	1,141	23.8	23.3	17.3	873	58.2	59.7	53.1
Joint	25,123	14.7	16.2	16.3	14,154	38.7	44.1	42.2
Missing	121,400	21.9	20.8	19.8	165,776	54.6	47.7	43.9
White, by ethnicity								
Hispanic white	152,228	24.0	19.8	20.0	73,118	47.6	44.1	44.3
Non-Hispanic white	890,659	14.1	14.1	14.1	662,593	37.5	37.5	37.5
Sex								
One male	433,829	19.0	19.0	19.0	300,070	42.8	42.8	42.8
One female	283,404	19.2	17.7	17.8	219,503	44.0	41.2	41.3
Two males	29,772	20.9	20.9	20.9	11,826	41.8	41.8	41.8
Two females	23,519	20.5	18.7	18.5	13,808	41.2	40.3	40.3

NOTE: See notes to table 21.A.

Appendix A: Requirements of Regulation C

The Federal Reserve Board's Regulation C requires lenders to report the following information on home-purchase and home-improvement loans and on refinance loans:

For each application or loan

- application date and the date an action was taken on the application
- action taken on the application
  - approved and originated
  - approved but not accepted by the applicant
  - denied (with the reasons for denial—voluntary for some lenders
  - withdrawn by the applicant
  - file closed for incompleteness
- preapproval program status (for home-purchase loans only)
  - preapproval request denied by financial institution
  - preapproval request approved but not accepted by individual
- loan amount
- loan type
  - conventional
  - insured by the Federal Housing Administration
  - guaranteed by the U.S. Department of Veterans Affairs
  - backed by the Farm Service Agency or Rural Housing Service
- lien status
  - first lien
  - junior lien
  - unsecured
- loan purpose
  - home purchase
  - refinance
  - home improvement
- type of purchaser (if the lender subsequently sold the loan during the year)
  - Fannie Mae
  - Ginnie Mae
  - Freddie Mac
  - Farmer Mac
  - Private securitization
  - Commercial bank, savings bank, or savings association
  - Life insurance company, credit union, mortgage bank, or finance company
  - Affiliate institution
  - Other type of purchaser

For each applicant or co-applicant

- race
- ethnicity
- sex
- income relied on in credit decision

For each property

- location, by state, county, metropolitan statistical area, and census tract
- type of structure
  - one- to four-family dwelling
  - manufactured home
  - multifamily property (dwelling with five or more units)
- occupancy status (owner occupied, non-owner occupied, or not applicable)

For loans subject to price reporting

- spread above comparable Treasury security

For loans subject to the Home Ownership and Equity Protection Act

- indicator of whether loan is subject to the Home Ownership and Equity Protection Act

APPENDIX B: PRIVATE MORTGAGE INSURANCE DATA

Historically, mortgage lenders have required a prospective borrower to make a down payment of at least 20 percent of a home's value before they will extend a loan to buy a home or refinance an existing loan. Such down payments are required because experience has shown that homeowners with little equity are substantially more likely to default on their mortgages. Private mortgage insurance (PMI) emerged as a response to creditors' concerns about the elevated credit risk of lending backed by little equity in a home as well as the difficulties that some consumers encounter in accumulating sufficient savings to meet the required down payment and closing costs.

PMI protects a lender if a borrower defaults on a loan; it reduces a lender's credit risk by insuring against losses associated with default up to a contractually established percentage of the claim amount. The costs of the insurance are typically paid by the borrower through a somewhat higher interest rate on the loan.

In 1993, the Mortgage Insurance Companies of America (MICA) asked the Federal Financial Institutions Examination Council (FFIEC) to process data from PMI companies on applications for mortgage insurance and to produce disclosure statements for the public based on the data.[58] The PMI data largely mirror the types of information submitted by lenders covered by the Home Mortgage Disclosure Act of 1975 (HMDA). However, because the PMI companies do not receive all the information about a prospective loan from the lenders seeking insurance coverage, some HMDA items are not included in the PMI data. In particular, loan pricing information, requests for preapproval, and an indicator of whether a loan is subject to the Home Ownership and Equity Protection Act are unavailable in the PMI data.

The eight PMI companies that issued PMI during 2008 submitted data to the FFIEC through MICA. In total, these companies acted on more than 1.55 million applications for insurance, including 1.06 million applications to insure mortgages for purchasing homes and 490,000 applications to insure mortgages for refinancing existing mortgages. PMI companies approved 87 percent of the applications they received. Approval rates for PMI companies are notably higher than they are for mortgage lenders because lenders applying for PMI are familiar with the underwriting standards used by the PMI companies and generally submit applications for insurance coverage only if the applications are likely to be approved. □

58. Founded in 1973, MICA is the trade association for the PMI industry. The FFIEC prepares disclosure statements for each of the PMI companies. The statements are available at the corporate headquarters of each company and at a central depository in each metropolitan statistical area in which HMDA data are held. The PMI data are available from the FFIEC at www.ffiec.gov/reports.htm.

Legal Developments

Legal Developments: Fourth Quarter, 2008

ORDERS ISSUED UNDER BANK HOLDING COMPANY ACT

Orders Issued under Section 3 of the Bank Holding Company Act

The PNC Financial Services Group, Inc. Pittsburgh, Pennsylvania

Order Approving the Merger of Bank Holding Companies

The PNC Financial Services Group, Inc. ("PNC"), a financial holding company within the meaning of the Bank Holding Company Act ("BHC Act"), has requested the Board's approval under section 3 of the BHC Act[1] to acquire National City Corporation ("National City") and thereby indirectly acquire National City's subsidiary bank, National City Bank ("NC Bank"), both of Cleveland, Ohio.[2]

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (73 *Federal Register* 65,854 (2008)). The time for filing comments has expired, and the Board has considered the proposal and all comments received in light of the factors set forth in the BHC Act.[3]

PNC, with total consolidated assets of approximately $145.6 billion, is the 14th largest depository organization in the United States, controlling deposits of approximately $84.6 billion, which represent less than 1 percent of the total amount of deposits of insured depository institutions in the United States.[4] PNC controls two insured depository institutions that operate in nine states and the District of Columbia.[5] PNC is the 12th largest depository organization in Ohio, controlling deposits of approximately $2.2 billion.[6]

National City, with total consolidated assets of approximately $143.7 billion, is the 16th largest depository organization in the United States. NC Bank, its only depository institution, operates in nine states and controls deposits of approximately $94.3 billion. National City is the largest depository organization in Ohio, controlling deposits of $34.7 billion.

On consummation of this proposal, and after taking into account the proposed divestitures, PNC would become the eighth largest depository organization in the United States, with total consolidated assets of approximately $288.5 billion. PNC would control total deposits of $174.8 billion, representing less than 1 percent of the total amount of deposits of insured depository institutions in the United States. In Ohio, PNC would become the largest depository organization, controlling deposits of approximately $36.9 billion, which represent approximately 17.4 percent of the total amount of deposits of insured depository institutions in the state.

FACTORS GOVERNING BOARD REVIEW OF THE TRANSACTION

The BHC Act enumerates the factors the Board must consider when reviewing the merger of bank holding companies or the acquisition of banks. These factors are the competitive effects of the proposal in the relevant geographic markets; the financial and managerial resources and future prospects of the companies and banks involved in the transaction; the convenience and needs of the communities to be served;[7] the records of performance under the Community Reinvestment Act ("CRA")[8] of the insured depository institutions involved in the transaction;

1. 12 U.S.C. § 1842.
2. PNC also proposes to acquire Ohio National Corporation Trade Services, Cleveland, the agreement corporation subsidiary of National City under section 25 of the Federal Reserve Act ("FRA") and the Board's Regulation K, 12 U.S.C. §§ 601 et seq. and 12 CFR 211.5(g). In addition, PNC proposes to acquire the nonbanking subsidiaries of National City in accordance with section 4(k) of the BHC Act (12 U.S.C. § 1843(k)).
3. Ninety-four commenters expressed concerns about certain aspects of the proposal.
4. Asset, national deposit, and ranking data are as of September 30, 2008. In this context, insured depository institutions include commercial banks, savings banks, and savings associations.
5. PNC's subsidiary insured depository institutions are PNC Bank, National Association ("PNC Bank"), Pittsburgh, Pennsylvania; and PNC Bank, Delaware, Wilmington, Delaware.
6. Statewide deposit and ranking data are as of June 30, 2008.
7. A majority of commenters expressed concern that the proposed acquisition would result in the loss of jobs. The effect of a proposed transaction on employment in a community is not among the factors that the Board is authorized to consider under the BHC Act, and the federal banking agencies, courts, and the Congress consistently have interpreted the convenience and needs factor to relate to the effect of a proposal on the availability and quality of banking services in the community. *See, e.g., Wells Fargo & Company*, 82 *Federal Reserve Bulletin* 445, 457 (1996).
8. 12 U.S.C. § 2901 et seq.

and the availability of information needed to determine and enforce compliance with the BHC Act.[9] In cases involving interstate bank acquisitions, the Board also must consider the concentration of deposits nationwide and in certain individual states, as well as compliance with other provisions of section 3(d) of the BHC Act.[10]

INTERSTATE ANALYSIS

Section 3(d) of the BHC Act allows the Board to approve an application by a bank holding company to acquire control of a bank located in a state other than the home state of such bank holding company if certain conditions are met. For purposes of the BHC Act, the home state of PNC is Pennsylvania,[11] and NC Bank is located in nine states.[12] Based on a review of all the facts of record, including relevant state statutes, the Board finds that the conditions for an interstate acquisition enumerated in section 3(d) of the BHC Act are met in this case.[13] In light of all the facts of record, the Board is permitted to approve the proposal under section 3(d) of the BHC Act.

COMPETITIVE CONSIDERATIONS

The Board has considered carefully the competitive effects of the proposal in light of all the facts of record. Section 3 of the BHC Act prohibits the Board from approving a proposal that would result in a monopoly or would be in furtherance of an attempt to monopolize the business of banking in any relevant banking market. The BHC Act also prohibits the Board from approving a bank acquisition that would substantially lessen competition in any relevant banking market, unless the anticompetitive effects of the proposal are clearly outweighed in the public interest by the probable effect of the transaction in meeting the convenience and needs of the community served.[14]

PNC's subsidiary depository institutions and NC Bank directly compete in 10 banking markets, including markets in Florida, Kentucky, Ohio, and Pennsylvania. The Board has reviewed carefully the competitive effects of the proposal in each of these banking markets in light of all the facts of record and public comments on the proposal.[15] In particular, the Board has considered the number of competitors that would remain in the banking markets, the relative shares of total deposits in depository institutions in the markets ("market deposits") controlled by PNC's insured depository institutions and NC Bank,[16] the concentration levels of market deposits and the increase in those levels as measured by the Herfindahl–Hirschman Index ("HHI") under the Department of Justice Merger Guidelines ("DOJ Guidelines"),[17] and other characteristics of the markets. In addition, the Board has considered commitments made by PNC to the Board to reduce the potential that the proposal would have adverse effects on competition by divesting 61 NC Bank branches (the "divestiture branches"), which

9. Some commenters urged the Board to deny the proposal because National City's board of directors allegedly breached its fiduciary duties in entering into the merger agreement with PNC and because the purchase price was inadequate and would harm the interests of National City's shareholders. These allegations are subject to litigation before a court of competent jurisdiction and are not within the discretion of the Board to resolve. *See Western Bancshares, Inc. v. Board of Governors*, 480 F.2d 749 (10th Cir. 1973). The Board also notes that approval of the National City shareholders is required to consummate the proposal.

10. 12 U.S.C. § 1843(d).

11. A bank holding company's home state is the state in which the total deposits of all subsidiary banks of the company were the largest on July 1, 1966, or the date on which the company became a bank holding company, whichever is later. *See* 12 U.S.C. § 1841(o)(4)(C).

12. For purposes of section 3(d), the Board considers a bank to be located in the states in which the bank is chartered or headquartered or operates a branch. *See* 12 U.S.C. §§ 1841(o)(4)–(7) and 1842(d)(1)(A) and (d)(2)(B). NC Bank operates branches in Florida, Illinois, Indiana, Kentucky, Michigan, Missouri, Ohio, Pennsylvania, and Wisconsin.

13. 12 U.S.C. §§ 1842(d)(1)–(3). Applicant is adequately capitalized and adequately managed, as defined by applicable law. NC Bank has been in existence and operated for the minimum period of time required by applicable state laws. *See* 12 U.S.C. § 1842(d)(1)(B). On consummation of the proposal, applicant would control less than 10 percent of the total amount of deposits of insured depository institutions in the United States (12 U.S.C. § 1842(d)(2)(A)). Applicant also would control less than 30 percent of, and less than the applicable state deposit cap for, the total amount of deposits in insured depository institutions in the relevant states (12 U.S.C. §§ 1842(d)(2)(B)–(D)). All other requirements of section 3(d) of the BHC Act would be met on consummation of the proposal.

14. 12 U.S.C. § 1842(c)(1).

15. Several commenters expressed general concerns about the competitive effects of this proposal and the effects it could have on consumer choices for banking services.

16. Deposit and market share data are as of June 30, 2008, adjusted to reflect mergers and acquisitions through November 4, 2008, and generally are based on calculations in which the deposits of thrift institutions are included at 50 percent. In recognition that thrift institutions have become, or have the potential to become, significant competitors of commercial banks, the Board regularly has included thrift institution deposits in the market concentration and market share calculations on a 50 percent weighted basis. *See, e.g., First Hawaiian, Inc.*, 77 *Federal Reserve Bulletin* 52, 55 (1991). In some markets noted in this order, the market concentration and market share are based on calculations in which the deposits of certain thrift institutions are weighted at 100 percent. The Board previously has indicated that it may consider the competitiveness of a thrift institution at a level greater than 50 percent of its deposits when appropriate if competition from the institution closely approximates competition from a commercial bank. *See, e.g., Banknorth Group, Inc.*, 75 *Federal Reserve Bulletin* 703 (1989). In evaluating when it is appropriate to increase the weighting of a thrift institution's deposits in a banking market, the Board considers whether the thrift institution serves as a significant source of commercial loans in the market and provides a broad range of consumer, mortgage, and other banking products. *See, e.g., The PNC Financial Services Group, Inc.*, 93 *Federal Reserve Bulletin* C65 (2007); *First Union Corporation*, 84 *Federal Reserve Bulletin* 489 (1998).

17. Under the DOJ Guidelines, a market is considered unconcentrated if the post-merger HHI is less than 1000, moderately concentrated if the post-merger HHI is between 1000 and 1800, and highly concentrated if the post-merger HHI is more than 1800. The Department of Justice ("DOJ") has informed the Board that a bank merger or acquisition generally will not be challenged (in the absence of other factors indicating anticompetitive effects) unless the post-merger HHI is at least 1800 and the merger increases the HHI more than 200 points. The DOJ has stated that the higher-than-normal HHI thresholds for screening bank mergers for anticompetitive effects implicitly recognize the competitive effects of limited-purpose lenders and other nondepository financial entities.

account for approximately $4 billion in deposits, in five banking markets in Pennsylvania.

A. Banking Markets within Established Guidelines

Consummation of the proposal would be consistent with Board precedent and within the thresholds in the DOJ Guidelines in five of the banking markets in which PNC's subsidiary depository institutions and NC Bank directly compete.[18] On consummation of the proposal, one market would remain highly concentrated, two markets would remain moderately concentrated, and two would remain unconcentrated, as measured by the HHI. The change in HHI in the one highly concentrated market would be small and consistent with Board precedent and the thresholds in the DOJ Guidelines. In each of the banking markets, numerous competitors would remain.

B. Certain Banking Markets with Divestitures

After accounting for the branch divestitures, consummation of the merger would be consistent with Board precedent and the thresholds in the DOJ Guidelines in two banking markets in Pennsylvania: Franklin-Titusville-Oil City ("FTO") and Warren.[19] Although both markets would remain highly concentrated, the HHI would not increase in either market. In addition, six competitors would remain in the FTO banking market, including a depository institution that would control 33 percent of market deposits. Although only four competitors would remain in the Warren banking market, one depository institution competitor of PNC would control 52 percent of market deposits.

C. Three Banking Markets Warranting Special Scrutiny

PNC's subsidiary depository institutions and NC Bank compete directly in three banking markets in Pennsylvania that warrant a detailed review: Pittsburgh, Erie, and Meadville. In each of these markets, all with proposed divestitures, the concentration levels on consummation of the proposal would exceed the threshold levels in the DOJ Guidelines or the resulting market share of PNC would exceed 35 percent.

For each of these markets, the Board has considered carefully whether other factors either mitigate the competitive effects of the proposal or indicate that the proposal would have a significantly adverse effect on competition in the market. The number and strength of factors necessary to mitigate the competitive effects of a proposal depend on the size of the increase in and resulting level of concentration in a banking market.[20] In each of these markets, the Board has identified factors that indicate the proposal would not have a significantly adverse impact on competition, notwithstanding the post-consummation increase in the HHI and market share.

Among the factors reviewed, the Board has considered the competitive influence of community credit unions in these banking markets. Those credit unions offer a wide range of consumer products, operate street-level branches, and have membership open to almost all residents in the applicable market. The Board has concluded that the activities of such credit unions in the three markets exert competitive influence that mitigates, in part, the potential effects of the proposal.[21]

Pittsburgh. The structural effects of the proposal in the Pittsburgh banking market ("Pittsburgh Market") as measured by applying the HHI to the June 30, 2008, Summary of Deposit data ("SOD") would substantially exceed the DOJ Guidelines. According to those data, PNC operates the largest insured depository institution in the Pittsburgh Market,[22] controlling approximately $26 billion in deposits, which represents approximately 37 percent of market deposits. NC Bank operates the second largest insured depository institution in the Pittsburgh Market, controlling approximately $11 billion in deposits, which represents approximately 16 percent of market deposits. After the proposed merger, PNC would remain the largest depository institution in the market, controlling deposits of approximately $38 billion, representing approximately 53 percent of market deposits.[23]

To reduce the potential adverse effects on competition in the Pittsburgh Market, PNC has proposed to divest 50 of NC Bank's branches that account for approximately $3.5 billion in deposits. On consummation of the merger and after

18. These banking markets and the effects of the proposal on their concentrations of banking resources are described in Appendix A.

19. These banking markets and the effects of the proposal on their concentrations of banking resources are described in Appendix B. The analysis of the effects of the proposal in these markets includes the weighting of deposits controlled by one thrift institution operating in both the markets at 100 percent. The thrift institution was deemed to be an active commercial lender based on lending data and discussions with personnel of the thrift institution and commercial bank competitors indicating that it was an active commercial lender in both markets.

20. *See Regions Financial Corp.*, 93 *Federal Reserve Bulletin* C16 (2007); *NationsBank Corporation*, 84 *Federal Reserve Bulletin* 129 (1998).

21. The Board previously has considered the competitiveness of certain active credit unions as a mitigating factor. *See, e.g., Wells Fargo & Company*, 95 *Federal Reserve Bulletin* B39; *The PNC Financial Services Group, Inc.*, 93 *Federal Reserve Bulletin* C65 (2007); *Regions Financial Corp.*, 93 *Federal Reserve Bulletin* C16 (2007); *Wachovia Corp.*, 92 *Federal Reserve Bulletin* C183 (2006).

22. The Pittsburgh Market is defined as the counties of Allegheny, Armstrong, Beaver, Butler, Fayette (except Point Marion Borough and Springhill Township), Greene, Lawrence, Washington, and Westmoreland.

23. These market concentration and market share calculations include the weighting of deposits controlled by five thrift institutions in the market at 100 percent. Two of these thrift institutions were considered to be active in the Pittsburgh commercial lending market as a result of having a ratio of commercial and industrial ("C&I") loans to assets of at least 5 percent. A third thrift institution had ratios of C&I loans to total loans of more than 10 percent, which is comparable to the national average for all commercial banks. The remaining two thrift institutions had C&I loan-to-asset ratios slightly below 5 percent and were deemed to be active commercial lenders based on discussions with personnel of the thrift institutions and commercial bank competitors in the Pittsburgh Market, who indicated that the thrift institutions were active participants in the market's commercial lending sector.

accounting for the proposed divestiture, PNC would remain the largest depository institution in the market, controlling deposits of approximately $34 billion, which represent approximately 48 percent of market deposits. The HHI would increase 752 points to 2640.

The proposal raises special concerns in the Pittsburgh Market because PNC, the largest institution in the banking market, proposes to merge with the market's second largest competitor and all other competitors in the market have significantly smaller market shares. The Board has previously recognized that merger proposals involving the largest depository institutions in markets structured like the Pittsburgh Market warrant close review due to the size of those institutions relative to other market competitors.[24] The Board, therefore, has carefully considered whether other factors indicate that the increase in market concentration, as measured by SOD data, overstates the potential competitive effects of the proposal in the market.

The Board has considered PNC's assertion that inclusion of certain deposits that were received and booked at PNC's head office in the Pittsburgh Market in calculations of market share indices for this transaction would distort the measures of the competitive effect of the proposal on the Pittsburgh Market. PNC has argued that, for purposes of evaluating the proposal's competitive effect in the Pittsburgh Market, the Board should exclude those deposits booked at PNC's head office that have no relation to the Pittsburgh Market. Approximately $17 billion of the deposits at PNC's head office are government deposits, out-of-market escrow deposits, correspondent banking deposits, wholesale certificates of deposit and related accounts ("CDs"), broker-dealer trust accounts, and certain corporate deposits.

In conducting its competitive analysis in previous cases, the Board generally has not adjusted its market share calculations to exclude out-of-market deposits because all deposits are typically available to support lending and other banking activities at any location. The Board has adjusted the market deposits held by an applicant to exclude specific types of deposits only in limited situations, such as when evidence supported a finding that the excluded deposits were not legally available for use in that market and data were available to make comparable adjustments to the market shares for all other market participants.[25] The Board also has adjusted deposit data in the limited circumstance when there was strong evidence that a depository organization moved its national business-line deposits to a particular branch for business reasons unrelated to its efforts to compete in that market and did not use those deposits to enhance its competitive ability in that market or to manipulate SOD data used in competitive analyses by a federal supervisory agency.[26]

PNC has stated that approximately $10 billion in out-of-market deposits was assigned to PNC's head office for business reasons unrelated to its efforts to compete in the Pittsburgh Market. PNC has represented that these deposits were transferred because that office houses the "Intrader" accounting system, which is used to track PNC's wholesale CDs and broker-dealer trust accounts, both nationally and internationally. In addition, PNC has represented that the deposits maintained by the Intrader system are segregated from the deposit account system on which the head office generally operates. Furthermore, the head office systems are separate from the retail branch located in the same building, and the retail branch personnel cannot access the Intrader system.[27] PNC has represented that it placed the Intrader deposits in its head office for administrative convenience unrelated to PNC's efforts to compete in the Pittsburgh Market and that none of the account holders booked on Intrader are domiciled in the Pittsburgh Market.

PNC has also argued that other deposits associated with out-of-market customers should be excluded from PNC's head office deposits, including deposits that were generated from various municipalities and governments outside the Pittsburgh Market, that involve escrow accounts for mortgages and other transactions outside the market, or that represent correspondent banking accounts with institutions outside the market. PNC is limited by law, contract, or duration of relationship from using these deposits for any activity other than to support the deposit account.[28] Other deposits PNC asserted should be excluded are accounts from large corporations located outside the Pittsburgh Market.

There is no evidence in the record that PNC moved the deposits in question to the head office from another branch in an attempt to manipulate the SOD data used for competitive analyses by the appropriate federal supervisory agency. Although PNC holds approximately $26 billion in deposits in the Pittsburgh Market based on SOD data, it holds loans in the Pittsburgh Market ("market loans") totaling approximately $2 billion, which represents a loan-to-deposit ratio of 8.1 percent for PNC in the Pittsburgh Market. In contrast, PNC's ratio of market loans to deposits associated with customers in the Pittsburgh Market is 22.4 percent. In addition, PNC's total market loans have decreased 3 percent in the period since December 31, 2006, while its total deposits held at the Pittsburgh office have increased 29 percent. Furthermore, the market deposits of PNC associated

24. *See First Busey Corporation*, 93 *Federal Reserve Bulletin* C90, C91 (2007); *Firstar Corporation*, 87 *Federal Reserve Bulletin* 236, 238 (2001).

25. *See First Security Corp.*, 86 *Federal Reserve Bulletin* 122 (2000).

26. *See Bank of America Corporation*, 94 *Federal Reserve Bulletin* C81, C84–C85 (2008); *J.P. Morgan Chase & Co.*, 90 *Federal Reserve Bulletin* 352, 355 (2004).

27. The wholesale funds booked to PNC's head office support the entire multistate branch footprint of PNC and its national and international nonbank operational footprint.

28. *See First Security Corp.*, 86 *Federal Reserve Bulletin* 122, 126–127 (2000).

with out-of-market customers increased 41 percent during the same period while its market deposits associated with customers in the Pittsburgh Market increased 13 percent. These facts, and in particular the fact of the decrease in loan market share in comparison to a significant increase in the deposits held by the Pittsburgh head office from out-of-market customers, is consistent with the conclusion that the SOD deposit data significantly overstate PNC's competitive presence in the Pittsburgh Market.

The Board has also taken into consideration the fact that the next largest competitor (other than NC Bank) to PNC in the Pittsburgh Market has significantly more branches than PNC in the market but has average market deposits per branch of less than 17 percent of PNC's average market deposits per branch. The other commercial bank and thrift institution competitors of PNC that have at least half as many branches as PNC have average market deposits per branch of less than 14 percent of PNC's average market deposits per branch. PNC's high average market deposits per branch further supports the conclusion that the SOD deposit data significantly overstate PNC's competitive presence in the Pittsburgh Market.

Based on a careful review of these and all other facts of record, the Board concludes that the concentration level for PNC in the Pittsburgh Market, as measured by the HHI using SOD data without adjustment, overstates the competitive effect of the proposal in the Pittsburgh Market. If the $17 billion in deposits discussed above with no relation to the Pittsburgh Market is excluded from the calculation of its market concentration, the market share held by PNC on consummation of the proposal would be approximately 38 percent, after accounting for the effects of the proposed divestitures. PNC would remain the largest insured depository institution in the market on consummation of the proposal, controlling adjusted market deposits of approximately $21 billion. If PNC's proposed divestitures were purchased by the largest in-market institution, the resulting HHI would increase 529 points to 1835.

The Board also examined other mitigating factors in the Pittsburgh Market. A large number of commercial bank and thrift institution competitors (57) would remain in the market after consummation of the proposal, including two competitors that each have more than a 12 percent market share.[29] The proposed divestiture of 50 branches would significantly strengthen the competitive position of a banking organization operating in the Pittsburgh Market or bring a new, sizable competitor into the market. Furthermore, the record of recent entry into the Pittsburgh Market is evidence of its attractiveness for entry by out-of-market competitors. Six banking organizations have entered the market in the past four years.

Based on a careful review of these and all other factors of record, the Board concludes that, with the proposed divestitures, appropriate adjustment, and consideration of other mitigating factors, consummation of the proposal would have no significantly adverse effects in the Pittsburgh Market.

Erie. In the Erie banking market ("Erie Market"),[30] PNC operates the largest depository institution in the market, controlling deposits of approximately $820 million, which represent approximately 27 percent of market deposits. NC Bank operates the second largest depository institution in the market, controlling deposits of approximately $459 million, which represent approximately 15 percent of market deposits. To reduce the potential for adverse effects on competition in the Erie Market, PNC Bank has proposed to divest six of NC Bank's branches that account for $294.6 million in total deposits. On consummation of the merger and after accounting for the proposed divestitures, PNC would remain the largest depository institution in the market, controlling deposits of approximately $985 million, which represent approximately 32 percent of market deposits. The HHI would increase 246 points to 2060.[31]

Several factors indicate that the increase in concentration in the Erie Market, as measured by the HHI and PNC's market share, overstates the potential competitive effects of the proposal in the market. After consummation of the proposal, eight other commercial bank and thrift institution competitors would remain in the market, including two other competitors with a significant presence in the market. The second and third largest depository institution organizations in the market would control approximately 24 percent and 12 percent of market deposits, respectively. The second largest depository organization would also control 22 branches, the largest branch network of any depository institution in the Erie Market.

In addition, the Board has evaluated the competitive influence of four active community credit unions in the Erie Market. These credit unions control approximately $467 million in deposits in the market that, on a 50 percent weighted basis, represent approximately 7.14 percent of market deposits. Accounting for the revised weightings of these deposits, PNC would control approximately 30.1 percent of market deposits, and the HHI would increase 212 points to 1795.

In addition, the record of recent entry into the Erie Market is evidence of the market's attractiveness for entry. Two depository institutions have entered the market since 2004.

Based on a careful review of all the facts of record, and taking into account the proposed divestitures, the Board

29. The Board also has concluded that the activity of one community credit union in the market exerts sufficient competitive influence to mitigate, in part, the potential adverse competitive effects of the proposal. This active credit union controls approximately $554 million of deposits in the market. Accounting for a 50 percent weighting of these deposits, PNC would control approximately 37 percent of market deposits, and the HHI would increase 522 points to 1813.

30. The Erie Market is defined as Erie County.

31. This analysis includes the weighting of deposits controlled by one thrift institution in the market at 100 percent. The thrift institution was deemed to be an active commercial lender based on lending data and discussions with personnel of the thrift institution and other commercial banking competitors indicating that the thrift institution was an active commercial lending participant in the Erie Market.

concludes that consummation of the proposal would not substantially lessen competition in the Erie Market.

Meadville. In the Meadville banking market ("Meadville Market"),[32] PNC operates the third largest depository institution in the market, controlling deposits of approximately $113 million, which represent approximately 13 percent of market deposits. NC Bank operates the largest depository institution in the market, controlling deposits of approximately $341 million, which represent approximately 40 percent of market deposits. To reduce the potential for adverse effects on competition in the Meadville Market, PNC has proposed to divest three of NC Bank's branches that account for $93.9 million in total deposits. On consummation of the merger and after accounting for the proposed divestiture, PNC would become the largest depository institution in the market, controlling deposits of approximately $360 million, which represent approximately 43 percent of market deposits. The HHI would increase 130 points to 2498.[33]

Several factors indicate that the increase in concentration in the Meadville Market, as measured by PNC's market share, overstates the potential competitive effects of the proposal in the market. After consummation of the proposal, five other commercial banking and thrift institution competitors would remain in the market. The Board notes that there are other competitors with a significant presence in the market. The second and third largest depository institution organizations in the market would control approximately 16 percent and 14 percent of market deposits, respectively. Furthermore, a commercial bank competitor would have a larger number of branches in the Meadville Market than PNC, and four other institutions would have branch networks comparable to PNC's network.

In addition, the Board has evaluated the competitive influence of one active community credit union in the market. This credit union controls approximately $39 million in deposits in the market that, on a 50 percent weighted basis, represents approximately 2.3 percent of market deposits. Accounting for the revised weightings of these deposits, PNC would control 41.6 percent of market deposits, and the HHI would increase 124 points to 2390.

Based on a careful review of all the facts of record, and taking into account the proposed divestitures, the Board concludes that consummation of the proposal would not substantially lessen competition in the Meadville Market.

32. The Meadville Market is defined as Crawford County, excluding the city of Titusville.

33. This analysis includes the weighting of deposits controlled by one thrift institution in the market at 100 percent. The thrift institution is the same institution weighted at 100 percent in the Erie Market and the basis for weighting this institution's deposits at 100 percent in the Meadville Market is the same as the basis in the Erie Market. *See* footnote 31 above.

D. View of Other Agencies and Conclusion on Competitive Considerations

The DOJ also has conducted a detailed review of the potential competitive effects of the proposal and has advised the Board that, in light of the proposed divestitures, consummation of the proposal would not likely have a significantly adverse effect on competition in any relevant banking market.[34] In addition, the appropriate banking agencies have been afforded an opportunity to comment and have not objected to the proposal.

Based on these and all other facts of record, the Board has concluded that consummation of the proposal would not have a significantly adverse effect on competition or on the concentration of resources in any relevant banking market. Accordingly, based on all the facts of record and subject to completion of the proposed divestitures, the Board has determined that competitive considerations are consistent with approval.

Financial, Managerial, and Supervisory Considerations

Section 3 of the BHC Act requires the Board to consider the financial and managerial resources and future prospects of the companies and banks involved in the proposal and certain other supervisory factors. The Board has carefully considered these factors in light of all the facts of record, including confidential supervisory and examination information received from the relevant federal and state supervisors of the organizations involved, publicly reported and other financial information, information provided by PNC, and public comments received on the proposal.[35]

In evaluating the financial resources in expansion proposals by banking organizations, the Board reviews the financial condition of the organizations involved on both a parent-only and consolidated basis, as well as the financial condition of the subsidiary depository institutions and significant nonbanking operations. In this evaluation, the Board considers a variety of information, including capital adequacy, asset quality, and earnings performance. In assessing financial resources, the Board consistently considers capital adequacy to be especially important. The Board also evaluates the financial condition of the resulting

34. PNC has committed to the Board that it will comply with the divestiture agreement between the DOJ and PNC dated December 11, 2008.

35. Many commenters expressed concern that National City was not provided federal financial assistance to help it remain an independent organization while PNC is scheduled to receive federal funding under the Department of the Treasury's Capital Purchase Program ("CPP"), which would help PNC finance the proposed transaction. As explained in more detail above, the Board has carefully considered all the facts of record in assessing the financial and managerial resources and future prospects of the companies involved.

organization at consummation, including its capital position, asset quality, earnings prospects, and the impact of the proposed funding of the transaction. In addition, the Board considers the ability of the organization to absorb the costs of the proposal and the plans for integrating operations after consummation.

The Board has carefully considered the financial resources of the organizations involved in the proposal in light of information provided by PNC and National City and supervisory information available to the Federal Reserve through its supervision of these companies and from the OCC, the primary supervisor of the depository institution subsidiaries of these organizations. The Board has considered that, although National City is well capitalized, it has experienced severe financial strains and liquidity pressures during the last year that have weakened its condition and stressed its operations. National City has had difficulty raising sufficient private capital to address these issues without a merger partner. PNC is well capitalized, would remain well capitalized after consummation of this proposal, and would provide operational and capital strength to National City. Consummation of this proposal would create a combined organization that can withstand the financial pressures in the present exigent market conditions and restore a strong provider of banking and other financial services in the markets served by National City. The proposed transaction is structured as a share exchange. Based on its review of the record, the Board finds that PNC has sufficient resources to effect the proposal.

The Board also has considered the managerial resources of the organizations involved in the proposed transaction. The Board has reviewed the examination records of PNC, its subsidiary depository institutions, and NC Bank and other nonbanking companies involved in the proposal. In addition, the Board has considered its supervisory experience and that of other relevant banking supervisory agencies, including the OCC, with the organizations and their records of compliance with applicable banking law and anti-money-laundering laws.[36]

The Board also has considered carefully the future prospects of the organizations involved in the proposal. Moreover, the Board has considered information on PNC's plans to implement its risk-management policies, procedures, and controls at National City and how PNC would manage the integration of National City into PNC. The Board also considered PNC's extensive experience in acquiring bank holding companies and successfully integrating them into its organization.

PNC does not have a significant presence in many of the markets served by National City. In particular, PNC does not compete in the markets in Ohio and Indiana where National City has the majority of its operations. Consummation of this proposal will benefit those markets by providing financial strength and stability to National City that will allow it to continue to provide banking services to households, businesses, and other customers. The proposed acquisition will also allow those NC Bank offices to provide additional services currently offered by PNC. The record indicates that PNC has the financial and managerial resources to serve as a source of strength to NC Bank and the other operations of National City.

Based on all the facts of record, the Board has concluded that the financial and managerial resources and the future prospects of the organizations involved in the proposal are consistent with approval, as are the other supervisory factors.

Convenience and Needs Considerations and CRA Performance

In acting on a proposal under section 3 of the BHC Act, the Board also must consider the effects of the proposal on the convenience and needs of the communities to be served and take into account the records of the relevant insured depository institutions under the CRA.[37] The CRA requires the federal financial supervisory agencies to encourage insured depository institutions to help meet the credit needs of the local communities in which they operate, consistent with their safe and sound operation, and requires the appropriate federal financial supervisory agency to take into account a relevant depository institution's record of meeting the credit needs of its entire community, including low- and moderate-income ("LMI") neighborhoods, in evaluating bank expansionary proposals.[38]

The Board has considered carefully all the facts of record, including reports of examination of the CRA performance records of the subsidiary banks of PNC and National City, data reported by PNC and National City under the Home Mortgage Disclosure Act ("HMDA"),[39] as well as other information provided by PNC, confidential supervisory information, and public comments received on the proposal. Several commenters expressed general concerns regarding the effect of the proposal on the amount of community development lending or investment and charitable donations in areas served by NC Bank.[40] Two com-

36. Several commenters expressed concern over reports of large payments to be made to certain National City executives on the acquisition by PNC. As part of its review of financial factors, the Board has reviewed the proposed severance payments to be provided by PNC as well as the limitations imposed on those payments in connection with the request for funding under the CPP.

37. 12 U.S.C. § 1842(c)(2).

38. 12 U.S.C. § 2903.

39. 12 U.S.C. § 2801 et seq.

40. Two commenters also urged the Board to require or encourage PNC to enter into agreements to provide CRA loans, investments, and services to low-income communities or to require it to take certain actions in the future. A community group commenter generally supported National City's CRA record in Milwaukee but requested that PNC meet with the group to discuss CRA-related concerns. The Board consistently has stated that neither the CRA nor the federal banking agencies' CRA regulations require depository institutions to make pledges or enter into commitments or agreements with any organization and that the enforceability of any such third-party pledges, initiatives, or agreements are matters outside the CRA. *See, e.g., Wachovia Corporation,* 91 *Federal Reserve Bulletin* 77 (2005). Instead, the Board focuses on the existing CRA performance record of an applicant and the programs that an applicant has in place to serve

menters also expressed concern regarding the potential impact of branch closures. One commenter expressed concern that the proposal would inhibit small business lending in Michigan and Ohio.[41] In addition, one commenter criticized PNC's and National City's records of home mortgage lending in LMI and minority communities in Ohio, PNC's home mortgage lending to minorities in Pittsburgh and Philadelphia, and National City's home mortgage lending to minorities in Cleveland.

A. CRA Performance Evaluations

As provided in the CRA, the Board has considered the convenience and needs factor in light of the evaluations by the appropriate federal supervisors of the CRA performance records of the insured depository institutions of PNC and National City. An institution's most recent CRA performance evaluation is a particularly important consideration in the applications process because it represents a detailed, on-site evaluation of the institution's overall record of performance under the CRA by its appropriate federal supervisor.[42]

PNC's lead subsidiary insured depository institution, PNC Bank, received an "outstanding" rating at its most recent CRA performance evaluation by the OCC, as of May 16, 2006 ("PNC 2006 Evaluation"). Both of PNC's other subsidiary insured depository institutions received an "outstanding" or "satisfactory" rating at their most recent CRA performance evaluations.[43] NC Bank received an "outstanding" rating at its most recent CRA performance evaluation by the OCC, as of June 30, 2005 ("NC Bank 2005 Evaluation").[44]

CRA Performance of PNC Bank. PNC Bank's 2006 Evaluation was discussed in the Board's order approving PNC's acquisition of Sterling Financial Corporation, Lancaster, Pennsylvania, in 2008.[45] Based on a review of the record in this case, the Board hereby reaffirms and adopts the facts and findings detailed in that order concerning PNC Bank's CRA performance record. PNC also provided the Board with additional information about its CRA performance since the Board last reviewed such matters in the *PNC-Sterling Order*. In addition, the Board has consulted with the OCC with respect to PNC Bank's CRA performance since the *PNC-Sterling Order* and has reviewed information provided by PNC regarding its CRA-related activities since that order.

In addition to PNC Bank's overall "outstanding" rating in the PNC 2006 Evaluation,[46] the bank received an overall "outstanding" rating in Pennsylvania and in the Cincinnati Metropolitan Area ("MA"). Examiners reported that PNC Bank's overall lending performance was good, as reflected by the bank's loan volume and loan distribution by geography and borrower income, and that its performance in the Pittsburgh and Cincinnati assessment areas was excellent. They further noted that PNC Bank's level of community development lending in Pennsylvania and in the Cincinnati MA was excellent and had a positive impact on the bank's overall performance under the lending test.

Examiners reported that the bank's distribution of small loans to businesses was excellent in Pennsylvania.[47] They noted that the bank's market share of small loans to businesses in LMI areas exceeded the bank's overall market share of loans across its Pennsylvania assessment areas in each year of the evaluation period. In Pennsylvania, examiners also noted that PNC Bank placed significant community development lending emphasis on economic revitalization and affordable housing. Since the PNC 2006 Evaluation, PNC Bank has continued its high level of CRA lending activity by making more than $230 million in community development loans in its assessment areas in 2006 and 2007.

In the PNC 2006 Evaluation, examiners also commended PNC Bank's overall level of qualified investments and concluded that the bank's performance under the investment test was "high satisfactory" in the Pennsylvania assessment area and was "outstanding" in the Cincinnati MA. They noted that the bank's level of qualifying investments represented excellent responsiveness to the needs of the Cincinnati MA community, particularly in relation to affordable housing. Since the 2006 Evaluation, PNC Bank has continued to make a significant amount of CRA-qualified investments in community development projects. In 2006 and 2007, PNC Bank made more than 160 investments totaling approximately $370 million.

Examiners also concluded that the bank's delivery systems overall were accessible to its customers. In the

the credit needs of its assessment areas at the time the Board reviews a proposal under the convenience and needs factor.

41. One commenter expressed concern that the proposal would have an adverse effect on loss mitigation efforts for assumed and outstanding subprime mortgage loans from NC Bank.

42. The Interagency Questions and Answers Regarding Community Reinvestment provide that a CRA examination is an important and often controlling factor in the consideration of an institution's CRA record. *See Interagency Questions and Answers Regarding Community Reinvestment*, 66 *Federal Register* 36,620 at 36,640 (2001).

43. PNC Bank, Delaware received an "outstanding" rating at its most recent evaluation by the Federal Reserve Bank of Cleveland, as of February 4, 2008.

44. One commenter expressed concern that NC Bank's 2005 Evaluation excluded the Pittsburgh Metropolitan Statistical Area ("MSA"). The commenter also criticized the length of time since the most recent exam and requested that the OCC conduct a targeted CRA exam for the Pittsburgh MSA. At the time of the 2005 Evaluation, NC Bank had a minimal presence in Pennsylvania, consisting of a single branch in Philadelphia. An affiliated but separate institution, National City Bank of Pennsylvania, Pittsburgh, held a significant market share in the state. The two institutions merged in 2006, providing NC Bank with much of its share of market deposits in Pennsylvania.

45. *See The PNC Financial Services Group, Inc.*, 94 *Federal Reserve Bulletin* C38 (2008) ("*PNC-Sterling Order*").

46. The PNC 2006 Evaluation focused on PNC Bank's performance in assessment areas throughout Pennsylvania and New Jersey and in the Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Multistate Metropolitan Area, which together represented approximately 83 percent of the bank's deposits. The evaluation periods for different aspects of PNC Bank's CRA performance ranged from January 1, 2002, to April 30, 2006.

47. "Small loans to businesses" are loans with original amounts of $1 million or less that are either secured by nonfarm, nonresidential properties or classified as commercial and industrial loans.

Pennsylvania assessment area, examiners rated PNC Bank's performance under the service test as "outstanding" and reported that the bank's performance in the Pittsburgh assessment area was excellent for both retail banking services and community development services. PNC represented that there have been no material changes to its CRA programs since the 2006 evaluation.

CRA Performance of NC Bank. The NC Bank 2005 Evaluation was discussed in the Board's order approving National City's acquisition of Mid America Bank fsb, Clarendon Hills, Illinois, in 2007.[48] Based on a review of the record in this case, the Board hereby reaffirms and adopts the facts and findings detailed in that order concerning NC Bank's CRA performance record.

In addition to the overall "outstanding" rating that NC Bank received in its 2005 evaluation, the bank received separate overall "outstanding" or "satisfactory" ratings for its CRA performance in each of the states reviewed. Examiners reported that the bank's distribution of HMDA loans to borrowers of different income levels was excellent. Examiners also stated that the bank's record of community development lending and qualified community development investments demonstrated excellent responsiveness to community credit and investment needs.

Examiners rated NC Bank's performance under the investment test as "outstanding" or "high satisfactory" in most of the states reviewed.[49] They reported that the bank's investments demonstrated excellent responsiveness to the needs of the community. Examiners concluded that NC Bank's retail banking services generally were accessible to geographies and individuals with different income levels. They also reported that the bank generally provided a high level of community development services.

B. Branch Closings

Two commenters expressed general concern that the proposal, or the eventual merger of PNC Bank and NC Bank after consummation of the proposal, would lead to branch closures and adversely affect banking services in LMI areas. PNC has stated that it has not made any decisions regarding potential branch closures but that any closures would not take place until PNC merges PNC Bank and NC Bank at some point after consummation of the proposal. PNC also stated that it intends to continue to serve LMI communities through its branch network.

In addition, PNC has stated that, on consummation of the proposal, it expects to implement its current branch closing policy at NC Bank. PNC's branch closing policy requires the bank to make every effort to minimize the customer impact in the local market and to provide a reasonable alternative to acquire similar services. The policy requires that, before a final decision is made to close a branch, management will consult with members of the community in an effort to minimize the impact of the branch closing.

The Board also has considered that federal banking law provides a specific mechanism for addressing branch closings.[50] Federal law requires an insured depository institution to provide notice to the public and to the appropriate federal supervisory agency before closing a branch and to adopt a policy regarding branch closures.[51]

In the most recent CRA performance examinations, examiners found that the banks' records of opening or closing branches had not adversely affected the accessibility of delivery systems, particularly in LMI areas and to LMI individuals. In addition, the Board notes that the OCC will continue to review the branch closing record of PNC Bank and NC Bank in the course of conducting CRA performance evaluations.

C. HMDA and Fair Lending Record

In light of the public comments received on the proposal, the Board has considered carefully the compliance records of PNC and National City with fair lending and other consumer protection laws in its evaluation of the public interest factors. Two commenters alleged, based on HMDA data, that PNC and National City denied the home mortgage loan applications of African American and Hispanic borrowers more frequently than those of nonminority applicants in certain MSAs. A commenter also alleged, based on 2007 HMDA data, that NC Bank made disproportionately higher-cost loans to African American and Hispanic borrowers than to nonminority borrowers.[52] One commenter also alleged that PNC extended a disproportionately small

48. *See National City Corporation*, 93 *Federal Reserve Bulletin* C127 (2007).

49. Two commenters expressed concern about the impact of the proposal on charitable donations made by NC Bank. PNC represented that it plans to surpass NC Bank's 2008 goal for charitable donations across all markets. The Board notes that neither the CRA nor the agencies' implementing rules require institutions to engage in charitable donations.

50. Section 42 of the Federal Deposit Insurance Act, 12 U.S.C. § 1831r-1 ("FDI Act"), as implemented by the Joint Policy Statement Regarding Branch Closings (64 *Federal Register* 34,844 (1999)), requires that a bank provide the public with at least 30 days' notice and the appropriate federal supervisory agency and customers of the branch with at least 90 days' notice before the date of the proposed branch closing. The bank also is required to provide reasons and other supporting data for the closure, consistent with the institution's written policy for branch closings.

51. One commenter requested the Federal Reserve to hold hearings under the FDI Act before any branch in a LMI area is closed. The FDI Act provides that, in cases where an interstate bank proposes to close a branch in an LMI area, an individual from the area where such branch is located may request a meeting between the bank's primary federal regulator and community leaders. Such requests must be made to the bank's primary federal regulator after notice of a branch closure has been made to its customers. As noted above, PNC has not made any decisions regarding potential branch closures, which makes such a request premature. In addition, any such requests for a hearing with regard to branch closures by either PNC Bank or NC Bank must be made to the OCC, the primary federal regulator of both banks. The Board has forwarded the commenter's letter to the OCC for consideration.

52. Beginning January 1, 2004, the HMDA data required to be reported by lenders were expanded to include pricing information for loans on which the annual percentage rate (APR) exceeds the yield for U.S. Treasury securities of comparable maturity 3 or more percentage

percentage of loans to African Americans in Pittsburgh when compared to the percentage of African American households in that area.

The Board's analysis of the lending-related concerns included a review of HMDA data reported by PNC Bank and NC Bank and their lending affiliates.[53] Although the HMDA data might reflect certain disparities in the rates of loan applications, originations, and denials among members of different racial or ethnic groups in certain local areas, or in the pricing of loans to such groups, they provide an insufficient basis by themselves on which to conclude whether or not PNC Bank or NC Bank has excluded or imposed higher costs on any group on a prohibited basis. The Board recognizes that HMDA data alone, even with the recent addition of pricing information, provide only limited information about the covered loans.[54] HMDA data, therefore, have limitations that make them an inadequate basis, absent other information, for concluding that an institution has engaged in illegal lending discrimination.

The Board is nevertheless concerned when HMDA data for an institution indicate disparities in lending and believes that all lending institutions are obligated to ensure that their lending practices are based on criteria that ensure not only safe and sound lending but also equal access to credit by creditworthy applicants regardless of their race or ethnicity. Moreover, the Board believes that all bank holding companies and their affiliates must conduct their mortgage lending operations without any abusive lending practices and in compliance with all consumer protection laws.

In carefully reviewing the concerns about the organizations' lending activities, the Board has taken into account other information, including examination reports that provide on-site evaluations of compliance with fair lending and other consumer protection laws and regulations by PNC Bank, NC Bank, and their lending affiliates. The Board also has consulted with the OCC, the primary federal supervisor of both PNC Bank and NC Bank. In addition, the Board has considered information provided by PNC, including its plans for managing the consumer compliance operations of PNC Bank and NC Bank after consummation of the proposal.

The record, including confidential supervisory information, indicates that PNC has implemented many processes to help ensure compliance with all consumer protection laws and regulations. PNC's compliance program includes employee training; review by senior management of credit decisions, pricing, and marketing; and fair lending policies and procedures to help ensure compliance with consumer protection laws. PNC's fair-lending compliance program that includes a second-review process to identify any discriminatory practices with respect to the company's home mortgage lending. In addition, PNC has a process for resolving fair lending complaints and conducts periodic internal audits of its fair lending program. PNC requires its employees to complete fair-lending training sessions. PNC has stated that NC Bank operations will be integrated into PNC's existing fair-lending and consumer-protection compliance programs after consummation of the proposal.[55]

The Board also has considered the HMDA data in light of other information, including the overall performance records of the subsidiary banks of PNC and National City under the CRA. These established efforts and record of performance demonstrate that the institutions are active in helping to meet the credit needs of their entire communities.

D. Conclusion on Convenience and Needs and CRA Performance

The Board has considered carefully all the facts of record, including reports of examination of the CRA performance records of the institutions involved, information provided by PNC, comments received on the proposal, and confidential supervisory information. PNC represented that the proposal would result in greater convenience for customers of PNC and National City through expanded delivery channels and a broader range of products and services. In addition, the Board previously noted the severe financial strains and liquidity pressures that National City has been experiencing, which are likely to adversely affect services to its customers. In light of these circumstances, the Board recognizes that the proposed merger would allow the combined organization to continue to provide banking and other financial services in support of the convenience and needs of the communities currently served by both organizations. Based on a review of the entire record, and for the reasons discussed above, the Board concludes that considerations relating to the convenience and needs factor and the CRA performance records of the relevant insured depository institutions are consistent with approval of the proposal.

AGREEMENT CORPORATION

As noted, PNC also has provided notice under section 25 of the FRA and the Board's Regulation K to acquire the agreement corporation subsidiary of National City. The

points for first-lien mortgages and 5 or more percentage points for second-lien mortgages (12 CFR 203.4).

53. The Board reviewed HMDA data for 2006 and 2007 for PNC Bank in the Pittsburgh assessment area and the Cincinnati and Philadelphia MSAs; for NC Bank in the Cincinnati, Cleveland, and Pittsburgh MSAs; and for both PNC Bank and NC Bank in Pennsylvania and Ohio.

54. The data, for example, do not account for the possibility that an institution's outreach efforts may attract a larger proportion of marginally qualified applicants than other institutions attract and do not provide a basis for an independent assessment of whether an applicant who was denied credit was, in fact, creditworthy. In addition, credit history problems, excessive debt levels relative to income, and high loan amounts relative to the value of the real estate collateral (reasons most frequently cited for a credit denial or higher credit cost) are not available from HMDA data.

55. One commenter reiterated concerns regarding alleged disparate pricing of subprime loans originated by a former National City subsidiary, First Franklin, that the commenter made in connection with National City Corporation's application to acquire Provident Bank. The Board considered those comments when it approved that proposal. *See National City Corporation*, 90 *Federal Reserve Bulletin* 382, 384 (2004). National City sold First Franklin to Merrill Lynch & Co., Inc. in 2006.

Board concludes that all factors required to be considered under the FRA and the Board's Regulation K are consistent with approval.

CONCLUSION

Based on the foregoing, the Board has determined that the applications under section 3 of the BHC Act and section 25 of the FRA should be, and hereby are, approved.[56] In reaching its conclusion, the Board considered all the facts of record in light of the factors that the Board is required to consider under the BHC Act, the FRA, and other applicable statutes.[57] The Board's approval is specifically conditioned on compliance by PNC with the conditions imposed in this order and all the commitments made to the Board in connection with the proposal. These conditions and commitments are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

The acquisition of National City may not be consummated before the 15th calendar day, or later than three months, after the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of Cleveland, acting pursuant to delegated authority.

By order of the Board of Governors, effective December 15, 2008.

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Kroszner, and Duke.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

56. A number of commenters requested an extension of the comment period or delayed action on the proposal, and one commenter has requested Board review of a decision under authority delegated by the Board that denied his request for an extension of the comment period. *See* letter dated November 26, 2008, from Robert deV. Frierson, Deputy Secretary of the Board, to the Honorable Dennis J. Kucinich. As previously noted, notice of the proposal was published in the *Federal Register* on November 5, 2008. Newspaper notices were published on October 30 and November 3 in the appropriate newspapers of record, and the comment period ended on December 2. Accordingly, interested persons had approximately 33 days to submit their views. This period provided sufficient time for commenters to prepare and submit their comments and, as noted above, many commenters have provided written submissions, all of which the Board has considered carefully in acting on the proposal. The Board also has accumulated a significant record in this case, including reports of examination, confidential supervisory information and public reports and information, in addition to public comments. Moreover, the Board is required under applicable law and its regulations to act on applications submitted under the BHC Act within specified time periods. Based on all the facts of record, the Board has concluded that the record in this case is sufficient to warrant action at this time and that neither an extension of the comment period nor further delay in considering the proposal is necessary.

57. A number of commenters requested that the Board hold a public meeting or hearing on the proposal. Section 3 of the BHC Act does not require the Board to hold a public hearing on an application unless the appropriate supervisory authority for the bank to be acquired makes a written recommendation of denial of the application. The Board has not received such a recommendation from the OCC. Under its rules, the Board also may, in its discretion, hold a public meeting or hearing on an application to acquire a bank if necessary or appropriate to clarify material factual issues related to the application and to provide an opportunity for testimony (12 CFR 225.16(e), 262.25(d)). The Board has considered carefully the commenters' requests in light of all the facts of record. As noted, the commenters had ample opportunity to submit their views and, in fact, submitted written comments that the Board has considered carefully in acting on the proposal. The commenters' requests fail to demonstrate why written comments do not present their views adequately or why a meeting or hearing otherwise would be necessary or appropriate. For these reasons, and based on all the facts of record, the Board has determined that a public meeting or hearing is not required or warranted in this case. Accordingly, the requests for a public meeting or hearing on the proposal are denied.

Appendix A

PNC AND NATIONAL CITY BANKING MARKETS CONSISTENT WITH BOARD PRECEDENT AND DOJ GUIDELINES WITHOUT DIVESTITURES

Bank	Rank	Amount of deposits (dollars)	Market deposit shares (percent)	Resulting HHI	Change in HHI	Remaining number of competitors
FLORIDA BANKING MARKET						
Indian River County						
PNC Pre-Consummation	14	30.9 mil.	.9	1,753	18	17
National City	3	361.2 mil.	10.1	1,753	18	17
PNC Post-Consummation	2	392.1 mil.	11.0	1,753	18	17
Naples Area—Collier County, excluding the town of Immokalee						
PNC Pre-Consummation	34	15.5 mil.	.2	993	0	43
National City[1]	42	0 mil.	.0	993	0	43
PNC Post-Consummation	34	15.50 mil.	.2	993	0	43

Appendix A—*Continued*

PNC AND NATIONAL CITY BANKING MARKETS CONSISTENT WITH BOARD PRECEDENT AND DOJ GUIDELINES WITHOUT DIVESTITURES—Continued

Bank	Rank	Amount of deposits (dollars)	Market deposit shares (percent)	Resulting HHI	Change in HHI	Remaining number of competitors
KENTUCKY BANKING MARKET						
Lexington—Bourbon, Clark, Fayette, Jessamine, Nicholas, Powell, Scott, and Woodford counties						
PNC Pre-Consummation	15	123.7 mil.	1.6	848	27	35
National City	4	670.2 mil.	8.5	848	27	35
PNC Post-Consummation	4	793.9 mil.	10.1	848	27	35
Louisville, Kentucky–Indiana—Bullitt, Henry, Jefferson, Meade, Nelson, Oldham, Shelby, and Spencer counties, the Bedford census county division in Trimble County, the West Point census county division and the cities of Vine Grove and Radcliff in Hardin County, and the city of Irvington in Breckinridge County, all in Kentucky; Clark, Floyd, Harrison, and Washington counties, and Crawford County, excluding Patoka township, all in Indiana						
PNC Pre-Consummation	3	2.2 bil.	10.1	1,239	378	53
National City	1	4.0 bil.	18.8	1,239	378	53
PNC Post-Consummation	1	6.2 bil.	28.8	1,239	378	53
Cincinnati, Ohio–Indiana–Kentucky—Brown, Butler, Clermont, Hamilton, and Warren counties in Ohio; Dearborn County in Indiana; Boone, Bracken, Campbell, Gallatin, Grant, Kenton, and Pendleton counties, and the New Liberty and Owenton census county divisions in Owen County, all in Kentucky						
PNC Pre-Consummation	4	2.4 bil.	4.4	2,421	48	82
National City	3	2.9 bil.	5.5	2,421	48	82
PNC Post-Consummation	3	5.3 bil.	9.9	2,421	48	82

NOTE: Data are as of June 30, 2008. All amounts of deposits are unweighted. All rankings, market deposit shares, and HHIs are based on thrift institution deposits weighted at 50 percent.

1. National City established a branch in the Naples Area banking market in late 2007. As of June 30, 2008, no deposits had been recorded.

Appendix B

PNC AND NATIONAL CITY BANKING MARKETS IN PENNSYLVANIA CONSISTENT WITH BOARD PRECEDENT AND DOJ GUIDELINES AFTER DIVESTITURES

Bank	Rank	Amount of deposits (dollars)	Market deposit shares (percent)	Resulting HHI	Change in HHI	Remaining number of competitors
Franklin–Titusville–Oil City—Venango County and the city of Titusville in Crawford County						
Pre-Divestiture						
PNC Pre-Consummation	7	40.8 mil.	4.5	2,319	254	8
National City	2	250.8 mil.	27.9	2,319	254	8
PNC Post-Consummation	1	291.6 mil.	32.5	2,319	254	8
Post-Divestiture						
PNC Post-Consummation	2	199.2 mil.	22.2	1,863	–202	9
Branches Divested to Out-of-Market Purchaser	3	92.4 mil. (1 branch)	10.3	1,863	–202	9
Warren—Warren County						
Pre-Divestiture						
PNC Pre-Consummation	3	92.5 mil.	13.7	4,766	871	4
National City	2	216.3 mil.	31.9	4,766	871	4
PNC Post-Consummation	2	308.8 mil.	45.6	4,766	871	4
Post-Divestiture						
PNC Post-Consummation	2	188.4 mil.	27.8	3,779	–117	5
Branches Divested to Out-of-Market Purchaser	3	120.5 mil. (1 branch)	17.8	3,779	–117	5

NOTE: Data are as of June 30, 2008. All amounts of deposits are unweighted. All rankings, market deposit shares, and HHIs are based on thrift institution deposits weighted at 50 percent, except for one thrift institution operating in both markets for which deposits are weighted at 100 percent.

ORDERS ISSUED UNDER SECTION 4 OF THE BANK HOLDING COMPANY ACT

Bank of America Corporation Charlotte, North Carolina

Order Approving the Acquisition of a Savings Association and an Industrial Loan Company

Bank of America Corporation ("Bank of America"), a financial holding company within the meaning of the Bank Holding Company Act ("BHC Act"), has requested the Board's approval under sections 4(c)(8) and 4(j) of the BHC Act and section 225.24 of the Board's Regulation Y[1] to acquire Merrill Lynch & Company, Inc. ("Merrill"), and thereby indirectly acquire Merrill's subsidiary savings association, Merrill Lynch Bank & Trust Co., FSB ("ML Bank"), both of New York, New York. In addition, Bank of America has requested the Board's approval to acquire Merrill Lynch Bank USA ("ML USA"), Salt Lake City, Utah, and thereby engage in operating an industrial loan company.[2] Bank of America also has filed notice to acquire Merrill Lynch Yatirim Bank A.S., Istanbul, Turkey, pursuant to section 4(c)(13) of the BHC Act and the Board's Regulation K.[3]

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published in the *Federal Register* (73 *Federal Register* 61,130 (2008)). The time for filing comments has expired, and the Board has considered the proposal and all comments received in light of the factors set forth in section 4 of the BHC Act.

Bank of America, with total consolidated assets of $1.8 trillion, is the largest depository organization in the United States, as measured by deposits, and controls deposits of approximately $774.2 billion, which represent approximately 10.8 percent of the total amount of deposits of

1. 12 U.S.C. §§ 1843(c)(8) and (j); 12 CFR 225.24.

2. 12 CFR 225.28(b)(4)(i).

3. 12 U.S.C. § 1843(c)(13); *see* 12 CFR 211.9(f). Bank of America also proposes to acquire Merrill's other subsidiaries in accordance with sections 4(c)(13) or 4(k) of the BHC Act (12 U.S.C. §§ 1843(c)(13) and (k)).

insured depository institutions in the United States.[4] Bank of America controls six insured depository institutions[5] that operate in thirty-one states and the District of Columbia.

Merrill has total consolidated assets of approximately \$875 billion and controls deposits of approximately \$77.8 billion, which represent approximately 1.1 percent of the total amount of deposits of insured depository institutions in the United States. ML Bank and ML USA operate in nine states.

On consummation of the proposal, Bank of America would remain the largest depository organization in the United States, with total consolidated assets of approximately \$2.7 trillion. Bank of America would control deposits of approximately \$852 billion, representing approximately 11.9 percent of the total amount of deposits of insured depository institutions in the United States.[6]

Factors Governing Board Review of the Proposal

The Board previously has determined by regulation that the operation of a savings association and an industrial loan company by a bank holding company are activities closely related to banking for purposes of section 4(c)(8) of the BHC Act.[7] The Board requires that savings associations, industrial loan companies, and any other entities acquired by bank holding companies or financial holding companies conform their direct and indirect activities to the requirements for permissible activities under section 4 of the BHC Act and Regulation Y.[8] Bank of America has certified that Merrill is substantially engaged in activities that are financial in nature, incidental to a financial activity, or otherwise permissible for a financial holding company under section 4(c) of the BHC Act.[9] Bank of America has committed that it will conform, terminate, or divest, within two years of the acquisition of Merrill, all the activities and investments of Merrill that are not permissible for a bank holding company under section 4(c) of the BHC Act.[10]

To approve the proposal, section 4(j)(2)(A) of the BHC Act requires the Board to determine that the proposed acquisition of ML Bank and ML USA "can reasonably be expected to produce benefits to the public, such as greater convenience, increased competition, or gains in efficiency, that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices."[11] As part of its evaluation under these public interest factors, the Board reviews the financial and managerial resources of the companies involved, the effect of the proposal on competition in the relevant markets, and the public benefits of the proposal.[12] In acting on a notice to acquire a savings association or an insured industrial loan company, the Board also reviews the records of performance of the relevant insured depository institutions under the Community Reinvestment Act ("CRA").[13]

Competitive Considerations

The Board has considered carefully the competitive effects of Bank of America's acquisition of Merrill, including the acquisition of ML Bank and ML USA, in light of all the facts of record. Bank of America and Merrill have subsidiary insured depository institutions that compete directly in 11 banking markets in California, Massachusetts, Nevada, New York, and Oregon.[14] The Board has reviewed care-

---

4. Asset and nationwide deposit-ranking data are as of June 30, 2008. In this context, insured depository institutions include commercial banks, savings banks, and savings associations.

5. Bank of America, National Association ("BANA"), Charlotte, North Carolina, is Bank of America's largest subsidiary depository institution, as measured by both assets and deposits.

6. The Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 ("Riegle-Neal Act") provides that the Board may not approve an application for the interstate acquisition of a *bank* if consummation of the acquisition would result in the applicant controlling more than 10 percent of the total amount of deposits of insured depository institutions in the United States. Pub. L. 103–328 (1994), codified at 12 U.S.C. § 1842(d). ML Bank is chartered as a federal savings bank under the Home Owners' Loan Act and, therefore, is exempt from the definition of "bank" (12 U.S.C. § 1461 et seq.; 12 U.S.C. § 1841(c)(2)(B)). ML USA operates as an industrial loan company and also is exempt from the definition of "bank" under the BHC Act. *See* 12 U.S.C. § 1841(c)(2)(H). As a result, ML Bank and ML USA are not "banks" for purposes of the BHC Act and its nationwide deposit cap. Accordingly, the Riegle-Neal Act's prohibition against approving proposals that would result in the applicant exceeding the nationwide deposit cap does not apply to the proposed acquisition of Merrill, ML Bank, and ML USA. After consummation of the proposal, however, the calculation of Bank of America's total deposits would include the deposits of ML Bank and ML USA for purposes of calculating compliance with the nationwide deposit cap prohibition in connection with any subsequent application by Bank of America to acquire a bank pursuant to section 3 of the BHC Act or by one of its subsidiary banks to merge with an unaffiliated bank pursuant to the Bank Merger Act (12 U.S.C. § 1828(c)).

7. 12 CFR 225.28(b)(1), (2), (4), (5), (6), (7), and (12).

8. A savings association operated by a bank holding company may engage only in activities that are permissible for bank holding companies under section 4(c)(8) of the BHC Act (12 CFR 225.28(b)(4) and 225.86(a)).

9. A company is substantially engaged in activities permissible for a financial holding company if at least 85 percent of the company's consolidated total annual gross revenue is derived from, and at least 85 percent of the company's consolidated total assets is attributable to, the conduct of activities permissible for a financial holding company 12 CFR 225.85(a)(3)(ii).

10. 12 CFR 225.85(a)(3).

11. 12 U.S.C. § 1843(j)(2)(A).

12. *See* 12 CFR 225.26. *See, e.g., Wachovia Corporation*, 92 *Federal Reserve Bulletin* C183 (2006); *Banc One Corporation*, 83 *Federal Reserve Bulletin* 602 (1997).

13. 12 U.S.C. § 2901 et seq.

14. ML Bank operates 54 branches in California, Connecticut, Massachusetts, Nevada, New Jersey, New York, Oregon, and Pennsylvania and offers a full range of banking products and services to its customers. ML USA operates three branches in New Jersey, New York, and Utah. ML USA accepts money market deposit accounts, transaction accounts, and certificates of deposit. It also makes loans and

fully the competitive effects of the proposal in all markets in light of all the facts of record. In particular, the Board has considered the number of competitors that would remain in the markets, the relative shares of total deposits in depository institutions in each market ("market deposits") controlled by Bank of America and Merrill,[15] the concentration levels of market deposits and the increase in those levels as measured by the Herfindahl–Hirschman Index ("HHI") under the Department of Justice Merger Guidelines ("DOJ Guidelines"),[16] and other characteristics of the markets.

Consummation of the proposal would be consistent with Board precedent and within the thresholds in the DOJ Guidelines in all the banking markets in which the insured depository institutions of Bank of America and Merrill directly compete.[17] On consummation of the proposal, two of the banking markets would remain unconcentrated and eight would remain moderately concentrated. One banking market would continue to be highly concentrated but with no increase in the HHI. In each of the 11 banking markets, numerous competitors would remain.

The DOJ also reviewed the proposal and has advised the Board that consummation of the transaction would not likely have a significantly adverse effect on competition in any relevant banking market or in any relevant market. The appropriate federal supervisory agencies also have been afforded an opportunity to comment and have not objected to the proposal.

serves as a transfer agent, subaccountant, registrar, and fiscal agent for nonproprietary money market funds and mutual funds.

15. Deposit and market share data are as of June 30, 2008, and are based on calculations in which the deposits of thrift institutions are included at 50 percent. The Board previously has indicated that thrift institutions have become, or have the potential to become, significant competitors of commercial banks. *See, e.g., Midwest Financial Group*, 75 *Federal Reserve Bulletin* 386, 387 (1989); *National City Corporation*, 70 *Federal Reserve Bulletin* 743, 744 (1984). Thus, the Board regularly has included thrift institution deposits in the market share calculation on a 50 percent weighted basis. *See, e.g., First Hawaiian, Inc.*, 77 *Federal Reserve Bulletin* 52, 55 (1991). In the market share calculations in this case, the Board weighted the deposits of ML Bank at 50 percent on a pre-acquisition basis and at 100 percent on a post-acquisition basis to reflect the resulting control of such deposits by a commercial banking organization. ML USA offers only limited services and its offices are not open to the public. The Board, therefore, excluded the deposits of ML USA on a pre-acquisition basis and weighted them at 100 percent on a post-acquisition basis to reflect the resulting control of such deposits by a commercial banking organization.

16. Under the DOJ Guidelines, a market is considered unconcentrated if the post-acquisition HHI is under 1000, moderately concentrated if the post-acquisition HHI is between 1000 and 1800, and highly concentrated if the post-acquisition HHI exceeds 1800. The Department of Justice ("DOJ") has informed the Board that a bank merger or acquisition generally will not be challenged (in the absence of other factors indicating anticompetitive effects) unless the post-acquisition HHI is at least 1800 and the acquisition increases the HHI more than 200 points. The DOJ has stated that the higher-than-normal HHI thresholds for screening bank mergers and acquisitions for anticompetitive effects implicitly recognize the competitive effects of limited-purpose and other nondepository financial entities.

17. Those banking markets and the effects of the proposal on their concentration of banking resources are described in the appendix.

Based on all the facts of record, the Board concludes that consummation of the proposal would not have a significantly adverse effect on competition or on the concentration of resources in any relevant banking market. Accordingly, the Board has determined that competitive considerations are consistent with approval.

Financial and Managerial Resources

In reviewing the proposal under section 4 of the BHC Act, the Board has considered carefully the financial and managerial resources of Bank of America, Merrill, and their subsidiary insured depository institutions and the effect of the transaction on those resources. This review was conducted in light of all the facts of record, including confidential reports of examination, other supervisory information from the primary federal and state supervisors of the organizations involved in the proposal, and publicly reported and other financial information, including information provided by Bank of America. The Board also has consulted with the Office of Thrift Supervision ("OTS") and Federal Deposit Insurance Corporation ("FDIC"), the primary federal supervisors of Merrill's subsidiary insured depository institutions.

In evaluating financial resources in expansionary proposals by banking organizations, the Board reviews the financial condition of the organizations involved on both a parent-only and consolidated basis, as well as the financial condition of the subsidiary insured depository institutions and the organizations' significant nonbanking operations. In this evaluation, the Board considers a variety of information, including capital adequacy, asset quality, and earnings performance. In assessing financial factors, the Board consistently has considered capital adequacy to be especially important. The Board also evaluates the financial condition of the combined organization at consummation, including its capital position, asset quality, and earnings prospects, and the impact of the proposed funding of the transaction. In addition, the Board considers the ability of the organization to absorb the costs of the proposal and the plans for integrating operations after consummation.

The Board has considered carefully the financial factors of the proposal. Bank of America and its subsidiary depository institutions are well capitalized and would remain so on consummation of the proposal. ML Bank and ML USA also are well capitalized and would remain so after consummation of the proposal. Based on its review of the record, including all of the considerations noted above, the Board finds that Bank of America has sufficient financial resources to effect the proposal.[18]

The Board also has considered the managerial resources of the organizations involved and the proposed combined organization. The Board has reviewed the examination records of Bank of America and its subsidiary depository

18. The proposed transaction is structured as a share exchange and would not increase the debt-service requirements of the combined company.

institutions, and ML Bank and ML USA, including assessments of their management, risk-management systems, and operations. In addition, the Board has considered its supervisory experiences and those of the other relevant federal supervisory agencies with the organizations and their records of compliance with applicable banking laws and with anti-money-laundering laws. The Board also has considered carefully Bank of America's plans for implementing the proposal, including its proposed risk-management systems after consummation. Bank of America plans to implement enhanced risk-management policies, procedures, and controls at the combined organization and is devoting significant financial and other resources to address all aspects of the post-acquisition integration process. The Board also has considered Bank of America's record of successfully integrating large organizations into its operations and risk-management systems after acquisitions.

Based on all the facts of record, the Board has concluded that considerations relating to the financial and managerial resources of the organizations involved in the proposal are consistent with approval under section 4 of the BHC Act.

Records of Performance under the CRA

As noted previously, the Board reviews the records of performance under the CRA of the relevant insured depository institutions when acting on a notice to acquire an insured depository institution, including a savings association or industrial loan company. The CRA requires the federal financial supervisory agencies to encourage insured depository institutions to help meet the credit needs of the local communities in which they operate, consistent with their safe and sound operation, and requires the appropriate federal financial supervisory agency to take into account the relevant depository institution's record of meeting the credit needs of its entire community, including low- and moderate-income ("LMI") neighborhoods, in evaluating bank expansionary proposals.[19]

As provided in the CRA, the Board has evaluated the proposal in light of the evaluations by the appropriate federal supervisors of the CRA performance records of the relevant insured depository institutions. An institution's most recent CRA performance evaluation is a particularly important consideration in the application process because it represents a detailed, on-site evaluation of the institution's overall record of performance under the CRA by its appropriate federal supervisor.[20]

Bank of America's lead bank, BANA, received an "outstanding" rating at its most recent CRA performance evaluation by the Office of the Comptroller of the Currency, as of December 31, 2006.[21] All other insured depository institutions of Bank of America were rated "outstanding" or "satisfactory" at their most recent CRA performance evaluations.

ML USA received an "outstanding" rating at its most recent CRA performance evaluation by the FDIC, as of January 10, 2006.[22] ML Bank has not yet received a CRA rating because before its conversion to a savings association on August 5, 2006, it was a trust company and thus not subject to the CRA. Bank of America has represented that it will institute the community development and community investment policies of BANA at ML Bank to strengthen the bank's CRA policies, and to help meet the credit needs of the communities it serves.

Based on a review of the entire record, and for the reasons discussed above, the Board has concluded that considerations relating to the CRA performance records of the relevant insured depository institutions are consistent with approval of the proposal.

Public Benefits

As part of its evaluation of the public interest factors under section 4 of the BHC Act, the Board has reviewed carefully the public benefits and possible adverse effects of the proposal. The record indicates that consummation of the proposal would result in benefits to consumers currently served by ML Bank and ML USA by providing them access to additional banking and nonbanking products and services from Bank of America. Bank of America has represented that it would grant customers of ML Bank and ML USA access to BANA's ATM network and branches on the same terms and conditions as BANA customers. As noted, Bank of America also would implement enhanced risk-management systems at the combined organization.

For the reasons discussed above and based on all the facts of record, the Board has determined that the conduct of the proposed nonbanking activities within the framework of Regulation Y and Board precedent is not likely to result in significantly adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices. For the reasons discussed above and based on the entire record, the Board has concluded that consummation of the proposal can reasonably be expected to produce public benefits that would outweigh any likely adverse effects. Accordingly, the Board has determined that the balance of the public benefits under the standard of section 4(j)(2) of the BHC Act is consistent with approval.

Bank of America also has provided notice under section 4(c)(13) of the BHC Act and the Board's Regulation K to acquire Merrill Lynch Yatirim Bank A.S. The Board concludes that all factors required to be considered under the BHC Act and the Board's Regulation K are consistent with approval.

19. 12 U.S.C. §2903.

20. *See Interagency Questions and Answers Regarding Community Reinvestment*, 66 *Federal Register* 36,620 and 36,639 (2001).

21. The period for the BANA evaluation was January 1, 2004, through December 31, 2006.

22. The period for the ML USA evaluation was April 1, 2003, through December 31, 2005.

CONCLUSION

Based on the foregoing and all the facts of record, including reports of examination of the institutions involved, information provided by Bank of America, and confidential supervisory information, the Board has determined that the proposal should be, and hereby is, approved. In reaching its conclusion, the Board has considered all the facts of record in light of the factors that it is required to consider under the BHC Act. The Board's approval is specifically conditioned on compliance by Bank of America with the conditions imposed in this order and all the commitments made to the Board in connection with the proposal. The Board's approval also is subject to all the conditions set forth in Regulation Y, including those in sections 225.7 and 225.25(c),[23] and to the Board's authority to require such modification or termination of the activities of the bank holding company or any of its subsidiaries as the Board finds necessary to ensure compliance with, and to prevent evasion of, the provisions of the BHC Act and the Board's regulations and orders issued thereunder. For purposes of this action, these conditions and commitments are deemed to be conditions imposed in writing by the Board in connection with its findings and decisions herein and, as such, may be enforced in proceedings under applicable law.

The proposal shall not be consummated later than three months after the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of Richmond, acting pursuant to delegated authority.

By order of the Board of Governors, effective November 26, 2008.

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Kroszner, and Duke.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

23. 12 CFR 225.7 and 225.25(c).

Appendix

BANKING MARKETS CONSISTENT WITH BOARD PRECEDENT AND DOJ GUIDELINES

Bank	Rank	Amount of deposits (dollars)	Market deposit shares (percent)	Resulting HHI	Change in HHI	Remaining number of competitors
CALIFORNIA BANKING MARKETS						
Los Angeles—the Los Angeles Ranally Metropolitan Area and the cities of Acton in Los Angeles County and Rosamond in Kern County						
Bank of America Pre-Consummation ...	1	58.8 bil.	19.8	824	16	198
Merrill ...	40	1.4 bil.	.3	824	16	198
Bank of America Post-Consummation ..	1	60.3 bil.	20.3	824	16	198
Napa—the Napa Ranally Metropolitan Area and the cities of Calistoga and St. Helena in Napa County						
Bank of America Pre-Consummation ...	2	423.8 mil.	16.0	1,127	27	18
Merrill ...	16	32.8 mil.	.6	1,127	27	18
Bank of America Post-Consummation ..	2	456.7 mil.	17.2	1,127	27	18
Palm Springs–Cathedral City–Palm Desert—the Palm Springs–Cathedral City–Palm Desert and Indio–Coachella Ranally Metropolitan Areas and the cities of Joshua Tree, Twentynine Palms, and Yucca Valley in San Bernardino County						
Bank of America Pre-Consummation ...	1	1.2 bil.	19.1	936	9	26
Merrill ...	23	18.9 mil.	.2	936	9	26
Bank of America Post-Consummation ..	1	1.2 bil.	19.3	936	9	26

Appendix—*Continued*

Banking Markets Consistent with Board Precedent and DOJ Guidelines—Continued

Bank	Rank	Amount of deposits (dollars)	Market deposit shares (percent)	Resulting HHI	Change in HHI	Remaining number of competitors
San Diego—the San Diego Ranally Metropolitan Area and the cities of Camp Pendleton and Pine Valley in San Diego County						
Bank of America Pre-Consummation ...	1	7.9 bil.	17.3	1,090	34	70
Merrill ...	17	633.6 mil.	.7	1,090	34	70
Bank of America Post-Consummation ..	1	8.5 bil.	18.6	1,090	34	70
San Francisco–Oakland–San Jose—the San Francisco–Oakland–San Jose Ranally Metropolitan Area, and the cities of Byron in Contra Costa County, Hollister and San Juan Bautista in San Bonito County, Pescadero in San Mateo County and Point Reyes Station in Marsh County						
Bank of America Pre-Consummation ...	1	56.8 bil.	25.3	1,497	85	115
Merrill ...	12	5.1 bil.	1.1	1,497	85	115
Bank of America Post-Consummation ..	1	61.9 bil.	27.3	1,497	85	115
Santa Barbara—the Santa Barbara Ranally Metropolitan Area						
Bank of America Pre-Consummation ...	2	648.8 mil.	10.4	1,423	18	18
Merrill ...	13	162.2 mil.	1.3	1,423	18	18
Bank of America Post-Consummation ..	2	811 mil.	12.8	1,423	18	18
Santa Rosa—the Santa Rosa Ranally Metropolitan Area and the city of Cloverdale in Sonoma County						
Bank of America Pre-Consummation ...	2	845.6 mil.	12.9	1,003	16	21
Merrill ...	16	62.7 mil.	.5	1,003	16	21
Bank of America Post-Consummation ..	2	908.4 mil.	13.8	1,003	16	21
MASSACHUSETTS BANKING MARKET						
Boston—the Boston Ranally Metropolitan Area and the towns of Amherst, Antrim, Atkinson, Bennington, Brookline, Chester, Danville, Deering, Derry, Dublin, East Hamstead, Fitzwilliam, Francestown, Fremont, Greenfield, Greenville, Hampstead, Hancock, Hollis, Hudson, Jaffrey, Kingston, Litchfield, Lyndeboro, Mason, Merrimac, Milford, Mont Vernon, Nashua City, New Ipswich, Newton, Pelham, Peterborough, Plaistow, Raymond, Rindge, Salem, Sandown, Seabrook, Sharon, South Hampton, South Nashua, Temple, Wilton, and Windham in New Hampshire						
Bank of America Pre-Consummation ...	1	29.6 bil.	22.0	1,202	7	159
Merrill ...	67	314.2 mil.	.1	1,202	7	159
Bank of America Post-Consummation ..	1	29.9 bil.	22.2	1,202	7	159

Appendix—*Continued*

Banking Markets Consistent with Board Precedent and DOJ Guidelines—Continued

Bank	Rank	Amount of deposits (dollars)	Market deposit shares (percent)	Resulting HHI	Change in HHI	Remaining number of competitors
NEVADA BANKING MARKET						
Las Vegas—the Las Vegas Ranally Metropolitan Area						
Bank of America Pre-Consummation ...	3	6.8 bil.	4.2	3,635	-1	47
Merrill ...	27	99.9 mil.	.0	3,635	-1	47
Bank of America Post-Consummation ..	3	6.9 bil.	4.2	3,635	-1	47
NEW YORK BANKING MARKET						
Metropolitan New York–New Jersey–Pennsylvania–Connecticut—Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, and Westchester counties in New York; Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren counties in New Jersey; Monroe and Pike counties in Pennsylvania; and Fairfield County and portions of Litchfield and New Haven counties in Connecticut						
Bank of America Pre-Consummation ...	2	67.2 bil.	8.5	1,278	8	301
Merrill ...	17	12.2 bil.	.8	1,278	8	301
Bank of America Post-Consummation ..	2	79.4 bil.	10.0	1,278	8	301
OREGON BANKING MARKET						
Portland—the Portland Ranally Metropolitan Area; the cities of Banks, Molalla, Mount Angel, North Plains, Saint Helens, Scappoose, Vernonia, and Woodburn in Oregon; and the city of Yacolt in Washington						
Bank of America Pre-Consummation ...	2	4.8 bil.	17.5	1,304	0	44
Merrill ...	42	0	.0	1,304	0	44
Bank of America Post-Consummation ..	2	4.8 bil.	17.5	1,304	0	44

NOTE: All rankings, market deposit shares, and HHIs are based on thrift institution deposits weighted at 50 percent, except for the savings association deposits of Merrill, which are weighted at 50 percent before consummation of the proposal and 100 percent after consummation. The deposits of ML Bank US were excluded on a pre-acquisition basis and weighted at 100 percent on a post-acquisition basis. The effects of these modifications on the post-consummation market shares and HHIs are more evident in some markets than in others.

Orders Issued under Sections 3 and 4 of the Bank Holding Company Act

American Express Company
New York, New York

American Express Travel Related Services Company, Inc.
New York, New York

Order Approving Formation of Bank Holding Companies and Notice to Engage in Certain Nonbanking Activities

American Express Company ("AMEX") and American Express Travel Related Services Company, Inc. ("AMEX Travel") (collectively, "Applicants") have requested the Board's approval under section 3 of the Bank Holding Company Act ("BHC Act")[1] to become bank holding companies on conversion of American Express Centurion Bank ("AMEX Bank"), Salt Lake City, Utah, to a bank.[2] AMEX Bank currently operates as an industrial loan company and is exempt from the definition of "bank" under the BHC Act.[3] Applicants have also filed with the Board elections to become financial holding companies on consummation of the proposal pursuant to sections 4(k) and (*l*) of the BHC Act and section 225.82 of the Board's Regulation Y.[4]

In addition, as part of their proposal to become bank holding companies, AMEX and AMEX Travel have requested the Board's approval under sections 4(c)(8) and 4(j) of the BHC Act and section 225.24 of the Board's Regulation Y[5] to retain their voting shares of American Express Bank, FSB, Salt Lake City ("AMEX Thrift"), a federal savings association.[6] AMEX has also provided notice of its proposal to retain its foreign bank subsidiaries under section 4(c)(13) of the BHC Act.[7]

Section 3(b)(1) of the BHC Act requires that the Board provide notice of an application under section 3 to the appropriate federal or state supervisory authority for the banks to be acquired and provide the supervisor a period of time (normally 30 days) within which to submit views and recommendations on the proposal.[8] Section 4(i)(4) of the BHC Act imposes a similar requirement with respect to a notice to acquire a savings association.[9] The BHC Act also authorizes the Board to reduce or eliminate these notice periods under certain circumstances.[10]

In light of the unusual and exigent circumstances affecting the financial markets, and all other facts and circumstances, the Board has determined that emergency conditions exist that justify expeditious action on this proposal in accordance with the provisions of the BHC Act and the Board's regulations.[11] The Board has provided notice to the primary federal and state supervisors of AMEX Bank, the Federal Deposit Insurance Corporation ("FDIC") and Commissioner of the Utah Department of Financial Institutions; to the primary federal supervisor of AMEX Thrift, the Office of Thrift Supervision ("OTS"); and to the Department of Justice ("DOJ"). Those agencies have indicated that they have no objection to approval of the proposal. For the same reasons, and in light of the fact that this transaction represents the conversion of an existing subsidiary of Applicants from one form of a depository institution to another, the Board has also waived public notice of this proposal.[12]

AMEX, with total consolidated assets of approximately $127 billion, provides charge and credit payment-card products and travel-related services and engages in other activities both in the United States and abroad.[13] AMEX Bank has total consolidated assets of approximately $25.3 billion and controls deposits of approximately $7.2 billion. It engages primarily in financing and lending activities and taking deposits of the type that are permissible for an industrial loan company under the exception in section 2(c)(2)(H) of the BHC Act. AMEX Thrift has total consolidated assets of approximately $25 billion and controls deposits of approximately $7.2 billion. AMEX Thrift engages primarily in credit card lending activities.

Factors Governing Board Review of Transaction

The BHC Act sets forth the factors that the Board must consider when reviewing the formation of a bank holding company or the acquisition of a bank. These factors are the competitive effects of the proposal in the relevant geographic markets; the financial and managerial resources and future prospects of the companies and banks involved in the proposal; the convenience and needs of the community to be served, including the records of performance under the Community Reinvestment Act[14] ("CRA") of the insured depository institutions involved in the transaction; and the availability of information needed to determine and enforce compliance with the BHC Act and other applicable federal banking laws.[15]

1. 12 U.S.C. § 1842.
2. AMEX Bank is a direct subsidiary of AMEX Travel and an indirect subsidiary of AMEX.
3. 12 U.S.C. § 1841(c)(2)(H).
4. 12 U.S.C. §§ 1843(k) and (l); 12 CFR 225.82.
5. 12 U.S.C. §§ 1843(c)(8) and (j); 12 CFR 225.24.
6. AMEX Thrift is a direct subsidiary of AMEX Travel and an indirect subsidiary of AMEX.
7. 12 U.S.C. § 1843(c)(13).
8. 12 U.S.C. § 1842(b)(1); 12 CFR 225.15(b).
9. 12 U.S.C. § 1843(i)(4).
10. 12 U.S.C. §§ 1842(b)(1) and 1843(i)(4).
11. *Id.*; 12 CFR 225.16(b)(3), 225.16(g)(2), 225.25(d), and 262.3(l).
12. 12 CFR 225.16(b)(3), 225.16(g)(2), 225.25(d), and 262.3(l).
13. Asset data for AMEX are as of September 30, 2008, and asset and deposit data for AMEX Bank and AMEX Thrift are as of June 30, 2008.
14. 12 U.S.C. § 2901 et seq.
15. In cases involving interstate bank acquisitions by bank holding companies, the Board also must consider the concentration of deposits

An acquisition of a savings association requires Board approval under sections 4(c)(8) and 4(j) of the BHC Act.[16] The Board previously has determined by regulation that the operation of a savings association is closely related to banking for purposes of section 4(c)(8) of the BHC Act.[17] The Board also must determine that the operation of AMEX Thrift by Applicants "can reasonably be expected to produce benefits to the public, such as greater convenience, increased competition, or gains in efficiency, that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices."[18]

Competitive Considerations

Section 3 of the BHC Act prohibits the Board from approving a proposal that would result in a monopoly. The BHC Act also prohibits the Board from approving a proposed bank acquisition that would substantially lessen competition in any relevant banking market unless the anticompetitive effects of the proposal are clearly outweighed in the public interest by the probable effect of the proposal in meeting the convenience and needs of the community to be served.[19] In addition, the Board must consider the competitive effects of a proposal to acquire a savings association under the public benefits factor of section 4(j) of the BHC Act.

The proposal involves the conversion of an existing, wholly owned industrial loan company subsidiary of Applicants into a bank, with no resulting change in the ownership of Applicants, AMEX Bank, or AMEX Thrift. In addition, Applicants do not propose to acquire any additional depository institution as part of this proposal. Based on all the facts of record, the Board concludes that consummation of the proposal would not result in any significantly adverse effects on competition or on the concentration of banking resources in any relevant banking market and that the competitive factors are consistent with approval of the proposal.

Financial, Managerial, and Other Supervisory Considerations

Section 3 of the BHC Act requires the Board to consider the financial and managerial resources and future prospects of the companies and banks involved in the proposal and certain other supervisory factors.[20] The Board also reviews the financial and managerial resources of the organizations involved in the proposal under section 4 of the BHC Act. The Board has carefully considered these factors in light of all the facts of record, including supervisory and examination information received from the relevant federal and state supervisors of the organizations involved in the proposal and other available financial information, including information provided by AMEX and AMEX Travel. In addition, the Board has consulted with the primary federal and state supervisors of Applicants, AMEX Bank, and AMEX Thrift.

The Board consistently has considered capital adequacy to be an especially important aspect in analyzing financial factors. AMEX and AMEX Travel are adequately capitalized and all the AMEX entities that are subject to regulatory capital requirements currently exceed the relevant requirements. In addition, AMEX Bank and AMEX Thrift are currently well capitalized under applicable federal guidelines. AMEX Bank and AMEX Thrift also would be well capitalized on a pro forma basis on consummation of the proposal. Other financial factors are consistent with approval.

In addition, the Board has carefully considered the managerial resources of AMEX and AMEX Travel in light of all the facts of record, including confidential supervisory and examination information and information provided by Applicants. The Board has considered the supervisory experience of the relevant federal and state supervisory agencies of Applicants and their insured depository institutions with the organizations and institutions and their records of compliance with applicable banking law and anti-money-laundering laws.[21]

Based on all the facts of record, the Board concludes that considerations relating to the financial and managerial resources and future prospects of the organizations involved are consistent with approval, as are the other supervisory factors under the BHC Act.

Convenience and Needs and CRA Performance Considerations

In acting on a proposal under section 3 of the BHC Act, the Board must consider the effects of the proposal on the convenience and needs of the communities to be served and to take into account the records of the relevant depository institutions under the CRA.[22] The Board must also review the records of performance under the CRA of the relevant insured depository institutions when acting on a notice

---

in the nation and relevant individual states, as well as compliance with the other provisions of section 3(d) of the BHC Act. Because the proposed transaction does not involve an interstate bank acquisition by a bank holding company, the provisions of section 3(d) of the BHC Act do not apply in this case.

16. 12 U.S.C. §§ 1843(c)(8) and 1843(j); *See* 12 U.S.C. § 1843(i).

17. 12 CFR 225.28(b)(4)(ii).

18. 12 U.S.C. § 1843(j)(2)(A).

19. 12 U.S.C. § 1842(c)(1).

20. 12 U.S.C. § 1842(c)(2) and (3).

21. A former subsidiary of Applicants was subject to a cease and desist order and concurrent civil money penalties related to Bank Secrecy Act violations issued by the Board on August 3, 2007. AMEX Travel was subject to related civil money penalties issued by the Financial Crimes Enforcement Network. The subsidiary at which the violations occurred, and against which the cease and desist order was applied, American Express Bank International, was sold by Applicants in late 2007. In reviewing the statutory factors, the Board has consulted with the relevant federal and state supervisors about the compliance by Applicants and their subsidiary depository institutions with anti-money-laundering laws.

22. 12 U.S.C. § 2903.

under section 4 of the BHC Act to acquire voting securities of an insured savings association.[23]

The Board has carefully considered the convenience and needs factor and the CRA performance records of the subsidiary depository institutions of the Applicants in light of all the facts of record. As provided in the CRA, the Board evaluates the record of performance of an institution in light of examinations by the appropriate federal supervisors of the CRA performance records of the relevant institutions. An institution's most recent CRA performance evaluation is a particularly important consideration in the applications process because it represents a detailed, on-site evaluation of the institution's overall record of performance under the CRA by its appropriate federal supervisor.[24]

AMEX Bank received an "outstanding" rating under the CRA at its most recent performance evaluation by the FDIC as of January 9, 2006 (the "FDIC Examination"). Consistent with the CRA regulations adopted by the federal banking agencies, AMEX Bank was evaluated under the community development test as a limited-purpose institution.[25] The FDIC Examination indicated that AMEX Bank originated and funded new community development loans totaling $6.04 million during the examination period (January 28, 2003, through January 9, 2006) and had more than $3 million in community development loan commitments. The FDIC Examination also determined that AMEX Bank provided an outstanding level of community development investments. Applicants have represented that the conversion of AMEX Bank to a bank for purposes of the BHC Act will enhance its ability to meet the convenience and needs of its communities by permitting the bank to offer a wider array of deposit products.

AMEX Thrift received an "outstanding" rating under the CRA at its most recent performance evaluation by the OTS, as of October 12, 2006 (the "OTS Examination"). AMEX Thrift also was evaluated under the community development test as a limited-purpose institution. The OTS Examination indicated that AMEX Thrift originated and funded new community development loans totaling $16.0 million during the examination period (March 1, 2004, through September 30, 2006), and that it provided more than $118.8 million in qualifying community development investments.

Based on a review of the entire record, and for the reasons discussed above, the Board has concluded that considerations relating to convenience and needs considerations and the CRA performance records of AMEX Bank and AMEX Thrift are consistent with approval of the proposal.

Nonbanking Activities and Financial Holding Company Declarations

Applicants engage in a wide range of nonbanking activities that have been determined to be financial in nature or incidental to a financial activity pursuant to section 4(k) of the BHC Act.[26] These activities include, among other things, extending credit and servicing loans, engaging in activities related to extending credit, issuing and selling consumer-type payment instruments, providing data processing services, and operating travel agencies.[27]

Applicants also have filed a notice under sections 4(c)(8) and 4(j) of the BHC Act to retain their ownership interest in AMEX Thrift and thereby operate a savings association. As part of its evaluation of the public interest factors under section 4(j) of the BHC Act, the Board also must determine that the acquisition of the nonbank subsidiary and the performance of the proposed nonbanking activities by Applicants can reasonably be expected to produce benefits to the public that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices.[28]

The record indicates that consummation of the proposal would create a stronger and more diversified financial services organization and would provide the current and future customers of AMEX, AMEX Travel, and AMEX Thrift with expanded financial products and services. For the reasons discussed above, and based on the entire record, the Board has determined that the conduct of the proposed nonbanking activities within the framework of Regulation Y and Board precedent is not likely to result in significantly adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices. Moreover, based on all the facts of record, the Board has concluded that consummation of the proposal can reasonably be expected to produce public benefits that would outweigh any likely adverse effects. Accordingly, the Board has determined that the balance of the public benefits under the standard of section 4(j)(2) of the BHC Act is consistent with approval.

As noted, Applicants have filed elections to become financial holding companies pursuant to sections 4(k) and (*l*) of the BHC Act and section 225.82 of the Board's Regulation Y. Applicants have certified that AMEX Bank and AMEX Thrift are well capitalized and well managed and have provided all the information required under Regulation Y. Based on all the facts of record, the Board has determined that these elections to become financial holding companies will become effective on consummation of the proposal if, on that date, AMEX Bank and AMEX

23. *See, e.g., North Fork Bancorporation, Inc.*, 86 *Federal Reserve Bulletin* 767 (2000).

24. The Interagency Questions and Answers Regarding Community Reinvestment provide that a CRA examination is an important and often controlling factor in the consideration of an institution's CRA record. *See* 64 *Federal Register* 23,641 (1999).

25. *See, e.g.*, 12 CFR 228.21(a)(2).

26. *See* 12 U.S.C. § 1843(k).

27. *See* 12 U.S.C. § 1843(k)(4)(A) and (F); 12 CFR 225.28(b)(1), (2), and (13). Financial holding companies may engage, in the United States and abroad, in travel agency services in connection with financial services offered by the financial holding company or others (12 U.S.C. § 1843(k)(4)(G); 12 CFR 225.86(b)(2)).

28. *See* 12 U.S.C. § 1843(j)(2)(A).

Thrift remain well capitalized and well managed and each institution has a rating of at least "satisfactory" at its most recent performance evaluation under the CRA.

Section 4 of the BHC Act by its terms also provides any company that becomes a bank holding company two years within which to conform its existing nonbanking investments and activities to the section's requirements, with the possibility of three one-year extensions.[29] Applicants must conform to the BHC Act any impermissible nonfinancial activities and investments that they currently conduct or hold, directly or indirectly, within the time requirements of the act.

AMEX also has provided notice of its proposal to retain its foreign bank subsidiaries under section 4(c)(13) of the BHC Act. Based on the record, the Board has no objection to the retention of such subsidiaries.

CONCLUSION

Based on the foregoing and all the facts of record, the Board has determined that the applications under section 3 and the notices under section 4 of the BHC Act should be, and hereby are, approved. In reaching its conclusion, the Board has considered all the facts of record in light of the factors that the Board is required to consider under the BHC Act. The Board's approval is specifically conditioned on compliance by Applicants with the conditions imposed in this order and all the commitments made to the Board in connection with the applications and notices. The Board's approval of the nonbanking aspects of the proposal also is subject to all the conditions set forth in Regulation Y, including those in sections 225.7 and 225.25(c),[30] and to the Board's authority to require such modification or termination of the activities of a bank holding company or any of its subsidiaries as the Board finds necessary to ensure compliance with, and to prevent evasion of, the provisions of the BHC Act and the Board's regulations and orders issued thereunder. These commitments and conditions are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

The proposal does not involve the acquisition, merger, or consolidation of a bank. On this basis and after consultation with the DOJ, the Board has determined that the post-consummation period in section 11 of the BHC Act does not apply to consummation of the conversion of AMEX Bank.[31] Accordingly, the transaction may be consummated immediately but not later than three months after the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of New York, acting pursuant to delegated authority.

By order of the Board of Governors, effective November 10, 2008.

29. *See* 12 U.S.C. § 1843(a)(2).

30. 12 CFR 225.7 and 225.25(c).

31. 12 U.S.C. § 1849(b)(1).

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Kroszner, and Duke.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

Caja de Ahorros y Monte de Piedad de Madrid
Madrid, Spain

Caja Madrid Cibeles S.A.
Madrid, Spain

CM Florida Holdings, Inc.
Coral Gables, Florida

Order Approving the Acquisition of a Bank Holding Company

Caja de Ahorros y Monte de Piedad de Madrid ("Caja Madrid"), Madrid, Spain, a foreign banking organization subject to the Bank Holding Company Act ("BHC Act"),[1] and its subsidiary holding companies, Caja Madrid Cibeles S.A. ("CMC"), also of Madrid, and CM Florida Holdings, Inc. ("CM Florida"), Coral Gables, Florida (collectively, "Applicants"), have requested the Board's approval under section 3 of the BHC Act[2] to acquire 83 percent of the voting securities of City National Bancshares, Inc. ("CNB") and thereby acquire control of its subsidiary bank, City National Bank of Florida ("CN Bank"), both of Miami, Florida. Caja Madrid is treated as a financial holding company within the meaning of the BHC Act. CMC and CM Florida (jointly, "FHC electors") have also filed with the Board elections to become financial holding companies on consummation of the proposal pursuant to section 4(k) and (*l*) of the BHC Act and section 225.82 of the Board's Regulation Y.[3]

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (73 *Federal Register* 30,942 (2008)). The time for filing comments has expired, and the Board has considered the proposal and all comments received in light of the factors set forth in the BHC Act.

1. Caja Madrid operates an agency in the United States and is, therefore, subject to the BHC Act (12 U.S.C. § 3106(a)).

2. 12 U.S.C. § 1842.

3. *See* 12 U.S.C. § 1843(k) and (*l*); 12 CFR 225.82. FHC electors have certified that CN Bank is well capitalized and well managed and have provided all the information required under Regulation Y. Based on all the facts of record, the Board has determined that these elections to become financial holding companies will become effective on consummation of the proposal if, on that date, CN Bank remains well capitalized and well managed and has a rating of at least "satisfactory" at its most recent performance evaluation under the Community Reinvestment Act ("CRA") (12 U.S.C. § 2901 et seq.)

Caja Madrid, with total consolidated assets equivalent to $269 billion, is the fourth largest depository organization in Spain.[4] Caja Madrid operates an agency in Miami.

CNB has total consolidated assets of approximately $2.8 billion, and CN Bank operates only in Florida. CNB is the 21st largest depository organization in Florida, controlling deposits of $2.1 billion.[5]

Competitive Considerations

The BHC Act prohibits the Board from approving a proposal that would result in a monopoly or would be in furtherance of any attempt to monopolize the business of banking in any relevant banking market. The BHC Act also prohibits the Board from approving a bank acquisition that would substantially lessen competition in any relevant banking market, unless the anticompetitive effects of the proposal are clearly outweighed in the public interest by its probable effect in meeting the convenience and needs of the community to be served.[6]

Caja Madrid does not control a U.S. depository institution, and the proposal would not result in an expansion of CNB's operations. Based on all the facts of record, the Board concludes that consummation of the proposal would have no significantly adverse effect on competition or on the concentration of resources in any relevant banking market. Accordingly, the Board has determined that competitive considerations are consistent with approval.

Financial, Managerial, and Supervisory Considerations

Section 3 of the BHC Act requires the Board to consider the financial and managerial resources and future prospects of the companies and depository institutions involved in the proposal and certain other supervisory factors. The Board has considered these factors carefully in light of all the facts of record, including confidential supervisory and examination information from the various U.S. banking supervisors of the institutions involved, and publicly reported and other financial information, including information provided by Applicants. The Board also has consulted with the Bank of Spain, the agency with primary responsibility for the supervision and regulation of Spanish banks, including Caja Madrid.

In evaluating the financial factors in proposals involving the formation of bank holding companies, the Board reviews the financial condition of the applicant and the target depository institution. The Board also evaluates the financial position of the pro forma organization, including its capital position, asset quality, and earnings prospects, and the impact of the proposed funding of the transaction.

The Board has carefully considered the financial resources of the organizations involved in the proposal. The capital levels of Caja Madrid continue to exceed the minimum levels that would be required under the Basel Capital Accord and are considered to be equivalent to the capital levels that would be required of a U.S. banking organization. In addition, CNB and CN Bank are well capitalized and would remain so on consummation. Based on its review of the record, the Board finds that Applicants have sufficient financial resources to effect the proposal. The proposed transaction is structured as a cash purchase of shares. Applicants will use existing resources to fund the purchase.

The Board also has considered the managerial resources of the organizations involved. The Board has reviewed the examination records of Applicants, CNB, and CNB's subsidiary depository institution, including assessments of their management, risk-management systems, and operations. In addition, the Board has considered its supervisory experiences and those of other relevant banking supervisory agencies, including the Office of the Comptroller of the Currency ("OCC"), with the organizations and their records of compliance with applicable banking law and with anti-money laundering laws. Applicants and CNB are considered to be well managed. The Board also has considered Applicants' plans for implementing the proposal, including the proposed management after consummation.

Based on all the facts of record, the Board has concluded that considerations relating to the financial and managerial resources and future prospects of the organizations involved in the proposal are consistent with approval, as are the other supervisory factors.[7]

Section 3 of the BHC Act also provides that the Board may not approve an application involving a foreign bank unless the bank is subject to comprehensive supervision or regulation on a consolidated basis by the appropriate authorities in the bank's home country.[8] As noted, the Bank

4. Spanish asset and ranking data are as of June 30, 2008, and are based on the exchange rate as of that date.

5. Statewide deposit and ranking data are as of June 30, 2007, and reflect merger activity through October 10, 2008.

6. 12 U.S.C. § 1842(c)(1).

7. Section 3 of the BHC Act also requires the Board to determine that an applicant has provided adequate assurances that it will make available to the Board such information on its operations and activities and those of its affiliates that the Board deems appropriate to determine and enforce compliance with the BHC Act (12 U.S.C. § 1842(c)(3)(A)). The Board has reviewed the restrictions on disclosure in the relevant jurisdictions in which Caja Madrid operates and has communicated with relevant government authorities concerning access to information. In addition, Caja Madrid previously has committed that, to the extent not prohibited by applicable law, it will make available to the Board such information on the operations of its affiliates that the Board deems necessary to determine and enforce compliance with the BHC Act, the International Banking Act, and other applicable federal laws. Caja Madrid also previously has committed to cooperate with the Board to obtain any waivers or exemptions that may be necessary to enable its affiliates to make such information available to the Board. In light of these commitments, the Board has concluded that Caja Madrid has provided adequate assurances of access to any appropriate information the Board may request.

8. 12 U.S.C. § 1843(c)(3)(B). As provided in Regulation Y, the Board determines whether a foreign bank is subject to consolidated home-country supervision under the standards set forth in Regulation K. *See* 12 CFR 225.13(a)(4). Regulation K provides that a foreign bank will be considered subject to comprehensive supervision or

of Spain is the primary supervisor of Spanish banks, including Caja Madrid. The Board previously has determined that Caja Madrid is subject to comprehensive supervision on a consolidated basis by its home-country supervisor.[9] Based on this finding and all the facts of record, the Board has concluded that Caja Madrid continues to be subject to comprehensive supervision on a consolidated basis by its home-country supervisor.

Convenience and Needs Considerations

In acting on a proposal under section 3 of the BHC Act, the Board is required to consider the effects of the proposal on the convenience and needs of the communities to be served and to take into account the records of the relevant insured depository institutions under the CRA.[10] The CRA requires the federal financial supervisory agencies to encourage insured depository institutions to help meet the credit needs of the local communities in which they operate, consistent with their safe and sound operation, and requires the appropriate federal financial supervisory agency to take into account a relevant depository institution's record of meeting the credit needs of its entire community, including low- and moderate-income neighborhoods, in evaluating bank expansionary proposals.[11]

The Board has considered carefully all the facts of record, including evaluations of the CRA performance records of CN Bank, data reported by CNB under the Home Mortgage Disclosure Act ("HMDA"),[12] other information provided by Applicants, confidential supervisory information, and a public comment received on the proposal. The commenter alleged, based on HMDA data reported in 2006, that CN Bank had engaged in disparate treatment of minority individuals in home mortgage lending.

A. CRA Performance Evaluations

As provided in the CRA, the Board has reviewed the convenience and needs factor in light of the evaluations by the appropriate federal supervisor of the CRA performance record of the relevant insured depository institution. An institution's most recent CRA performance evaluation is a particularly important consideration in the applications process because it represents a detailed, on-site evaluation of the institution's overall record of performance under the CRA by its appropriate federal supervisor.[13]

CN Bank received an "outstanding" rating at its most recent CRA performance evaluation by the OCC, as of April 6, 2006.[14] Applicants have represented that they do not intend to make changes to CN Bank's CRA program on consummation.

B. HMDA and Fair Lending Record

The Board has carefully considered the fair lending record and HMDA data of CN Bank in light of the public comment received on the proposal. The commenter alleged, based on HMDA data, that CN Bank denied a disproportionate percentage of loan applications from African Americans in the Metropolitan Statistical Areas ("MSAs") that include Miami and Ft. Lauderdale. The Board focused its analysis on the 2006 and 2007 HMDA data reported by CN Bank.[15]

Although the HMDA data might reflect certain disparities in the rates of loan applications, originations, and denials among members of different racial or ethnic groups in certain local areas, they provide an insufficient basis by themselves on which to conclude whether or not CN Bank is excluding or imposing higher costs on any group on a prohibited basis. The Board recognizes that HMDA data alone, even with the recent addition of pricing information, provide only limited information about the covered loans.[16] HMDA data, therefore, have limitations that make them an inadequate basis, absent other information, for concluding that an institution has engaged in illegal lending discrimination.

The Board is nevertheless concerned when HMDA data for an institution indicate disparities in lending and believes that all lending institutions are obligated to ensure that their lending practices are based on criteria that ensure not only safe and sound lending but also equal access to credit by creditworthy applicants regardless of their race or ethnicity. Because of the limitations of HMDA data, the Board has considered these data carefully and taken into account other information, including examination reports that provide on-site evaluations of compliance with fair lending laws by CN Bank. The Board also has consulted with the OCC about the fair lending compliance record of CN Bank.

---

regulation on a consolidated basis if the Board determines that the bank is supervised or regulated in such a manner that its home-country supervisor receives sufficient information on the worldwide operations of the bank, including its relationship with any affiliates, to assess the bank's overall financial condition and its compliance with laws and regulations. *See* 12 CFR 211.24(c)(1).

9. *See Caja de Ahorros y Monte de Piedad de Madrid*, 87 *Federal Reserve Bulletin* 785 (2001).

10. 12 U.S.C. § 1842 (c)(2).

11. 12 U.S.C. §2903.

12. 12 U.S.C. §2801 et seq.

13. *See Interagency Questions and Answers Regarding Community Reinvestment*, 66 *Federal Register* 36,620 and 36,639 (2001).

14. With the exception of community development loans, the evaluation period was January 1, 2002, through December 31, 2005, for the lending test. The evaluation period for community development loans, the investment test, and the service test was January 6, 2003, through April 6, 2006.

15. The Board reviewed HMDA data from the Miami and Ft. Lauderdale MSAs, as well as from CN Bank's entire CRA assessment area.

16. The data, for example, do not account for the possibility that an institution's outreach efforts may attract a larger proportion of marginally qualified applicants than other institutions attract and do not provide a basis for an independent assessment of whether an applicant who was denied credit was, in fact, creditworthy. In addition, credit history problems, excessive debt levels relative to income, and high loan amounts relative to the value of the real estate collateral (reasons most frequently cited for a credit denial or higher credit cost) are not available from HMDA data.

The record of this application, including confidential supervisory information, indicates that CN Bank has taken steps to ensure compliance with fair lending and other consumer protection laws. CN Bank's compliance program includes self-assessments, fair lending internal audits, and ongoing fair lending training for its employees. Applicants have stated that they do not intend to change CN Bank's fair lending programs.

The Board also has considered the HMDA data in light of other information, including the overall performance record of CN Bank under the CRA. These established efforts and record of performance demonstrate that CN Bank is active in helping to meet the credit needs of its entire community.

C. Conclusion on Convenience and Needs and CRA Performance

The Board has considered carefully all the facts of record, including reports of examination of the CRA record of the institution involved, information provided by Applicants, comment received on the proposal, and confidential supervisory information. The proposal will result in increased credit availability and access to a broader range of financial services for customers of CN Bank. Based on a review of the entire record, and for the reasons discussed above, the Board concludes that considerations relating to the convenience and needs factor and the CRA performance record of the relevant insured depository institution are consistent with approval of the proposal.

CONCLUSION

Based on the foregoing, and in light of all the facts of record, the Board has determined that the application should be, and hereby is, approved.[17] In reaching its conclusion, the Board has considered all the facts of record in light of the factors that it is required to consider under the BHC Act and other applicable statutes. The Board's approval is specifically conditioned on compliance by Applicants with the conditions in this order and all the commitments made to the Board in connection with the proposal. For purposes of this transaction, these commitments and conditions are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

The proposal may not be consummated before the 15th calendar day after the effective date of this order, or later than three months after the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of Atlanta, acting pursuant to delegated authority.

By order of the Board of Governors, effective October 16, 2008.

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Kroszner, and Duke.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

17. The commenter requested that the Board hold a public meeting or hearing on the proposal. Section 3 of the BHC Act does not require the Board to hold a public hearing on an application unless the appropriate supervisory authority for the bank to be acquired makes a written recommendation of denial of the application. The Board has not received such a recommendation from the appropriate supervisory authorities. Under its rules, the Board also may, in its discretion, hold a public meeting or hearing on an application to acquire a bank if necessary or appropriate to clarify factual issues related to the application and to provide an opportunity for testimony (12 CFR 225.16(e), 262.25(d)). The Board has considered carefully the commenter's request in light of all the facts of record. In the Board's view, the commenter had ample opportunity to submit its views and, in fact, submitted written comments that the Board has considered carefully in acting on the proposal. The commenter's request fails to demonstrate why written comments do not present its views adequately or why a meeting or hearing otherwise would be necessary or appropriate. For these reasons, and based on all the facts of record, the Board has determined that a public meeting or hearing is not required or warranted in this case. Accordingly, the request for a public meeting or hearing on the proposal is denied.

CIT Group Inc.
New York, New York

Order Approving Formation of a Bank Holding Company and Notice to Engage in Certain Nonbanking Activities

CIT Group Inc. ("CIT Group") has requested the Board's approval under section 3 of the Bank Holding Company Act ("BHC Act")[1] to become a bank holding company on conversion of CIT Bank, Salt Lake City, Utah, to a state bank. CIT Bank currently operates as an industrial loan company that is exempt from the definition of "bank" under the BHC Act.[2] CIT Group has also requested the Board's approval pursuant to sections 4(c)(8) and 4(j) of the BHC Act[3] to retain nonbanking subsidiaries that engage in certain activities that are permissible for bank holding companies under the Board's Regulation Y, including credit extension, loan servicing, and related activities; leasing; financial and investment advisory services; private placement services; certain investment transactions as principal; and credit-related insurance agency and underwriting activities.[4] In addition, CIT Group has provided notice of its proposal to retain its foreign subsidiaries under section 4(c)(13) of the BHC Act.[5]

Section 3(b)(1) of the BHC Act requires that the Board provide notice of an application under section 3 to the appropriate federal or state supervisory authority for the bank to be acquired and provide the supervisor a period of time (normally 30 days) within which to submit views and

1. 12 U.S.C. § 1842.
2. 12 U.S.C. § 1841(c)(2)(H).
3. 12 U.S.C. §§ 1843(c)(8) and 1843(j).
4. *See* 12 CFR 225.28(b)(1)–(3), (6), (8), and (11).
5. 12 U.S.C. § 1843(c)(13).

recommendations on the proposal.[6] The BHC Act also authorizes the Board to reduce or eliminate this notice period under certain circumstances.[7]

In light of the unusual and exigent circumstances affecting the financial markets, and all other facts and circumstances, the Board has determined that emergency conditions exist that justify expeditious action on this proposal in accordance with the provisions of the BHC Act and the Board's regulations.[8] The Board has provided notice to the primary federal and state supervisors of CIT Bank, the Federal Deposit Insurance Corporation ("FDIC") and Commissioner of the Utah Department of Financial Institutions and to the Department of Justice ("DOJ"). Those agencies have indicated that they have no objection to the approval of the proposal. For the same reasons, and in light of the fact that this transaction represents the conversion of an existing subsidiary of the CIT Group from one form of a depository institution to another, the Board has also waived public notice of this proposal.[9]

CIT, with total consolidated assets of approximately $80.8 billion, provides a variety of commercial financing and leasing products and services.[10] CIT Bank has total consolidated assets of approximately $3.1 billion and controls deposits of approximately $2.3 billion. CIT Bank engages primarily in financing and lending activities and in taking deposits of the type that are permissible for an industrial loan company under the exception in section 2(c)(2)(H) of the BHC Act.

Factors Governing Board Review of Transaction

The BHC Act sets forth the factors that the Board must consider when reviewing the formation of a bank holding company or the acquisition of a bank. These factors are the competitive effects of the proposal in the relevant geographic markets; the financial and managerial resources and future prospects of the companies and banks involved in the proposal; the convenience and needs of the community to be served, including the records of performance under the Community Reinvestment Act[11] ("CRA") of the insured depository institutions involved in the transaction; and the availability of information needed to determine and enforce compliance with the BHC Act and other applicable federal banking laws.[12]

Competitive Considerations

Section 3 of the BHC Act prohibits the Board from approving a proposal that would result in a monopoly. The BHC Act also prohibits the Board from approving a proposed bank acquisition that would substantially lessen competition in any relevant banking market unless the anticompetitive effects of the proposal are clearly outweighed in the public interest by the probable effect of the proposal in meeting the convenience and needs of the community to be served.[13]

The proposal involves the conversion of an existing, wholly owned industrial loan company subsidiary of CIT Group into a bank with no resulting change in the ownership of CIT Group or CIT Bank. In addition, CIT Group does not propose to acquire any additional depository institution as part of this proposal. Based on all the facts of record, the Board concludes that consummation of the proposal would not result in any significantly adverse effects on competition or on the concentration of banking resources in any relevant banking market and that the competitive factors are consistent with approval of the proposal.

Financial, Managerial, and Other Supervisory Considerations

Section 3 of the BHC Act requires the Board to consider the financial and managerial resources and future prospects of the companies and banks involved in the proposal and certain other supervisory factors.[14] The Board has carefully considered these factors in light of all facts of record, including supervisory and examination information received from the relevant federal and state supervisors of the organizations involved in the proposal and other available financial information, including information provided by CIT Group. In addition, the Board has consulted with the primary federal and state supervisors of CIT Group and CIT Bank.

The Board consistently has considered capital adequacy to be an especially important aspect in analyzing financial factors. CIT Group has converted debt and raised a material amount of capital from third parties. CIT Group is adequately capitalized and as a result of its successful efforts to raise additional capital, will be well capitalized prior to consummation. In addition, CIT Bank is currently well capitalized under applicable federal guidelines, and it will remain well capitalized on a pro forma basis on consummation of the proposal. Other financial factors are consistent with approval.

In addition, the Board has carefully considered the managerial resources of CIT Group and CIT Bank in light of all the facts of record, including confidential supervisory and examination information and information provided by CIT Group. The Board has considered the supervisory experience of the relevant federal and state supervisory

6. 12 U.S.C. § 1842(b)(1); 12 CFR 225.15(b).

7. 12 U.S.C. § 1842(b)(1).

8. 12 U.S.C. § 1842(b)(1); 12 CFR 225.16(b)(3), 225.16(g)(2), and 262.3(*l*).

9. *Id.*

10. Asset data for CIT Group and asset and deposit data for CIT Bank are as of September 30, 2008.

11. 12 U.S.C. § 2901 et seq.

12. In cases involving interstate bank acquisitions by bank holding companies, the Board also must consider the concentration of deposits in the nation and relevant individual states, as well as compliance with the other provisions of section 3(d) of the BHC Act. Because the proposed transaction does not involve an interstate bank acquisition by a bank holding company, the provisions of section 3(d) of the BHC Act do not apply in this case.

13. 12 U.S.C. § 1842(c)(1).

14. 12 U.S.C. § 1842(c)(2) and (3).

agencies of CIT Group and its insured depository institution with the organization and institution and their records of compliance with applicable banking law and anti-money-laundering laws. The Board has engaged in discussions with the FDIC regarding its views on management processes and risk-management systems at both CIT Group and CIT Bank. In addition, the Board has carefully considered information from CIT Group about the organization's business strategy and the actions it is taking and proposing to take to strengthen the organization's risk-management systems, as well as its business plans for the bank. The Board also has consulted with the FDIC about these plans and actions to strengthen CIT Group's risk-management systems.

Based on all the facts of record, the Board concludes that considerations relating to the financial and managerial resources and future prospects of the organizations involved are consistent with approval, as are the other supervisory factors under the BHC Act.

Convenience and Needs and CRA Performance Considerations

In acting on a proposal under section 3 of the BHC Act, the Board must consider the effects of the proposal on the convenience and needs of the communities to be served and to take into account the records of the relevant depository institutions under the CRA.[15]

The Board has carefully considered the convenience and needs factor and the CRA performance records of CIT Bank in light of all the facts of record. As provided in the CRA, the Board evaluates the record of performance of an institution in light of examinations by the appropriate federal supervisors of the CRA performance records of the relevant institutions.[16]

CIT Bank received a "satisfactory" rating under the CRA at its most recent performance evaluation by the FDIC, as of October 28, 2002. Consistent with the CRA regulations adopted by the federal banking agencies, CIT Bank was evaluated under the community development test as a limited purpose institution.[17] CIT Group has represented that the conversion of CIT Bank to a bank for purposes of the BHC Act will enhance the ability of the bank to meet the convenience and needs of its community and customers nationwide by permitting the bank to offer a wider array of deposit products.

The Board has engaged in discussions about CIT Bank's CRA and consumer compliance performance with the FDIC, which is the primary federal supervisor for CIT Bank and examines the bank for its CRA performance. In particular, the Board has considered information collected by the FDIC since its last evaluation. In addition, the Board has reviewed information from CIT Bank about the actions it proposes to take with respect to its consumer lending activities and has consulted with the FDIC about these proposed actions. Importantly, the Board has also considered the FDIC's most current review of the CRA performance and compliance activities of the bank and the FDIC's views on this application.

Based on a review of the entire record and for the reasons discussed above, including the consultations with the FDIC, the Board has concluded that considerations relating to convenience and needs and the CRA performance record of CIT Bank are consistent with approval of the proposal.

Nonbanking Activities

As noted, CIT Group also has filed a notice under sections 4(c)(8) and 4(j) of the BHC Act to engage in certain lending, leasing, advisory, securities, investment, and insurance activities that are permissible for bank holding companies through its nonbanking subsidiaries. The Board has determined by regulation that such activities are permissible for a bank holding company under Regulation Y,[18] and CIT Group has committed to conduct these activities in accordance with the limitations set forth in Regulation Y and the Board's orders governing these activities.

To approve this notice, the Board must also determine that the performance of the proposed activities by CIT Group "can reasonably be expected to produce benefits to the public . . . that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices."[19] As part of its evaluation of these factors, the Board has considered the financial and managerial resources of CIT Group and its subsidiaries and the effect of the proposed transaction on their resources. For the reasons noted above, and based on all the facts of record, the Board has concluded that financial and managerial considerations are consistent with approval of the notice.

In addition, the Board must consider the competitive effects of a proposal to engage in nonbanking activities under the public benefits factor of section 4(j) of the BHC Act. The proposal involves the retention of CIT Group's existing nonbank subsidiaries, and CIT Group would not acquire any additional nonbank subsidiaries as part of this proposal. Accordingly, the Board concludes that consummation of the proposal would not result in any significantly adverse effects on competition in any relevant market.

CIT Group is a leading provider of factoring services in the United States and a leading lender in the Small Business Administration's 7a programs. The proposal would benefit the public by strengthening CIT Group's ability to offer its nonbanking products and services to customers nationwide.

The Board concludes that the conduct of the proposed nonbanking activities within the framework of Regula-

15. 12 U.S.C. §2903; 12 U.S.C. §1842(c)(2).

16. The Interagency Questions and Answers Regarding Community Reinvestment provide that a CRA examination is an important and often controlling factor in the consideration of an institution's CRA record. *See* 64 *Federal Register* 23,641 (1999).

17. *See, e.g.*, 12 CFR 228.21(a)(2).

18. 12 CFR 225.28(b)(1)–(3), (6), (8), and (11).

19. *See* 12 U.S.C. §1843(j)(2)(A).

tion Y and Board precedent can reasonably be expected to produce public benefits that would outweigh any likely adverse effects. Accordingly, based on all the facts of record, the Board has determined that the balance of the public benefits factor under section 4(j)(2) of the BHC Act is consistent with approval.

CIT Group engages in a small amount of activities that may not conform to the requirements of the BHC Act. Section 4 of the BHC Act by its terms also provides any company that becomes a bank holding company two years within which to conform its existing nonbanking investments and activities to the section's requirements, with the possibility of three one-year extensions.[20] CIT Group must conform any impermissible nonfinancial activities and investments that it currently conducts or holds, directly or indirectly, to the requirements of the BHC Act within the time periods provided by the act.

CIT Group also has provided notice of its proposal to retain its foreign bank subsidiaries under section 4(c)(13) of the BHC Act. Based on the record, the Board has no objection to the retention of such subsidiaries.

CONCLUSION

Based on the foregoing and all the facts of record, the Board has determined that the application under section 3 and notices under section 4 of the BHC Act should be, and hereby are, approved.[21] In reaching its conclusion, the Board has considered all the facts of record in light of the factors that the Board is required to consider under the BHC Act. The Board's approval is specifically conditioned on compliance by CIT Group with all the conditions imposed in this order and all the commitments made to the Board in connection with the application and notices. The Board's approval of the nonbanking aspects of the proposal also is subject to all the conditions set forth in Regulation Y, including those in sections 225.7 and 225.25(c),[22] and to the Board's authority to require such modification or termination of the activities of a bank holding company or any of its subsidiaries as the Board finds necessary to ensure compliance with, and to prevent evasion of, the provisions of the BHC Act and the Board's regulations and orders issued thereunder. These conditions and commitments are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

The proposal does not involve the acquisition, merger, or consolidation of a bank. On this basis and after consultation with the DOJ, the Board has determined that the post-consummation period in section 11 of the BHC Act does not apply to consummation of the conversion of CIT Bank.[23] Accordingly, the transaction may be consummated immediately but not later than three months after the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of New York, acting pursuant to delegated authority.

By order of the Board of Governors, effective December 22, 2008.

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Kroszner, and Duke.

ROBERT deV. FRIERSON
Deputy Secretary of the Board

20. *See* 12 U.S.C. § 1843(a)(2).

21. A commenter requested that the Board hold a public meeting or hearing on the proposal. Section 3(b) of the BHC Act does not require the Board to hold a public hearing on an application unless the appropriate supervisory authorities for the bank to be acquired make a timely written recommendation of denial of the application. The Board has not received such a recommendation from the appropriate supervisory authorities. The Board's regulations provide for a hearing under section 4 of the BHC Act if there are disputed issues of material fact that cannot be resolved in some other manner (12 CFR 225.25(a)(2)). Under its regulations, the Board also may, in its discretion, hold a public meeting or hearing on an application to acquire a bank if a meeting or hearing is necessary or appropriate to clarify factual issues related to the application and to provide an opportunity for testimony (12 CFR 225.16(e)). The Board has considered carefully the commenter's request in light of all the facts of record. The request fails to identify disputed issues of fact that are material to the Board's decision that would be clarified by a public meeting or hearing. For these reasons, and based on all the facts of record, the Board has determined that a public meeting or hearing is not required or warranted in this case. Accordingly, the request for a public meeting or hearing on the proposal is denied.

22. 12 CFR 225.7 and 225.25(c).

23. 12 U.S.C. § 1849(b)(1).

GMAC LLC

IB Finance Holding Company, LLC Detroit, Michigan

Order Approving Formation of Bank Holding Companies and Notice to Engage in Certain Nonbanking Activities

GMAC LLC and IB Finance Holding Company, LLC ("IBFHC") (collectively, "GMAC" or "Applicants") have requested the Board's approval under section 3 of the Bank Holding Company Act ("BHC Act")[1] to become bank holding companies on conversion of GMAC Bank, Midvale, Utah, to a commercial bank.[2] GMAC Bank currently operates as an industrial loan company and is exempt from the definition of "bank" under the BHC Act.[3] GMAC has also requested the Board's approval pursuant to sections 4(c)(8) and 4(j) of the BHC Act[4] to retain its nonbanking subsidiaries that engage in certain activities that are permissible for bank holding companies under the Board's Regulation Y, including certain credit extension,

1. 12 U.S.C. § 1842.

2. GMAC Bank is a direct subsidiary of IBFHC and an indirect subsidiary of GMAC LLC.

3. 12 U.S.C. § 1841(c)(2)(H).

4. 12 U.S.C. §§ 1843(c)(8) and (j).

loan servicing, leasing, and related activities.[5] GMAC has also provided notice to retain its foreign subsidiaries under section 4(c)(13) of the BHC Act.[6]

Section 3(b)(1) of the BHC Act requires that the Board provide notice of an application under section 3 to the appropriate federal or state supervisory authority for the banks to be acquired and provide the supervisor with a period of time (normally 30 days) within which to submit views and recommendations on the proposal.[7] The BHC Act also authorizes the Board to reduce or eliminate these notice periods under certain circumstances.[8]

In light of the unusual and exigent circumstances affecting the financial markets, and all other facts and circumstances, the Board has determined that emergency conditions exist that justify expeditious action on this proposal in accordance with the provisions of the BHC Act and the Board's regulations.[9] The Board has provided notice to the primary federal and state supervisors of GMAC Bank, the Federal Deposit Insurance Corporation ("FDIC") and the Commissioner of the Utah Department of Financial Institutions ("UDFI"), and to the Department of Justice ("DOJ"). Those agencies have indicated that they have no objection to approval of the proposal. For the same reasons, and in light of the fact that this transaction involves the conversion of an existing subsidiary of Applicants from one form of a depository institution to another and the retention of Applicants' existing nonbanking subsidiaries, the Board has also waived public notice of this proposal.[10]

GMAC, with total consolidated assets of approximately $211.3 billion, engages in automotive financing, commercial financing, mortgage financing, insurance, and other activities both in the United States and abroad.[11] GMAC Bank has total consolidated assets of approximately $33 billion and controls deposits of approximately $17 billion. GMAC Bank engages primarily in lending and other financing activities and taking deposits of the type that are permissible for an industrial loan company under the exception in section 2(c)(2)(H) of the BHC Act.

Factors Governing Board Review of the Proposed Bank Holding Companies

The BHC Act sets forth the factors the Board must consider when reviewing the formation of a bank holding company or the acquisition of a bank. These factors are the competitive effects of the proposal in the relevant geographic markets; the financial and managerial resources and future prospects of the companies and banks involved in the proposal; the convenience and needs of the community to be served, including the records of performance under the Community Reinvestment Act ("CRA")[12] of the insured depository institutions involved in the transaction; and the availability of information needed to determine and enforce compliance with the BHC Act and other applicable federal banking laws.[13]

In addition, this application presents a number of unique issues. In particular, GMAC has a long historical relationship with General Motors Corporation ("GM"). Since founding GMAC, GM has held a significant ownership position in GMAC, and GMAC has been the primary source of financing to customers and dealerships seeking to purchase or lease GM vehicles. GMAC proposes to continue to provide funding to customers and dealerships to enable them to acquire and lease vehicles from GM, though as noted below, GMAC proposes to diversify its activities and has modified in significant ways its agreement with GM to provide customer and dealership financing. Although GM owns a significant portion of GMAC, a group of entities controlled by or affiliated with a private investment firm, Cerberus Capital Management, L.P. ("Cerberus"), currently owns a majority of the shares of GMAC. Neither GM nor Cerberus is able to comply with the nonbanking activities restrictions in the BHC Act. Consequently, neither may retain a controlling interest in GMAC, within the meaning of the BHC Act, if this application is approved.

In reviewing the factors under the BHC Act, including the issues noted above, the Board has considered all the facts and circumstances. This review has included the record regarding the financial and managerial resources of GMAC and GMAC Bank, their future prospects, and the effects of this proposal on the convenience and needs of the communities served by these entities. Among other things, the Board has considered the business plans of GMAC's management to diversify the activities of GMAC and its plans for GMAC Bank; the successful efforts of management of GMAC to raise capital; the experience of senior management of GMAC in other organizations that are regulated as bank holding companies; the steps taken by the management of GMAC and GMAC Bank to address concerns raised by the bank's supervisors and to prepare to operate within the framework established by the BHC Act; and the public benefits that would accrue from approval of this proposal, including those resulting from the operation of GMAC as a regulated entity. The Board has also considered the steps taken by the Department of the Treasury to provide assistance to GM and thereby help ensure the viability of a major business partner of GMAC and GMAC Bank. In addition, the Board has had extensive consultations with the FDIC, the primary federal supervisor

5. 12 CFR 225.28(b)(1)–(3).
6. 12 U.S.C. § 1843(c)(13).
7. 12 U.S.C. § 1842(b)(1); 12 CFR 225.15(b).
8. 12 U.S.C. § 1842(b)(1).
9. 12 U.S.C. § 1842(b)(1); 12 CFR 225.16(b)(3), 225.16(g)(2), and 262.3(*l*).
10. 12 CFR 225.16(b)(3), 225.16(g)(2), and 262.3(*l*).
11. Asset and deposit data for GMAC and GMAC Bank are as of September 30, 2008.

12. 12 U.S.C. § 2901 et seq.
13. In cases involving interstate bank acquisitions by bank holding companies, the Board also must consider the concentration of deposits in the nation and relevant individual states, as well as compliance with the other provisions of section 3(d) of the BHC Act. Because the proposed transaction does not involve an interstate bank acquisition by a bank holding company, the provisions of section 3(d) of the BHC Act do not apply in this case.

of GMAC Bank, and has consulted with the UDFI, the chartering authority and state supervisor for GMAC Bank.

The Board has also carefully considered the plans and commitments made by GM and Cerberus promptly to conform their respective ownership interests in GMAC to the requirements of the BHC Act. To address concerns that GM could control GMAC and GMAC Bank for purposes of the BHC Act, GM has committed to the Board that before consummation of the proposal, GM will reduce its ownership interest in GMAC to less than 10 percent of the voting and total equity interest of GMAC. GM's remaining equity interest in GMAC will be transferred to a trust that has a trustee acceptable to the Board and the Department of the Treasury, who will be entirely independent of GM and have sole discretion to vote and dispose of the GMAC equity interests.[14] The trustee must dispose of the equity interests held in the trust within three years of the trust's creation. In addition, GM has made commitments to the Board that are similar to those the Board previously has relied on to ensure that a company could not exercise a controlling influence over a bank or bank holding company.[15] Until the trust fully divests the shares, the limitations of sections 23A and 23B of the Federal Reserve Act will apply to GM and GMAC Bank as if they were affiliates.[16] GMAC has committed to amend its existing agreements with GM to remove any restrictions on GMAC's ability to engage in transactions with unrelated third parties and to ensure that GMAC has complete discretion to set the terms of its financing arrangements.

To ensure that Cerberus's holdings in GMAC are consistent with the Board's precedent on noncontrolling investments in banks and bank holding companies, each Cerberus fund that holds interests in GMAC will distribute its equity interests in the company to its respective investors. As a result of this distribution, the aggregate direct and indirect investments controlled by Cerberus and its related parties would not exceed 14.9 percent of the voting shares or 33 percent of the total equity of GMAC LLC. The investors that receive shares in the distribution from the Cerberus funds are each sophisticated investors and are independent of Cerberus and independent of each other. No investor would, after this distribution, own, hold, or control 5 percent or more of the voting shares or 7.5 percent of the total equity of GMAC LLC. Cerberus has made a number of commitments previously found by the Board to be helpful in limiting the ability of an investor to exercise a controlling interest over a banking organization. In addition, Cerberus employees and consultants would cease providing services to, or otherwise functioning as dual employees of, GMAC, and neither Cerberus nor any affiliated entity will have any advisory relationships with GMAC or any investor regarding the vote or sale of shares or the management or policies of GMAC or GMAC Bank.[17]

Based on the entire record, and for the reasons explained more fully below, the Board has determined that the proposal meets the requirements of the BHC Act and, consequently, has approved the proposal.

Financial, Managerial, and Other Supervisory Considerations

Section 3 of the BHC Act requires the Board to consider the financial and managerial resources and future prospects of the companies and banks involved in the proposal and certain other supervisory factors.[18] The Board also reviews the financial and managerial resources of the organization involved in the proposal under section 4 of the BHC Act. The Board has carefully considered these factors in light of all the facts of record, including supervisory and examination information received from the relevant federal and state supervisors of the organizations involved in the proposal and other available financial information, including information provided by Applicants. In addition, the Board has consulted with the primary federal and state supervisors of GMAC Bank.

In analyzing financial factors, the Board consistently has considered capital adequacy to be an especially important aspect. The Board has considered GMAC's successful efforts to raise additional capital and that, as a result, GMAC will be well capitalized on completion of the proposal, as well as commitments GMAC has made to maintain its capital at a high level for a specified time period. In addition, GMAC Bank is currently well capitalized under applicable federal guidelines. GMAC Bank also would be well capitalized on a pro forma basis on consummation of the proposal. The Board has consulted with the FDIC, the primary federal supervisor of GMAC Bank, about the adequacy of the bank's capital for its current and pro forma operations and the future prospects of GMAC Bank in light of its business plans. Moreover, as noted above, the Board has considered that the Department of the Treasury has taken a number of steps including providing credit to GM, which for some time will continue to be a major business partner of GMAC, in order to help stabilize GM and improve its viability.

In addition, the Board has considered carefully the managerial resources of Applicants in light of all the facts of record, including confidential supervisory and examination information and information provided by the Applicants. The Board has considered the supervisory experience of the relevant federal and state supervisory agencies with

14. The trust agreement and trustee must be acceptable to the Board.

15. In rare and unusual situations when warranted by the public interest, the Board previously has used the device of a trust as an interim measure to facilitate the sales of shares to conform with the requirements of the BHC Act. *See* Board Letter to Stuart M. Plevin, Esq. dated June 26, 2000.

16. 12 U.S.C. §§371c and 371c-1.

17. A commenter opposed approval of the application because, in the commenter's view, approval would breach the separation between banking and commerce in the BHC Act. As discussed above, GM and Cerberus have restructured their respective ownership interests to be consistent with the BHC Act limitations on banking and commerce and with the Board's policies and precedent on noncontrolling investments in banks and bank holding companies.

18. 12 U.S.C. § 1842(c)(2) and (3).

Applicants and GMAC Bank and their records of compliance with applicable banking law and anti-money-laundering laws. The Board also has considered the experience of management of GMAC, both at GMAC and more broadly in managing a regulated entity subject to the requirements applicable to bank holding companies. The Board has consulted the FDIC regarding its views on management processes and risk-management systems at both GMAC and GMAC Bank. In addition, the Board has carefully considered information from GMAC about the organization's business strategy, as well as its business plans for the holding company and bank, and the actions it is taking and proposing to take to strengthen the organization's risk-management infrastructure and to diversify its customer base and sources of income. The Board also has consulted with the FDIC about these plans and actions to strengthen GMAC and GMAC Bank's risk-management infrastructure and diversify its business operations.

The Board also has considered carefully the future prospects of GMAC and GMAC Bank, including their business plans, in light of all the facts and circumstances, and the actions they already have taken and plan to take to strengthen their financial condition and management systems and to diversify their business operations. As noted, the Board also has considered the actions taken by the Department of the Treasury to provide financial assistance to stabilize GM, which would benefit GMAC and GMAC Bank while they remain an important provider of financing for vehicles manufactured by GM.

Based on all the facts of record, the Board concludes that considerations relating to the financial and managerial resources and future prospects of the organizations involved are consistent with approval, as are the other supervisory factors under the BHC Act.

Competitive Considerations

Section 3 of the BHC Act prohibits the Board from approving a proposal that would result in a monopoly. The BHC Act also prohibits the Board from approving a proposed bank acquisition that would substantially lessen competition in any relevant banking market unless the anticompetitive effects of the proposal are clearly outweighed in the public interest by the probable effect of the proposal in meeting the convenience and needs of the community to be served.[19]

The proposal involves the conversion of an existing, wholly owned industrial loan company subsidiary of Applicants into a bank with no resulting change in the ownership of GMAC Bank. Applicants do not propose to acquire any additional depository institution as part of this proposal. Based on all the facts of record, the Board concludes that consummation of the proposal would not result in any significantly adverse effects on competition or on the concentration of banking resources in any relevant banking market and that the competitive factors are consistent with approval of the proposal.

Convenience and Needs and CRA Performance Considerations

In acting on a proposal under section 3 of the BHC Act, the Board must consider the effects of the proposal on the convenience and needs of the communities to be served and take into account the records of the relevant depository institutions under the CRA.[20]

The Board has carefully considered the convenience and needs factor and the CRA performance records of GMAC Bank in light of all the facts of record. As provided in the CRA, the Board evaluates the record of performance of an institution in light of examinations by the appropriate federal supervisors of the CRA performance records of the relevant institutions.[21]

GMAC Bank received an "outstanding" rating under the CRA at its most recent performance evaluation by the FDIC, as of February 27, 2006 (the "FDIC Examination"). Consistent with the CRA regulations adopted by the federal banking agencies, GMAC Bank was evaluated under the community development test as a limited purpose institution.[22] Applicants have represented that the conversion of GMAC Bank to a bank for purposes of the BHC Act will enhance the ability of the bank to meet the convenience and needs of its communities by permitting the bank to offer a wider array of deposit products and strengthening the bank's ability to continue to serve as a significant source of automobile financing, including for vehicles from companies other than GM.

The Board has engaged in extensive consultation with the FDIC about GMAC Bank's CRA and consumer compliance performance since its last evaluation. In addition, the Board has received information from GMAC Bank about the actions it will take with respect to its consumer lending activities on conversion of the industrial loan company to a bank and has consulted with the FDIC about these proposed actions.

Based on a review of the entire record, and for the reasons discussed above, the Board has concluded that considerations relating to convenience and needs considerations and the CRA performance record of GMAC Bank are consistent with approval of the proposal.

Nonbanking Activities

As noted, GMAC also has filed a notice under sections 4(c)(8) and 4(j) of the BHC Act to engage in certain credit extension and servicing, leasing, and related activities that are permissible for a bank holding company

19. 12 U.S.C. § 1842(c)(1).

20. 12 U.S.C. § 2903; 12 U.S.C. § 1842(c)(2).

21. The Interagency Questions and Answers Regarding Community Reinvestment provide that a CRA examination is an important and often controlling factor in the consideration of an institution's CRA record. *See* 64 *Federal Register* 23,641 (1999).

22. *See, e.g.*, 12 CFR 228.21(a)(2).

directly and through its nonbanking subsidiaries.[23] GMAC has committed to conduct these activities in accordance with the limitations set forth in Regulation Y and the Board's orders governing these activities.

To approve this notice, the Board must also determine that the performance of the proposed activities by GMAC "can reasonably be expected to produce benefits to the public . . . that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices."[24] As part of its evaluation of these factors, the Board has considered the financial and managerial resources of GMAC and its subsidiaries and the effect of the proposed transaction on their resources. For the reasons noted above, and based on all the facts of record, the Board has concluded that financial and managerial considerations are consistent with approval of the notice.

In addition, the Board must consider the competitive effects of a proposal to engage in nonbanking activities under the public benefits factor of section 4(j) of the BHC Act. The proposal involves the retention of GMAC's existing nonbanking subsidiaries, and GMAC would not acquire any additional nonbanking subsidiaries as part of this proposal. Accordingly, the Board concludes that consummation of the proposal would not result in any significantly adverse effects on competition in any relevant market.

GMAC is one of the nation's largest automotive finance companies. The proposal would benefit the public by strengthening GMAC's ability to fund the purchases of vehicles manufactured by GM and other companies and by helping to normalize the credit markets for such purchases.

The Board concludes that the conduct of the proposed nonbanking activities within the framework of Regulation Y and Board precedent can reasonably be expected to produce public benefits that would outweigh any likely adverse effects. Accordingly, based on all the facts of record, the Board has determined that the balance of the public benefits factor under section 4(j)(2) of the BHC Act is consistent with approval.

GMAC engages in a small amount of activities that may not conform to the requirements of the BHC Act. Section 4 of the BHC Act by its terms also provides any company that becomes a bank holding company two years within which to conform its existing nonbanking investments and activities to the section's requirements, with the possibility of three one-year extensions.[25] GMAC must conform to the BHC Act any impermissible nonfinancial activities and investments that they currently conduct or hold, directly or indirectly, within the time requirements of the act.

GMAC also has provided notice of its proposal to retain its foreign subsidiaries under section 4(c)(13) of the BHC Act. Based on the record, the Board has no objection to the retention of such subsidiaries.

23. 12 CFR 225.28(b)(1)–(3).

24. *See* 12 U.S.C. § 1843(j)(2)(A).

25. *See* 12 U.S.C. § 1843(a)(2).

CONCLUSION

Based on the foregoing, the Board has determined that the application under section 3 and the notices under section 4 of the BHC Act should be, and hereby are, approved.[26] In reaching its conclusion, the Board has considered all the facts of record in light of the factors that the Board is required to consider under the BHC Act. The Board's approval is specifically conditioned on compliance by Applicants and GMAC's shareholders with the conditions imposed in this order and all the commitments they made to the Board in connection with the application and notices. The Board's approval of the nonbanking aspects of the proposal also is subject to all the conditions set forth in Regulation Y, including those in sections 225.7 and 225.25(c),[27] and to the Board's authority to require such modification or termination of the activities of a bank holding company or any of its subsidiaries as the Board finds necessary to ensure compliance with, and to prevent evasion of, the provisions of the BHC Act and the Board's regulations and orders issued thereunder. These commitments and conditions are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

The proposal does not involve the acquisition, merger, or consolidation of a bank. On this basis and after consultation with the DOJ, the Board has determined that the post-consummation period in section 11 of the BHC Act does not apply to the consummation of the conversion of GMAC Bank.[28] Accordingly, the transaction may be consummated immediately but may not be consummated later than three months after the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of Richmond, acting pursuant to delegated authority.

By order of the Board of Governors, effective December 24, 2008.

26. A commenter requested that the Board hold a public meeting or hearing on the proposal. Section 3(b) of the BHC Act does not require the Board to hold a public hearing on an application unless the appropriate supervisory authority for the bank to be acquired makes a timely written recommendation of denial of the application. The Board has not received such a recommendation from the appropriate supervisory authorities. The Board's regulations provide for a hearing under section 4 of the BHC Act if there are disputed issues of material fact that cannot be resolved in some other manner (12 CFR 225.25(a)(2)). Under its regulations, the Board also may, in its discretion, hold a public meeting or hearing on an application to acquire a bank if a meeting or hearing is necessary or appropriate to clarify factual issues related to the application and to provide an opportunity for testimony (12 CFR 225.16(e)). The Board has considered carefully the commenter's request in light of all the facts of record. The request fails to identify disputed issues of fact that are material to the Board's decision that would be clarified by a public meeting or hearing. For these reasons, and based on all the facts of record, the Board has determined that a public meeting or hearing is not required or warranted in this case. Accordingly, the request for a public meeting or hearing on the proposal is denied.

27. 12 CFR 225.7 and 225.25(c).

28. 12 U.S.C. § 1849(b)(1).

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, and Kroszner. Voting against this action: Governor Duke.

JENNIFER J. JOHNSON
Secretary of the Board

Mitsubishi UFJ Financial Group, Inc. Tokyo, Japan

Order Approving Acquisition of Interests in a Bank Holding Company and Certain Nonbanking Subsidiaries

Mitsubishi UFJ Financial Group, Inc. ("MUFG"), a foreign banking organization that is a financial holding company[1] for purposes of the Bank Holding Company Act ("BHC Act"), has requested the Board's approval under section 3 of the BHC Act[2] to acquire up to 24.9 percent of the voting shares of Morgan Stanley ("Morgan"), New York, New York, and thereby indirectly acquire an interest in Morgan's subsidiary bank, Morgan Stanley Bank, National Association, Salt Lake City, Utah. In addition, MUFG has requested the Board's approval under sections 4(c)(8) and (4)(j) of the BHC Act to acquire an indirect interest in Morgan's subsidiary savings association, Morgan Stanley Trust, Jersey City, New Jersey, and Morgan's subsidiary trust company, Morgan Stanley Trust National Association, Wilmington, Delaware.[3] MUFG also has provided notice of its proposal to acquire an indirect interest in the foreign bank subsidiaries of Morgan under section 4(c)(13) of the BHC Act.[4]

Section 3(b)(1) of the BHC Act requires that the Board provide notice of an application under section 3 to the appropriate federal or state supervisory authority for the banks to be acquired and provide the supervisor a period of time (normally 30 days) within which to submit views and recommendations on the proposal.[5] Section 4(i)(4) of the BHC Act imposes a similar requirement with respect to a notice to acquire a savings association.[6] In light of the unusual and exigent circumstances affecting the financial markets and all other facts and circumstances, and in accordance with the provisions of the BHC Act and the Board's regulations, the Board has shortened to 10 days the notice and comment period to the primary regulators of the banks and savings associations involved in, and waived public notice of, this proposal.[7] The Board has contacted the primary federal supervisors of the insured depository institutions and the Department of Justice; those agencies have indicated they have no objection to consummation of the proposal.

Based on all the facts of record, the Board has concluded that all the factors it must consider in acting on the application and notices are consistent with approval. The application and notices are hereby approved by the Board for the reasons set forth in the Board's Statement, which will be released at a later date.

The Board's approval is specifically conditioned on compliance by MUFG with all the commitments made in connection with the proposal and on the receipt, in a form acceptable to the Board, of commitments by MUFG that it will not exercise a controlling influence over Morgan. This approval also is subject to all the conditions set forth in Regulation Y and to the Board's authority to require such modification or termination of the nonbanking activities of a bank holding company or any of its subsidiaries as the Board finds necessary to ensure compliance with, and to prevent evasion of, the provisions of the BHC Act and the Board's regulations and orders issued thereunder. These commitments and conditions are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

The acquisition may not be consummated before the fifth calendar day after the effective date of this order, or later than three months after the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of San Francisco, acting pursuant to delegated authority.

By order of the Board of Governors, effective October 6, 2008.

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Kroszner, and Duke.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

1. The elections by MUFG, The Bank of Tokyo-Mitsubishi UFJ, Ltd., and Mitsubishi UFJ Trust and Banking Corporation, all of Tokyo, and UnionBanCal Corporation, San Francisco, California, to become financial holding companies pursuant to sections 4(k) and (*l*) of the BHC Act and sections 225.82(b)(1) and 225.91(b)(1) of Regulation Y became effective as of October 6, 2008. *See* Board letter to Donald J. Toumey, Esq., dated October 6, 2008.

2. 12 U.S.C. § 1842. *See* 12 CFR 225.15.

3. 12 U.S.C § 1843(c)(8) and (j). *See* 12 CFR 225.24. The Board previously has determined by regulation that the operation of a savings association and a trust company by a bank holding company is closely related to banking for purposes of section 4(c)(8) of the BHC Act (12 CFR 225.28(b)(4)(ii) and (5)).

4. 12 U.S.C. § 1843(c)(13).

5. 12 U.S.C. § 1842(b)(1); 12 CFR 225.15(b).

6. 12 U.S.C. § 1843(i)(4).

7. 12 U.S.C. §§ 1842(b)(1) and 1843(i)(4); 12 CFR 225.16(b)(3), 225.16(g)(2), 225.25(d), and 262.3(l).

Mitsubishi UFJ Financial Group, Inc. Tokyo, Japan

Statement by the Board of Governors of the Federal Reserve System Regarding the Application and Notices by Mitsubishi UFJ Financial Group, Inc., to Acquire Interests in a Bank Holding Company and Certain Nonbanking Subsidiaries

By Order dated October 6, 2008, the Board approved the application of Mitsubishi UFJ Financial Group, Inc. ("MUFG"), a foreign banking organization that is a financial holding company[1] for purposes of the Bank Holding Company Act ("BHC Act"), under section 3 of the BHC Act[2] to acquire up to 24.9 percent of the voting shares of Morgan Stanley ("Morgan"), New York, New York, and thereby indirectly acquire an interest in Morgan's subsidiary bank, Morgan Stanley Bank, National Association ("MS Bank"), Salt Lake City, Utah.[3] In addition, the Board approved MUFG's notice under sections 4(c)(8) and (4)(j) of the BHC Act to acquire an indirect interest in Morgan's subsidiary savings association, Morgan Stanley Trust ("MST"), Jersey City, New Jersey, and Morgan's subsidiary trust company, Morgan Stanley Trust National Association ("MSTNA"), Wilmington, Delaware.[4] The Board also approved MUFG's notice of its proposal to acquire an indirect interest in the foreign bank subsidiaries of Morgan under section 4(c)(13) of the BHC Act.[5] The Board hereby issues this Statement regarding its approval Order.

In light of the unusual and exigent circumstances affecting the financial markets, and all other facts and circumstances, the Board has determined that emergency conditions exist that justify expeditious action on this proposal.[6] The Board has provided notice to the Office of the Comptroller of the Currency ("OCC") and the Office of Thrift Supervision ("OTS"), the primary federal supervisors of MS Bank and MST, respectively, and to the Department of Justice ("DOJ"); those agencies have indicated that they have no objection to the consummation of the proposal.[7] For the same reasons, and in light of the fact that this transaction represents a minority, noncontrolling investment in Morgan and its subsidiary depository institutions, the Board has waived public notice of the proposal.[8]

MUFG, with total consolidated assets of approximately $1.7 trillion as of December 31, 2007, is the largest banking organization in Japan. MUFG owns The Bank of Tokyo-Mitsubishi UFJ, Ltd. ("BTMU") and Mitsubishi UFJ Trust and Banking Corporation ("MUTB"), both of Tokyo. BTMU operates branches, agencies, and representative offices in several states.[9] It also controls Bank of Tokyo-Mitsubishi UFJ Trust Company ("BTMUT"), New York, New York, and UnionBanCal Corporation and its subsidiary bank, Union Bank of California, N.A. ("Union Bank"), both of San Francisco. MUTB operates a branch in New York, New York, and controls Mitsubishi UFJ Trust & Banking Corporation (U.S.A.) ("MUTB USA"), New York, New York. MUFG controls deposits of approximately $42 billion, which represent less than 1 percent of the total amount of deposits of insured depository institutions in the United States.[10]

Morgan, with total consolidated assets of approximately $1.0 trillion, engages in investment banking, securities underwriting and dealing, asset management, trading, and other activities both in and outside the United States.[11] Its principal subsidiaries include Morgan Stanley & Co., Incorporated, New York, New York, a broker-dealer registered with the Securities and Exchange Commission under the Securities Exchange Act of 1934 (15 U.S.C. § 78a et seq.). Through MS Bank and MST, Morgan controls deposits of approximately $34.8 billion, which represent less than 1 percent of the total amount of deposits of insured depository institutions in the United States.[12] If MUFG were deemed to control Morgan, MUFG would become the

1. The elections by MUFG, The Bank of Tokyo-Mitsubishi UFJ, Ltd., and Mitsubishi UFJ Trust and Banking Corporation, all of Tokyo, and UnionBanCal Corporation, San Francisco, California, to become financial holding companies pursuant to sections 4(k) and (*l*) of the BHC Act and sections 225.82(b)(1) and 225.91(b)(1) of Regulation Y became effective as of October 6, 2008. *See* Board letter to Donald J. Toumey, Esq., dated October 6, 2008.

2. 12 U.S.C. § 1842. *See* 12 CFR 225.15.

3. As a result of acquiring Morgan's voting shares, MUFG would acquire an indirect interest in Morgan Stanley Capital Management LLC and Morgan Stanley Domestic Holdings, Inc., both financial holding companies of New York, New York.

4. 12 U.S.C § 1843(c)(8) and (j). *See* 12 CFR 225.24. The Board previously has determined by regulation that the operation of a savings association and a trust company by a bank holding company is closely related to banking for purposes of section 4(c)(8) of the BHC Act (12 CFR 225.28(b)(4)(ii) and (5)).

5. 12 U.S.C. § 1843(c)(13).

6. *See* 12 U.S.C. §§ 1842(b)(1) and 1843(i)(4).

7. Section 3(b)(1) of the BHC Act requires that the Board provide notice of an application under section 3 to the appropriate federal or state supervisory authority for the bank to be acquired and provide the supervisor a period of time (normally 30 days) within which to submit views or recommendations on the proposal. Section 4(i)(4) of the BHC Act imposes a similar requirement with respect to a notice to acquire a savings association. Sections 3(b)(1) and 4(i)(4) also permit the Board to shorten or waive this notice period in certain circumstances (12 U.S.C. §§ 1842(b)(1) and 1843(i)(4); 12 CFR 225.16(g)(2)).

8. 12 CFR 225.16(b)(3), 225.25(d), and 262.3(*l*).

9. BTMU operates branches in California, Illinois, New York, Oregon, and Washington; agencies in Georgia and Texas; and has representative offices in the District of Columbia, Kentucky, Minnesota, New Jersey, and Texas.

10. Deposit data for MUFG's subsidiary banks are as of June 30, 2008.

11. Asset data for Morgan are as of May 31, 2008, and asset and deposit data for MS Bank and MST are as of June 30, 2008.

12. In this context, the "United States" includes any state of the United States, the District of Columbia, any territory of the United States, Puerto Rico, Guam, American Samoa, and the Virgin Islands. Also in this context, depository institutions include commercial banks, savings banks, and savings associations.

14th largest depository organization in the United States, with total consolidated assets of approximately \$2.7 trillion, and would control deposits of approximately \$76.6 billion.

NONCONTROLLING INVESTMENT

Although the acquisition of less than a controlling interest in a bank or bank holding company is not a normal acquisition for a bank holding company, the requirement in section 3(a)(3) of the BHC Act to obtain the Board's approval before a bank holding company acquires more than 5 percent of the voting shares of a bank suggests that Congress contemplated acquisitions by bank holding companies of between 5 percent and 25 percent of the voting shares of banks.[13] On this basis, the Board previously has approved the acquisition by a bank holding company of less than a controlling interest in a bank or bank holding company.[14]

MUFG has stated that it does not propose to control or exercise a controlling influence over Morgan and that its indirect investment in Morgan's subsidiary depository institutions would also be a passive investment. MUFG has provided certain commitments that are similar to commitments previously relied on by the Board in determining that an investing bank holding company would not be able to exercise a controlling influence over another bank holding company for purposes of the BHC Act. For example, MUFG has committed not to exercise or attempt to exercise a controlling influence over the management or policies of Morgan or any of its subsidiaries and committed not to have more than one representative serve on the board of directors of Morgan or its subsidiaries.[15] The commitments also include certain restrictions on the business relationships of MUFG with Morgan.

Based on these considerations and all the other facts of record, the Board has concluded that MUFG would not acquire control of, or have the ability to exercise a controlling influence over, Morgan or its subsidiary depository institutions through the proposed acquisition of Morgan's voting shares. The Board notes that the BHC Act would require MUFG to file an application and receive the Board's approval before it could directly or indirectly acquire additional shares of Morgan or attempt to exercise a controlling influence over Morgan.[16]

13. *See* 12 U.S.C. § 1842(a)(3).

14. *See, e.g., The Bank of Nova Scotia*, 93 *Federal Reserve Bulletin* C136 (2007); *Passumpsic Bancorp*, 92 *Federal Reserve Bulletin* C175 (2006); *Brookline Bancorp, MHC*, 86 *Federal Reserve Bulletin* 52 (2000).

15. Consistent with the Board's policy statement on equity investments in banks and bank holding companies, MUFG proposes also to have a representative serve as an observer at meetings of Morgan's board of directors. *See Policy Statement on Equity Investments in Banks and Bank Holding Companies* (September 22, 2008) (www.federalreserve.gov/newsevents/press/bcreg/20080922c.htm).

16. *See, e.g., Emigrant Bancorp, Inc.*, 82 *Federal Reserve Bulletin* 555 (1996); *First Community Bancshares, Inc.*, 77 *Federal Reserve Bulletin* 50 (1991).

COMPETITIVE CONSIDERATIONS

The Board has carefully considered the competitive effects of the proposal in light of all the facts of record. Section 3 of the BHC Act prohibits the Board from approving a proposal that would result in a monopoly or would be in furtherance of any attempt to monopolize the business of banking in any relevant banking market. The BHC Act also prohibits the Board from approving a proposal that would substantially lessen competition in any relevant banking market, unless the anticompetitive effects of the proposal clearly are outweighed in the public interest by the probable effect of the proposal in meeting the convenience and needs of the community to be served.[17] Under the public benefits factor of section 4 of the BHC Act, the Board also considers the competitive effects of a proposal to acquire a savings association.

The Board previously has stated that one company need not acquire control of another company to lessen competition between them substantially.[18] The Board has found that noncontrolling interests in directly competing depository institutions may raise serious questions under the BHC Act and has stated that the specific facts of each case will determine whether the minority investment in a company would be anticompetitive.[19]

The subsidiary insured depository institutions of MUFG and MST compete directly in the Metropolitan New York-New Jersey-Pennsylvania-Connecticut ("Metro New York") banking market.[20] The Board has reviewed carefully the competitive effects of the proposal in the Metro New York banking market in light of all the facts of record. In particular, the Board has considered the number of competitors that would remain in the banking market, the relative shares of total deposits in depository institutions in the market ("market deposits") controlled by MUFG and Morgan,[21] and the concentration level of market deposits and the increase in that level as measured by the Herfindahl–Hirschman Index ("HHI") under the

17. 12 U.S.C. § 1842(c)(1).

18. *See, e.g., SunTrust Banks, Inc.*, 76 *Federal Reserve Bulletin* 542 (1990).

19. *See, e.g., BOK Financial Corp.*, 81 *Federal Reserve Bulletin* 1052, 1053–54 (1995).

20. The Metro New York banking market includes Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, and Westchester counties in New York; Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren counties and the northern portions of Mercer County in New Jersey; Monroe and Pike counties in Pennsylvania; and Fairfield County and portions of Litchfield and New Haven counties in Connecticut.

21. Deposit and market share data are based on data reported by insured depository institutions in the summary of deposits data as of June 30, 2007, and are based on calculations in which the deposits of thrift institutions are included at 50 percent. The Board previously has indicated that thrift institutions have become, or have the potential to become, significant competitors of commercial banks. *See, e.g., Midwest Financial Group*, 75 *Federal Reserve Bulletin* 386 (1989); *National City Corporation*, 70 *Federal Reserve Bulletin* 743 (1984). Thus, the Board regularly has included thrift institution deposits in the market share calculation on a 50 percent weighted basis. *See, e.g., First Hawaiian, Inc.*, 77 *Federal Reserve Bulletin* 52 (1991).

Department of Justice Merger Guidelines ("DOJ Guidelines").[22] Consummation of the proposal would be consistent with Board precedent and within the thresholds in the DOJ Guidelines in the Metro New York banking market. On consummation, the Metro New York banking market would remain moderately concentrated, and numerous competitors would remain in the market.[23]

The DOJ also has reviewed the proposal and has advised the Board that it does not believe that MUFG's proposal would likely have a significantly adverse effect on competition in any relevant banking market. The appropriate banking agencies have been afforded an opportunity to comment and have not objected to the proposal.

Based on all the facts of record, the Board has concluded that consummation of the proposal would not have a significantly adverse effect on competition or on the concentration of resources in any relevant banking market. Accordingly, the Board has determined that competitive factors are consistent with approval of the proposal.

Financial, Managerial, and Other Supervisory Considerations

Section 3 of the BHC Act requires the Board to consider the financial and managerial resources and future prospects of the companies and depository institutions involved in the proposal and certain other supervisory factors. The Board also reviews financial and managerial resources of the organizations involved in a proposal under section 4 of the BHC Act.[24] The Board has carefully considered these factors in light of all the facts of record, including confidential supervisory and examination information from the various U.S. banking supervisors of the institutions involved, publicly reported and other financial information, and information provided by MUFG. In addition, the Board has consulted with the Japanese Financial Services Agency ("FSA"), the agency with primary responsibility for the supervision and regulation of Japanese banking organizations, including MUFG.

In evaluating the financial resources in expansion proposals by banking organizations, the Board reviews the financial condition of the organizations involved both on a parent-only and on a consolidated basis, as well as the financial condition of the subsidiary insured depository institutions and significant nonbanking operations. In this evaluation, the Board considers a variety of information, including capital adequacy, asset quality, and earnings performance. In assessing financial resources, the Board consistently has considered capital adequacy to be especially important. The Board also evaluates the financial condition of the pro forma organization, including its capital position, asset quality, and earnings prospects, and the impact of the proposed funding of the transaction.

The Board has carefully considered the financial resources of the organizations involved in the proposal. The capital levels of MUFG exceed the minimum levels that would be required under the Basel Capital Accord and are therefore considered to be equivalent to the capital levels that would be required of a U.S. banking organization. In addition, the subsidiary depository institutions involved in the proposal are well capitalized and would remain so on consummation. Based on its review of the record, the Board finds that MUFG has sufficient financial resources to effect the proposal.

The Board also has carefully considered the managerial resources of the organizations involved. The Board has reviewed the examination records of MUFG, its depository institutions, and the U.S. banking operations of Morgan, including assessments of their management, risk-management systems, and operations. In addition, the Board has considered its supervisory experiences and those of other relevant banking supervisory agencies with the organizations and their records of compliance with applicable banking law and with anti-money-laundering laws.

Based on all the facts of record, the Board has concluded that considerations relating to the managerial resources and future prospects of the organizations involved are consistent with approval. Section 3 of the BHC Act also provides that the Board may not approve an application involving a foreign bank unless the bank is subject to comprehensive supervision or regulation on a consolidated basis by the appropriate authorities in the bank's home country.[25] As noted, the FSA is the primary supervisor of Japanese banking organizations. The Board previously has determined that BTMU and MUTB are subject to comprehensive supervision on a consolidated basis by their home-country supervisor.[26] In that determination, the Board took

22. Under the DOJ Guidelines, a market is considered unconcentrated if the post-merger HHI is under 1000, moderately concentrated if the post-merger HHI is between 1000 and 1800, and highly concentrated if the post-merger HHI exceeds 1800. The Department of Justice ("DOJ") has informed the Board that a bank merger or acquisition generally will not be challenged (in the absence of other factors indicating anticompetitive effects) unless the post-merger HHI is at least 1800 and the merger increases the HHI more than 200 points. The DOJ has stated that the higher-than-normal HHI thresholds for screening bank mergers and acquisitions for anticompetitive effects implicitly recognize the competitive effects of limited-purpose and other nondepository financial entities.

23. On consummation, the HHI would remain unchanged at 1146, and 265 insured depository institution competitors would remain in the Metro New York banking market. The deposits of MUFG and Morgan, on a combined basis, would represent less than 1 percent of market deposits.

24. 12 CFR 225.26(b).

25. 12 U.S.C. § 1843(c)(3)(B). As provided in Regulation Y, the Board determines whether a foreign bank is subject to consolidated home-country supervision under the standards set forth in Regulation K. *See* 12 CFR 225.13(a)(4). Regulation K provides that a foreign bank will be considered subject to comprehensive supervision or regulation on a consolidated basis if the Board determines that the bank is supervised or regulated in such a manner that its home-country supervisor receives sufficient information on the worldwide operations of the bank, including its relationship with any affiliates, to assess the bank's overall financial condition and its compliance with laws and regulations. *See* 12 CFR 211.24(c)(1).

26. *See Mitsubishi Tokyo Financial Group, Inc.*, 87 *Federal Reserve Bulletin* 349 (2001). At that time, BTMU was named The Bank of Tokyo-Mitsubishi, Ltd. and MUTB was named The Mitsubishi Trust and Banking Corporation.

into account the FSA's supervisory authority with respect to MUFG (operating at that time as Mitsubishi Tokyo Financial Group, Inc.) and its nonbanking subsidiaries.[27] Based on this finding and all the facts of record, the Board has concluded that BTMU and MUTB continue to be subject to comprehensive supervision on a consolidated basis by their home-country supervisor.

Based on all the facts of record, the Board has concluded that considerations relating to the financial and managerial resources and future prospects of the organizations involved in the proposal are consistent with approval, as are the other supervisory factors.[28]

Convenience and Needs and CRA Performance Considerations

In acting on a proposal under section 3 of the BHC Act, the Board also must consider the effects of the proposal on the convenience and needs of the communities to be served and take into account the records of the relevant insured depository institutions under the Community Reinvestment Act ("CRA").[29] In addition, the Board must review the records of performance under the CRA of the relevant insured depository institutions when acting on a notice under section 4 of the BHC Act to acquire voting securities of an insured savings association.[30]

As provided in the CRA, the Board has evaluated the proposal in light of the evaluations by the appropriate federal supervisors of the CRA performance records of the relevant insured depository institutions. An institution's most recent CRA performance evaluation is a particularly important consideration in the applications process because it represents a detailed, on-site evaluation of the institution's overall record of performance under the CRA by its appropriate federal supervisor.[31]

MUFG's subsidiary banks each received "outstanding" or "satisfactory" ratings, and MS Bank received an "outstanding" rating, at their most recent evaluations for CRA performance by the OCC or the Federal Deposit Insurance Corporation ("FDIC").[32] Consistent with the CRA regulations adopted by the federal banking agencies, BTMUT, MUTB USA, and MS Bank were evaluated under the community development test as wholesale banks.[33]

Based on all the facts of record, the Board has concluded that considerations relating to convenience and needs of the communities to be served and the CRA performance records of the relevant depository institutions are consistent with approval of the proposal.

Nonbanking Activities

As noted above, MUFG has filed a notice under sections 4(c)(8) and 4(j) of the BHC Act for its proposed indirect investment in MST and MSTNA, which are engaged in activities that the Board has determined by regulation are so closely related to banking as to be a proper incident thereto for purposes of section 4(c)(8) of the BHC Act.[34] To approve this notice, the Board must also determine that the proposed acquisition of MST and MSTNA "can reasonably be expected to produce benefits to the public that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices."[35]

As part of its evaluation of the public interest factors under section 4 of the BHC Act, the Board has reviewed carefully the public benefits and possible adverse effects of the proposal. The record indicates that consummation of the proposal would result in benefits to customers currently served by Morgan. MUFG's investment in Morgan, and thus indirectly in MST and MSTNA, would strengthen Morgan's capital position and allow Morgan to better serve its customers. For the reasons discussed above and based on the entire record, the Board has determined that the conduct of the proposed nonbanking activities within the framework of Regulation Y and Board precedent is not likely to result in adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices.

Based on all the facts of record, the Board concludes that consummation of the proposal can reasonably be expected to produce public benefits that would outweigh any likely

27. *Id.*

28. Section 3 of the BHC Act also requires the Board to determine that an applicant has provided adequate assurances that it will make available to the Board such information on its operations and activities and those of its affiliates that the Board deems appropriate to determine and enforce compliance with the BHC Act (12 U.S.C. § 1842(c)(3)(A)). The Board has reviewed the restrictions on disclosure in the relevant jurisdictions in which the applicant operates and has communicated with relevant government authorities concerning access to information. In addition, MUFG previously has committed that, to the extent not prohibited by applicable law, it will make available to the Board such information on the operations of its affiliates that the Board deems necessary to determine and enforce compliance with the BHC Act, the International Banking Act, and other applicable federal law. MUFG also previously has committed to cooperate with the Board to obtain any waivers or exemptions that may be necessary to enable its affiliates to make such information available to the Board. In light of these commitments, the Board has concluded that MUFG has provided adequate assurances of access to any appropriate information the Board may request.

29. 12 U.S.C. § 2901 et seq.; 12 U.S.C. § 1842(c)(2).

30. *See, e.g., North Fork Bancorporation, Inc.*, 86 *Federal Reserve Bulletin* 767 (2000).

31. *See Interagency Questions and Answers Regarding Community Reinvestment*, 66 *Federal Register* 36,620 at 36,640 (2001); 72 *Federal Register* 37,922 at 37,951 (2007).

32. The most recent CRA performance evaluation of Union Bank, the largest of MUFG's subsidiary banks, by the OCC was as of October 2005. The most recent CRA performance evaluations of BTMUT ("outstanding") and MUTB USA ("satisfactory") by the FDIC were as of September 2007 and December 2006, respectively. MS Bank received an "outstanding" rating under the CRA at its most recent performance evaluation by the FDIC, as of January 2006. MSTNA is not an insured depository institution, and MST is not subject to the CRA pursuant to regulations issued by the OTS. *See* 12 CFR 563e.11(c)(2).

33. *See, e.g.*, 12 CFR 228.21(a)(2).

34. *See* 12 CFR 225.28(b)(4)(ii) and (5).

35. *See* 12 U.S.C. § 1843(j)(2)(A).

adverse effects. Accordingly, the Board has determined that the balance of the public benefits under section 4(j)(2) of the BHC Act is consistent with approval.

MUFG also provided notice of its proposal to acquire an indirect interest in the foreign bank subsidiaries of Morgan under section 4(c)(13) of the BHC Act. Based on the record, the Board has no objection to the acquisition of such interest.[36]

CONCLUSION

Based on the foregoing and all the facts of record, the Board has determined that the application and notices should be, and hereby are, approved. In reaching its conclusion, the Board has considered all the facts of record in light of the factors that it is required to consider under the BHC Act. As noted in the Board's Order approving MUFG's proposal, the Board's approval is specifically conditioned on compliance by MUFG with all the commitments made to the Board in connection with MUFG's application and notices. The Board's approval of the nonbanking aspects of the proposal is also subject to all the conditions set forth in Regulation Y, including those in sections 225.7 and 225.25(c),[37] and to the Board's authority to require such modification or termination of the activities of MUFG or any of its subsidiaries as the Board finds necessary to ensure compliance with, and to prevent evasion of, the provisions of the BHC Act and the Board's regulations and orders issued thereunder. For purposes of this action, the conditions and commitments are deemed to be conditions imposed in writing by the Board in connection with its findings and decisions and, as such, may be enforced in proceedings under applicable law.

October 7, 2008

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

36. Morgan became subject to the BHC Act on September 21, 2008, and as a new bank holding company has a two-year period, with the possibility of three one-year extensions, to conform its existing nonbanking investments and activities to the requirements of section 4 of the BHC Act (12 U.S.C. § 1842(a)(2)). MUFG, as a financial holding company, may acquire more than 5 percent of the voting shares of a company, such as Morgan, that is substantially engaged in financial activities subject to a two-year divestiture period (12 CFR 225.85(a)(3)).

37. 12 CFR 225.7 and 225.25(c).

Wells Fargo & Company
San Francisco, California

Order Approving the Acquisition of a Bank Holding Company

Wells Fargo & Company ("Wells Fargo"), a financial holding company within the meaning of the Bank Holding Company Act ("BHC Act"), has requested the Board's approval under section 3 of the BHC Act to acquire Wachovia Corporation ("Wachovia"),[1] Charlotte, North Carolina, and thereby indirectly acquire Wachovia's subsidiary banks, Wachovia Bank, National Association ("Wachovia Bank"), Charlotte, and Wachovia Bank of Delaware, National Association, Wilmington, Delaware.[2] In addition, Wells Fargo has requested the Board's approval under section 4 of the BHC Act[3] to acquire the nonbanking subsidiaries of Wachovia, including Wachovia's two subsidiary savings associations.[4] Wells Fargo also proposes to acquire the agreement corporation and Edge Act subsidiaries and the foreign operations of Wachovia pursuant to sections 25 and 25A of the Federal Reserve Act and the Board's Regulation K.[5]

Section 3(b)(1) of the BHC Act requires that the Board provide notice of an application under section 3 to the appropriate federal or state supervisory authority for the banks to be acquired and provide the supervisor a period of time (normally 30 days) within which to submit views and recommendations on the proposal.[6] Section 4(i)(4) of the BHC Act imposes a similar requirement with respect to a notice to acquire a savings association.[7] In light of the unusual and exigent circumstances affecting the financial markets, the weakened financial condition of Wachovia, and all other facts and circumstances, the Board has shortened to 10 days the notice period to the primary regulators of the banks and savings associations involved in, and waived public notice of, this proposal, in accordance with the provisions of the BHC Act and the Board's regulations.[8] The Board has contacted the primary federal supervisors of the insured depository institutions and the Department of Justice; those agencies have indicated that they have no objection to the approval of the proposal.

1. 12 U.S.C. § 1842.

2. Wells Fargo initially would acquire shares of newly issued voting preferred securities of Wachovia, representing approximately 39.9 percent of aggregate voting securities. After shareholder approval, a wholly owned subsidiary of Wells Fargo would merge with and into Wachovia, with Wachovia surviving the merger and becoming a wholly owned subsidiary of Wells Fargo. Wells Fargo also seeks the Board's approval pursuant to section 3 of the BHC Act to acquire Wachovia's indirect ownership of 5.7 percent of the voting shares of United Bancshares, Inc. ("United") and thereby indirectly acquire voting shares of United's subsidiary bank, United Bank of Philadelphia, both of Philadelphia, Pennsylvania.

3. 12 U.S.C. § 1843.

4. Wachovia's two savings associations are Wachovia Mortgage, F.S.B., North Las Vegas, Nevada, and Wachovia Bank, F.S.B., Houston, Texas. Wells Fargo also proposes to acquire all of Wachovia's other nonbanking subsidiaries pursuant to section 4 of the BHC Act, including (but not limited to) Wachovia Bank's insured credit card subsidiary, Wachovia Card Services, National Association, Atlanta, Georgia, and its nondepository trust company, Delaware Trust Company, National Association, Wilmington, Delaware. *See* 12 U.S.C. § 1843. Both of these Wachovia Bank subsidiaries engage only in limited operations and, therefore, are not banks for purposes of the BHC Act. *See* 12 U.S.C. § 1841(c)(2)(D) and (F).

5. 12 U.S.C. §§ 601 et seq. and 611 et seq.; 12 CFR Part 211.

6. 12 U.S.C. § 1842(b)(1); 12 CFR 225.25(b).

7. 12 U.S.C. § 1843(i)(4).

8. 12 U.S.C. §§ 1842(b)(1) and 1843(i)(4); 12 CFR 225.16(b)(3), 225.16(g)(2), 225.25(d), and 262.3(l).

The Board has carefully considered the statutory factors in light of all the facts of record, including confidential examination and other supervisory information, publicly reported and additional financial information, the supervisory experiences of the Board and the other federal supervisors of the organizations and institutions involved in the proposal, information provided by Wells Fargo and Wachovia, and comments received on the proposal. Based on all the facts of record, the Board has concluded that all the factors the Board must consider in acting on the application and notices are consistent with approval. The application and notices are hereby approved by the Board for the reasons set forth in the Board's Statement, which will be released at a later date.

The Board's approval is specifically conditioned on compliance by Wells Fargo with all the commitments made in connection with the proposal, including the commitments and conditions discussed in the forthcoming Statement. This approval also is subject to all the conditions set forth in Regulation Y and to the Board's authority to require such modification or termination of the nonbanking activities of a bank holding company or any of its subsidiaries as the Board finds necessary to ensure compliance with, and to prevent evasion of, the provisions of the BHC Act and the Board's regulations and orders issued thereunder. These commitments and conditions are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

The proposed bank-related acquisitions may not be consummated before the fifth calendar day after the effective date of this order, and the proposal may not be consummated later than three months after the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of San Francisco, acting pursuant to delegated authority.[9]

By order of the Board, effective October 12, 2008.

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Kroszner, and Duke.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

9. 12 U.S.C. § 1849(b)(1); 12 CFR 225.16(h)(2).

Wells Fargo & Company San Francisco, California

Statement by the Board of Governors of the Federal Reserve System Regarding the Application and Notices by Wells Fargo & Company to Acquire Wachovia Corporation and Wachovia's Subsidiary Banks and Nonbanking Companies

By order dated October 12, 2008, the Board approved the application of Wells Fargo & Company ("Wells Fargo"), a financial holding company within the meaning of the Bank Holding Company Act ("BHC Act"), under section 3 of the BHC Act,[1] to acquire Wachovia Corporation ("Wachovia"),[2] Charlotte, North Carolina, and thereby indirectly acquire Wachovia's subsidiary banks, Wachovia Bank, National Association ("Wachovia Bank"), Charlotte, and Wachovia Bank of Delaware, National Association, Wilmington, Delaware.[3] In addition, the Board approved Wells Fargo's notice under section 4 of the BHC Act[4] to acquire all the nonbanking subsidiaries of Wachovia, including Wachovia's two subsidiary savings associations, Wachovia Mortgage, F.S.B., North Las Vegas, Nevada, and Wachovia Bank, F.S.B., Houston, Texas.[5] The Board also approved Wells Fargo's notice to acquire the agreement corporation and Edge Act subsidiaries and the foreign operations of Wachovia pursuant to sections 25 and 25A of the Federal Reserve Act ("FRA") and the Board's Regulation K.[6] The Board hereby issues this statement regarding the approval order.

In light of the unusual and exigent circumstances affecting the financial markets, the weakened financial condition of Wachovia, and all other facts and circumstances, the Board determined in its order that emergency conditions existed that justified expeditious action on this proposal.[7] The Secretary of the Treasury (in consultation with the President) determined, on the recommendation of the Federal Deposit Insurance Corporation ("FDIC") and the Board (both by a vote of 5 members), that compliance by the FDIC with the least-cost provisions of the Federal Deposit Insurance Act ("FDI Act") with respect to Wachovia could likely result in serious adverse effects on economic conditions or financial stability. The proposed acquisition of Wachovia by Wells Fargo as currently structured would avoid those adverse effects without reliance on assistance by the FDIC. The Board provided notice of this

1. 12 U.S.C. § 1842.

2. Wells Fargo initially would acquire shares of newly issued voting preferred securities of Wachovia, representing approximately 39.9 percent of aggregate voting securities. After shareholder approval, a wholly owned subsidiary of Wells Fargo would merge with and into Wachovia, with Wachovia surviving the merger and becoming a wholly owned subsidiary of Wells Fargo.

3. The Board also approved the acquisition by Wells Fargo of Wachovia's indirect ownership of 5.7 percent of the voting shares of United Bancshares, Inc. ("United") and thereby the indirect acquisition of voting shares of United's subsidiary bank, United Bank of Philadelphia, both of Philadelphia, Pennsylvania.

4. 12 U.S.C. § 1843.

5. Wells Fargo proposes to acquire Wachovia's other nonbanking subsidiaries that are engaged in financial activities in accordance with section 4(k)(4)(A)–(H) and section 225.86 of the Board's Regulation Y (12 U.S.C. § 1843(k)(4)(A)–(H); 12 CFR 225.86(a)–(d) and 225.170–177). In addition, Wells Fargo proposes to acquire Wachovia's nonbanking subsidiary that is engaged in certain physical commodity trading activities as an activity that is complementary to a financial activity under section 4(k)(1)(B) of the BHC Act ("Complementary Activity"). *See* Board letter to Elizabeth T. Davy, April 13, 2006. Wells Fargo also received authority to engage in such physical trading activities as a Complementary Activity. *See* Board letter to John Shrewsberry, April 10, 2008. Wachovia also has other nonbanking subsidiaries that do not require Board approval, in accordance with section 225.22 of Regulation Y (12 CFR 225.22).

6. 12 U.S.C. §§ 601 et seq. and 611 et seq.; 12 CFR Part 211.

7. *See* 12 U.S.C. §§ 1842(b)(1) and 1843(i)(4). A commenter objecting to the proposal asserted that expeditious action was not warranted.

proposal to the Office of the Comptroller of the Currency ("OCC") and the Office of Thrift Supervision ("OTS"), the primary federal supervisors of Wachovia's subsidiary banks and savings associations, in accordance with the requirements of sections 3 and 4 of the BHC Act and the Board's Regulation Y governing emergencies that require expeditious action. The Board also provided notice of this proposal to the Department of Justice ("DOJ"). Those agencies have indicated that they have no objection to approval of the proposal.[8] For the same reasons, and in accordance with the provisions of the Board's regulations, the Board waived public notice of this proposal.[9]

Wells Fargo, with total consolidated assets of approximately $609.1 billion, is the fifth largest depository organization in the United States.[10] Wells Fargo controls nine insured depository institutions that operate in twenty-three states.

Wachovia, with total consolidated assets of approximately $812.4 billion, is the third largest depository organization in the United States. Wachovia controls five insured depository institutions that operate in twenty-one states and the District of Columbia. On consummation of this proposal, Wells Fargo would become the second largest depository organization in the United States, with total consolidated assets of approximately $1.37 trillion.

Factors Governing Board Review of the Transaction

The BHC Act sets forth the factors that the Board must consider when reviewing the acquisition of banks. For direct or indirect acquisitions of banks under section 3 of the BHC Act, these factors are the requirements for interstate bank acquisitions; the competitive effects of the proposal in the relevant geographic markets; the financial and managerial resources and future prospects of the companies and banks involved in the proposal; the convenience and needs of the communities to be served; the records of performance under the Community Reinvestment Act[11] ("CRA") of the insured depository institutions involved in the transaction; and the availability of information needed to determine and enforce compliance with the BHC Act and other applicable federal banking laws.[12]

An acquisition of a savings association requires Board approval under sections 4(c)(8) and 4(j) of the BHC Act.[13] The Board previously has determined by regulation that the operation of a savings association is closely related to banking for purposes of section 4(c)(8) of the BHC Act.[14] The Board also must determine that the proposed acquisition of Wachovia's savings associations "can reasonably be expected to produce benefits to the public, such as greater convenience, increased competition, or gains in efficiency, that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices."[15]

Interstate and Deposit Cap Analysis

Section 3(d) of the BHC Act allows the Board to approve an application by a bank holding company to acquire control of a bank located in a state other than the bank holding company's home state if certain conditions are met. For purposes of the BHC Act, the home state of Wells Fargo is Minnesota,[16] and the banks to be acquired are located in 21 states and the District of Columbia.[17]

The Board may not approve an interstate proposal under section 3(d) of the BHC Act if the applicant (including all its insured depository institution affiliates) controls, or on consummation of the proposal would control, more than 10 percent of the total amount of deposits of insured depository institutions in the United States ("nationwide deposit cap"). The nationwide deposit cap was added to section 3(d) when Congress broadly authorized interstate acquisitions by bank holding companies and banks in the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994.[18] Although the nationwide deposit cap prohibits interstate acquisitions by a company that controls depos-

8. Section 3(b)(1) of the BHC Act requires that the Board provide notice of an application under section 3 to the appropriate federal or state supervisory authority for the bank to be acquired and provide the supervisor a period of time (normally 30 days) within which to submit views or recommendations on the proposal. Section 4(i)(4) of the BHC Act imposes a similar requirement with respect to a notice to acquire a savings association. Sections 3(b)(1) and 4(i)(4) also permit the Board to shorten or waive this notice period in certain circumstances (12 U.S.C. §§ 1842(b)(1) and 1843(i)(4); 12 CFR 225.16(g)).

9. *Id.*; 12 CFR 225.16(b)(3), 225.25(d), and 262.3(*l*).

10. Asset, national deposit, and ranking data are as of June 30, 2008. In this context, insured depository institutions include commercial banks, savings banks, and savings associations.

11. 12 U.S.C. §2901 et seq.

12. The Board received comments from Citigroup Inc. ("Citigroup"), New York, New York, objecting to the proposal, which the Board carefully considered. Among other things, Citigroup contends that Wells Fargo's agreement to acquire Wachovia violated Wachovia's prior agreement to negotiate exclusively with Citigroup on an acquisition agreement and improperly interfered with plans by the FDIC to provide assistance pursuant to section 13(c) of the FDI Act for Citigroup's proposed acquisition of some or all of Wachovia (12 U.S.C. § 1823(c)). These allegations are the subject of litigation between Citigroup, Wells Fargo, and Wachovia. The litigation is before a court of competent jurisdiction, and the matters at issue in the litigation are not within the discretion of the Board to resolve. *See Western Bancshares, Inc. v. Board of Governors*, 480 F.2d 749 (10th Cir. 1973) ("*Western*"). As explained in more detail above, as part of its review of this proposal, the Board has carefully considered all of the facts of record in assessing the financial and managerial resources and future prospects of the companies involved.

13. 12 U.S.C. §§ 1843(i), 1843(c)(8), and 1843(j).

14. 12 CFR 225.28(b)(4)(ii).

15. 12 U.S.C. § 1843(j)(2)(A).

16. *See* 12 U.S.C. § 1842(d). A bank holding company's home state is the state in which the total deposits of all banking subsidiaries of such company were the largest on July 1, 1966, or the date on which the company became a bank holding company, whichever is later.

17. For purposes of section 3(d), the Board considers a bank to be located in the states in which the bank is chartered or headquartered or operates a branch. *See* 12 U.S.C. §§ 1841(o)(4)–(7) and 1842(d)(1)(A) and (d)(2)(B).

18. Pub. L. No. 103–328, 108 Stat. 2338 (1994). The nationwide deposit cap was intended to help guard against undue concentrations of economic power. *See* S. Rep. No. 102–167 at 72 (1991).

its in excess of the cap, it does not prevent a company from exceeding the nationwide deposit cap through internal growth and effective competition for deposits or through acquisitions entirely within the home state of the acquirer.

As required by section 3(d), the Board has carefully considered whether Wells Fargo controls, or on consummation of the proposed transaction would control, more than 10 percent of the total amount of deposits of insured depository institutions[19] in the United States. In analyzing this matter, the Board calculated the percentage of total deposits of insured depository institutions in the United States and the total deposits that Wells Fargo controls, and on consummation of the proposal would control, based on the definition of "deposit" in the FDI Act,[20] the latest available deposit data collected in reports filed by all insured depository institutions (data as of June 30, 2008),[21] deposit information available from the companies involved in this transaction, other information available to the Board, and the methods and adjustments used by the FDIC to compute total deposits. These calculations have been made using the methodology described in the Board's order in 2004 approving Bank of America Corporation's acquisition of FleetBoston Financial Corporation[22] and take into account the use of revised Call Report and Thrift Financial Report forms, which became effective for calendar year 2008.[23] In light of the turmoil in the financial markets since June 30, 2008, the Board also analyzed more recent adjusted deposit data from Wells Fargo and Wachovia and other sources of deposit data.

Based on data as of June 30, 2008, which represent the latest adjusted deposit data available from all insured depository institutions, the total amount of deposits of insured depository institutions in the United States was approximately $7.195 trillion. The data indicate that, on June 30, 2008, Wells Fargo controlled deposits of approximately $298.2 billion, and Wachovia controlled deposits of approximately $429.6 billion. As of that date, the combined firm would have controlled approximately 10.116 percent of the total amount of deposits of insured depository institutions in the United States on consummation of the proposal.

Wells Fargo and Wachovia provided data on their respective adjusted deposit totals as of September 30, 2008. These data indicate that, on a combined basis, Wells Fargo would control approximately $731.1 billion in deposits on consummation of the proposal. Deposit amounts for other insured depository organizations are not available because institutions are not required to file Call Reports for the third quarter until the end of October, and such data will not be available for review until later in November.

The prohibition in the BHC Act, by its terms, applies if "*upon consummation of the acquisition* (emphasis added)" the applicant would control more than 10 percent of the total amount of deposits of insured depository institutions in the United States. While the June 30, 2008, deposit data are the most recent data currently available on a uniform basis, the Board believes that other evidence indicates that the June 30, 2008, data do not reflect the current situation nor would those data accurately reflect the deposit ratio at the time required by the statute, which is the time of consummation of the acquisition.

Other data sources indicate, for example, that the total amount of deposits in the United States has significantly increased since June 30, 2008. Deposit data collected by the Federal Reserve in its survey of domestically chartered commercial banks and reported on the Board's H.8 Release (Assets and Liabilities of Commercial Banks) for September 2008 indicate that total deposits of insured commercial banks in the United States increased approximately 3.9 percent during the third quarter of 2008. Estimated nationwide deposit growth in excess of 3 percent is corroborated by other deposit data sources.[24] If total deposits reported on June 30, 2008, are adjusted to account for this level of growth, the combined deposits of Wells Fargo and Wachovia as of September 30, 2008, would be below 10 percent of nationwide deposits. Indeed, Wells Fargo's percentage of total nationwide deposits would be less than 10 percent if adjusted deposits for all insured depository institutions in the United States grew by at least 1.62 percent since June 30, 2008, which would result in a total amount of adjusted deposits all for insured depository institutions of at least $7.311 trillion. Based on all the information available to the Board, the Board concluded that the combined organization would not control an amount of deposits that would exceed the nationwide deposit cap on consummation of the proposal. To ensure compliance with the deposit limits on acquisitions, Wells

19. The BHC Act adopts the definition of "insured depository institution" used in the FDI Act. *See* 12 U.S.C. § 1841(n). The FDI Act's definition of "insured depository institution" includes all banks (whether or not the institution is a bank for purposes of the BHC Act), savings banks, and savings associations that are insured by the FDIC, and insured U.S. branches of foreign banks, as each of those terms is defined in the FDI Act. *See* 12 U.S.C. § 1813(c)(2).

20. Section 3(d) of the BHC Act specifically adopts the definition of "deposit" in the FDI Act (12 U.S.C. § 1842(d)(2)(E) incorporating the definition of "deposit" at 12 U.S.C. § 1813 (*l*)).

21. Each insured bank in the United States must report data regarding its total deposits in accordance with the definition of "deposit" in the FDI Act on the institution's Consolidated Report of Condition and Income ("Call Report"). Each insured savings association similarly must report its total deposits on the institution's Thrift Financial Report. Deposit data for FDIC-insured U.S. branches of foreign banks and federal branches of foreign banks are obtained from the Report of Assets and Liabilities of U.S. Branches and Agencies of Foreign Banks. These data are reported quarterly to the FDIC and are publicly available.

22. *Bank of America Corporation*, 90 *Federal Reserve Bulletin* 217, 219 (2004); *see also Bank of America Corporation*, 93 *Federal Reserve Bulletin* C109 (2007) (order approving the acquisition of ABN AMRO North America Holding Company); *Bank of America Corporation*, 92 *Federal Reserve Bulletin* C5 (2006) (order approving merger with MBNA Corporation).

23. The revisions to the Call Report and Thrift Financial Report that were introduced in 2007 have simplified the adjusted deposit-cap calculation for depository organizations. The methodology for computing the amount of deposits held by institutions for purposes of calculating the nationwide deposit cap is outlined in Appendix A.

24. Deposit data collected from commercial banks on the FR 2900 (Report of Transaction Accounts, Other Deposits and Vault Cash) show a similar trend.

Fargo has committed that, on consummation, the combined organization would not exceed the nationwide deposit cap based on the data reported by all depository institutions as of September 30, 2008. This commitment includes a commitment that Wells Fargo will reduce its deposits by any amount that exceeds the nationwide deposit cap based on Call Report data as of September 30, 2008, by no later than December 31, 2008.[25]

Section 3(d) also prohibits the Board from approving a proposal if, on consummation, the applicant would control 30 percent or more of the total deposits of insured depository institutions in any state in which both the applicant and the organization to be acquired operate an insured depository institution, or the applicable percentage of state deposits established by state law ("state deposit cap").[26] On consummation of the proposal, Wells Fargo would control less than 30 percent of, and less than any applicable state deposit cap for, the total amount of deposits of insured depository institutions in the relevant states.

All other requirements of section 3(d) of the BHC Act also would be met on consummation of the proposal.[27] Based on all the facts of record, the Board is permitted to approve the proposal under section 3(d) of the BHC Act.

Competitive Considerations

The Board has considered carefully the competitive effects of the proposal in light of all the facts of record. Section 3 of the BHC Act prohibits the Board from approving a proposal that would result in a monopoly or would be in furtherance of an attempt to monopolize the business of banking in any relevant banking market. The BHC Act also prohibits the Board from approving a bank acquisition that would substantially lessen competition in any relevant banking market, unless the anticompetitive effects of the proposal are clearly outweighed in the public interest by the probable effect of the transaction in meeting the convenience and needs of the community to be served.[28] In addition, the Board must consider the competitive effects of a proposal to acquire a savings association under the public benefits factor of section 4(j) of the BHC Act.

Wells Fargo's and Wachovia's subsidiary depository institutions directly compete in 49 banking markets, including markets in Arizona, California, Colorado, Illinois, Nevada, and Texas. The Board has reviewed carefully the competitive effects of the proposal in each of those banking markets in light of all the facts of record. In particular, the Board has considered the number of competitors that would remain in the banking markets, the relative shares of total deposits in depository institutions in the markets ("market deposits") controlled by Wells Fargo and Wachovia,[29] the concentration levels of market deposits and the increase in those levels as measured by the Herfindahl–Hirschman Index ("HHI") under the Department of Justice Merger Guidelines ("DOJ Guidelines"),[30] and other characteristics of the markets. In addition, the Board has considered commitments made by Wells Fargo to the Board to reduce the potential that the proposal would have adverse effects on competition by divesting six branches (the "divestiture branches"), which account for approximately $1.46 billion of deposits,[31] in six banking markets ("the divestiture markets").[32] Wells Fargo has proposed to transfer all the divestiture branches to out-of-market competitors.

25. Institutions reporting quarterly deposit data may find it necessary to make adjustments after the due date of the quarterly report. Accordingly, for purposes of this commitment, Wells Fargo and the Board will evaluate the third quarter 2008 deposit data on November 30, 2008, by which time reporting institutions should have completed any necessary adjustments.

26. 12 U.S.C. § 1842(d)(2)(B)–(D). Wells Fargo and Wachovia both operate insured depository institutions in Arizona, California, Colorado, Illinois, Nevada, and Texas.

27. Wells Fargo is adequately capitalized and adequately managed as required under section 3(d) (12 U.S.C. § 1842 (d)(1)(A)). The subsidiary banks of Wachovia have been in existence and operated for the minimum period of time required by applicable state law. *See* 12 U.S.C. § 1842(d)(1)(B). Wachovia Bank's subsidiary insured credit card company, Wachovia Card Services, National Association, Atlanta, Georgia, was established in 2007 but engages only in limited operations and, therefore, is not a bank for purposes of the BHC Act. *See* 12 U.S.C. § 1841(c)(2)(D). The other requirements in section 3(d) of the BHC Act also would be met on consummation of the proposal.

28. 12 U.S.C. § 1842(c)(1).

29. Deposit and market share data are as of June 30, 2007, adjusted to reflect mergers and acquisitions through October 3, 2008, and are based on calculations in which the deposits of thrift institutions are included at 50 percent. The Board previously has indicated that thrift institutions have become, or have the potential to become, significant competitors of commercial banks. *See, e.g., Midwest Financial Group*, 75 *Federal Reserve Bulletin* 386, 387 (1989); *National City Corporation*, 70 *Federal Reserve Bulletin* 743, 744 (1984). Thus, the Board regularly has included thrift institution deposits in the market share calculation on a 50 percent weighted basis. *See, e.g., First Hawaiian, Inc.*, 77 *Federal Reserve Bulletin* 52, 55 (1991). In this case, the savings association deposits of Wachovia are weighted at 100 percent both before and after consummation of the proposal because the savings associations are, and on consummation would continue to be, controlled by a bank holding company.

30. Under the DOJ Guidelines, a market is considered unconcentrated if the post-merger HHI is less than 1000, moderately concentrated if the post-merger HHI is between 1000 and 1800, and highly concentrated if the post-merger HHI is more than 1800. The Department of Justice has informed the Board that a bank merger or acquisition generally will not be challenged (in the absence of other factors indicating anticompetitive effects) unless the post-merger HHI is at least 1800 and the merger increases the HHI more than 200 points. The Department of Justice has stated that the higher-than-normal HHI thresholds for screening bank mergers for anticompetitive effects implicitly recognize the competitive effects of limited-purpose lenders and other nondepository financial entities.

31. Wells Fargo proposes to divest five Wachovia branches with approximately $1.33 billion of deposits in California and one Wachovia branch with approximately $127 million of deposits in Colorado.

32. Wells Fargo has committed that, not later than 60 days after consummating the proposed acquisition, it will execute an agreement for the proposed divestitures in each divestiture market with a purchaser that the Board determines to be competitively suitable. Wells Fargo also has committed to divest total deposits in each divestiture market of at least the amount specified in the commitment and discussed in this order and to complete divestitures within 180 days of consummation of the proposal. In addition, Wells Fargo has committed that, if it is unsuccessful in completing the proposed divestiture within this time period, it will transfer the unsold branches to an independent trustee that will be instructed to sell such branches to an alternate purchaser or purchasers, without regard to price. Both the trustee and any alternate purchaser must be acceptable to the

A. Banking Markets within Established Guidelines

Consummation of the proposal would be consistent with Board precedent and within the thresholds in the DOJ Guidelines in 37 of the banking markets in which Wells Fargo's and Wachovia's subsidiary depository institutions directly compete.[33] On consummation of the proposal, two of these banking markets would remain unconcentrated, twenty-seven banking markets would be moderately concentrated, and eight banking markets would be highly concentrated, as measured by the HHI. The change in HHI in the eight highly concentrated markets would be small or otherwise within the DOJ Guidelines. In each of the 37 banking markets, numerous competitors would remain on consummation of the proposal.

B. Certain Banking Markets with Divestitures

After accounting for the branch divestitures, consummation of the merger would be consistent with Board precedent and the thresholds in the DOJ Guidelines in five banking markets.[34] In three of these markets, Wells Fargo proposes to divest all branches to be acquired from Wachovia and, therefore, the levels of concentration as measured by the HHI would not increase on consummation of the merger and the proposed divestitures.[35] In two markets, the HHI would be consistent with Board precedent and thresholds in the DOJ Guidelines on consummation of the merger and the proposed divestitures.[36] After accounting for the proposed divestitures, four banking markets would be moderately concentrated, and one banking market would be highly concentrated on consummation. In addition, numerous competitors would remain in each of the five banking markets.

C. Seven Banking Markets Warranting Special Scrutiny

Wells Fargo and Wachovia compete directly in seven banking markets that warrant a detailed review: Cottonwood, Arizona; Hanford, Hemet, Oroville, Placerville, and Santa Cruz, all in California; and Grand Junction, Colorado. In each of these markets, including one with proposed divestitures and six without proposed divestitures, the concentration levels on consummation of the proposal would exceed the threshold levels in the DOJ Guidelines or the resulting market share of Wells Fargo would exceed 35 percent.

For each of these markets, the Board has considered carefully whether other factors either mitigate the competitive effects of the proposal or indicate that the proposal would have a significantly adverse effect on competition in the market. The number and strength of factors necessary to mitigate the competitive effects of a proposal depend on the size of the increase in, and resulting level of, concentration in a banking market.[37] In each of these markets, the Board has identified factors that indicate the proposal would not have a significantly adverse impact on competition, despite the post-consummation increases in the HHI and market shares.

Among the factors reviewed, the Board has considered the competitive influence of community credit unions in these banking markets. In each of the markets, certain credit unions offer a wide range of consumer products, operate street-level branches, and have membership open to almost all residents in the applicable market. The Board has concluded that the activities of such credit unions in each of these markets exert competitive influence that mitigates, in part, the potential effects of the proposal.[38]

BANKING MARKET IN ARIZONA

Cottonwood. In the Cottonwood banking market,[39] Wells Fargo is the second largest depository organization, controlling deposits of approximately $172.8 million, which represent approximately 15.3 percent of market deposits. Wachovia is the fifth largest depository organization in the market, controlling deposits of approximately $129 million, which represent approximately 11.4 percent of market deposits. On consummation of the merger, Wells Fargo would remain the second largest depository organization in the market, controlling deposits of approximately $301.8 million, which represent approximately 26.6 percent of market deposits. The HHI would increase 347 points to 2305.

Several factors indicate that the increase in concentration in the Cottonwood banking market, as measured by the HHI and Wells Fargo's market share, overstates the potential competitive effects of the proposal in the market. After consummation of the proposal, nine other commercial banking and thrift institution competitors would remain in the market. The Board notes that there are other competitors with a significant presence in the market. The largest depository organization in the market would control

Board. *See Regions Financial Corp.*, 93 *Federal Reserve Bulletin* C16 (2007); *BankAmerica Corp.*, 78 *Federal Reserve Bulletin* 338 (1992); *United New Mexico Financial Corp.*, 77 *Federal Reserve Bulletin* 484 (1991).

33. The effects of the proposal on the concentrations of banking resources in these banking markets are described in Appendix B.

34. The effects of the proposal on the concentrations of banking resources in these markets are described in Appendix C.

35. The three markets are Davis and Grass Valley, both in California, and Fremont County in Colorado.

36. The two markets are Monterey-Seaside-Marina and Sonora, both in California.

37. *See Regions Financial Corp.*, 93 *Federal Reserve Bulletin* C16 (2007); *NationsBank Corporation*, 84 *Federal Reserve Bulletin* 129 (1998).

38. The Board previously has considered the competitiveness of certain active credit unions as a mitigating factor. *See, e.g., The PNC Financial Services Group, Inc.*, 93 *Federal Reserve Bulletin* C65 (2007); *Regions Financial Corp.*, 93 *Federal Reserve Bulletin* C16 (2007); *Wachovia Corp.*, 92 *Federal Reserve Bulletin* C183 (2006); *F.N.B. Corporation*, 90 *Federal Reserve Bulletin* 481 (2004).

39. The Cottonwood banking market in Arizona is defined as the northeastern corner of Yavapai County and includes the towns of Camp Verde and Clarkdale and the cities of Cottonwood, Sedona, and West Sedona.

34.8 percent of market deposits, and two other bank competitors each would control more than 12 percent of market deposits.

The Board also has evaluated the competitive influence of one active community credit union in the market. This credit union controls approximately $88.3 million of deposits in the market, which, on a 50 percent weighted basis, represents approximately 3.8 percent of market deposits. After accounting for these credit union deposits, Wells Fargo on consummation of the proposal would control approximately 25.6 percent of market deposits, and the HHI would increase 322 points to 2149.[40]

In addition, the record of recent entry into the Cottonwood banking market evidences the market's attractiveness for entry. The Board notes that five depository institutions have entered the market de novo since 2004. Other factors indicate that the market remains attractive for entry. From 2004 to 2007, the annualized population growth for the county in which the Cottonwood market is located exceeded the average annualized population growth for non-metropolitan counties in Arizona.

Banking Markets in California

Hanford. In the Hanford banking market,[41] Wells Fargo is the fourth largest depository organization, controlling deposits of approximately $148.3 million, which represent approximately 17.4 percent of market deposits. Wachovia is the third largest depository organization in the market, controlling deposits of approximately $159.9 million, which represent approximately 18.7 percent of market deposits. On consummation of the merger, Wells Fargo would become the largest depository organization in the market, controlling deposits of approximately $308.2 million, which represent 36.1 percent of market deposits. The HHI would increase 650 points to 2045.

Several factors indicate that the proposal would not have significantly adverse competitive effects in the Hanford banking market. After consummation of the proposal, ten other commercial banking competitors would remain, including two other competitors with a significant presence in the market. The second and third largest depository organizations would control market deposits of more than 20 percent and 12 percent, respectively.

The Board also has evaluated the competitive influence of three active community credit unions in the market. These credit unions control approximately $200.6 million of deposits in the market, which, on a 50 percent weighted basis, represents approximately 10.5 percent of market deposits. After accounting for these credit union deposits, Wells Fargo on consummation of the proposal would control approximately 32.3 percent of market deposits, and the HHI would increase 521 points to 1675.[42]

Hemet. In the Hemet banking market,[43] Wells Fargo is the sixth largest depository organization, controlling approximately $124.4 million of deposits, which represents approximately 7.2 percent of market deposits. Wachovia is the largest depository organization in the market, controlling deposits of $391.6 million, which represent 22.6 percent of market deposits. On consummation of the proposal, Wells Fargo would become the largest depository organization in the market, controlling deposits of approximately $516 million, which represent approximately 29.8 percent of market deposits. The HHI would increase 324 points to 1809.

Several factors indicate that the proposal would not have a significantly adverse effect on competition in the Hemet banking market. After consummation of the proposal, 12 other commercial banking and thrift institution competitors would remain in the market. Three of those remaining competitors would each control more than 10 percent of market deposits.

In addition, the Board has concluded that the activities of two community credit unions in the market exert a sufficient competitive influence to mitigate, in part, the potential adverse competitive effects of the proposal. These active credit unions control approximately $186.3 million of deposits in the market, which, on a 50 percent weighted basis, represents approximately 5.1 percent of market deposits. After accounting for those credit union deposits, Wells Fargo would control approximately 28.2 percent of market deposits on consummation of the proposal, and the HHI would increase 292 points to 1644.[44]

Oroville. In the Oroville banking market,[45] Wells Fargo is the sixth largest depository organization, controlling deposits of approximately $49.1 million, which represent approximately 7.3 percent of market deposits. Wachovia is the largest depository organization in the market, controlling deposits of approximately $144.9 million, which represent approximately 21.6 percent of market deposits. On consummation of the proposal, Wells Fargo would become the largest depository organization in the market, controlling deposits of approximately $194 million, which represent 29 percent of market deposits. The HHI would increase 317 points to 1854.

---

40. With the deposits of this credit union weighted at 50 percent, Wells Fargo would be the second largest depository organization in the market, with approximately 14.7 percent of market deposits, and Wachovia would be the fifth largest depository organization in the market, controlling approximately 11 percent of market deposits.

41. The Hanford banking market in California is defined as Kings County and the city of Riverdale in Fresno County.

42. With the deposits of these credit unions weighted at 50 percent, Wells Fargo would be the fourth largest depository organization in the market, with approximately 15.5 percent of market deposits, and Wachovia would be the third largest depository organization in the market, controlling approximately 16.8 percent of market deposits.

43. The Hemet banking market in California is defined as the Hemet Ranally Metro Area.

44. With the deposits of these credit unions weighted at 50 percent, Wells Fargo would be the sixth largest depository organization in the market, with approximately 6.8 percent of market deposits, and Wachovia would be the largest depository organization in the market, controlling approximately 21.4 percent of market deposits.

45. The Oroville banking market in California is defined as the southern portion of Butte County, excluding the city of Chico but including the towns of Gridley and Oroville.

Several factors indicate that the increase in concentration in the Oroville banking market, as measured by the HHI and Wells Fargo's market share, overstates the potential competitive effects of the proposal in the market. After consummation of the proposal, seven other commercial banking competitors would remain in the market. The Board notes that there are other competitors with a significant presence in the market. The second largest depository organization in the market would control approximately 21.6 percent of market deposits, and two other bank competitors each would control more than 10 percent of market deposits.

The Board also has evaluated the competitive influence of two active community credit unions in the market. These credit unions control approximately $37.5 million of deposits in the market, which, on a 50 percent weighted basis, represents approximately 2.7 percent of market deposits. After accounting for these credit union deposits, Wells Fargo on consummation of the proposal would control approximately 28.2 percent of market deposits, and the HHI would increase 300 points to 1759.[46]

Placerville. In the Placerville banking market,[47] Wells Fargo is the third largest depository organization, controlling deposits of approximately $137.6 million, which represent approximately 15.7 percent of market deposits. Wachovia is the largest depository organization in the market, controlling deposits of approximately $220.3 million, which represent approximately 25.1 percent of market deposits. On consummation of the proposal, Wells Fargo would become the largest depository organization in the market, controlling deposits of approximately $357.9 million, which represent approximately 40.7 percent of market deposits. The HHI would increase 784 points to 2403.

Several factors indicate that the proposal would not have a significantly adverse effect on competition in the Placerville banking market. After consummation of the proposal, seven other commercial banking and thrift institution competitors would remain in the market. The Board notes that there are other competitors with a significant presence in the market, including two bank competitors that each would control more than 12 percent of the market deposits.

The Board also has evaluated the competitive influence of five active community credit unions in the market. These credit unions control approximately $277.2 million of deposits in the market, which, on a 50 percent weighted basis, represents approximately 13.1 percent of market deposits. After accounting for these credit union deposits, Wells Fargo on consummation of the proposal would control approximately 33.8 percent of market deposits, and the HHI would increase 538 points to 1738.[48]

Santa Cruz. In the Santa Cruz banking market,[49] Wells Fargo is the second largest depository organization, controlling deposits of approximately $653.9 million, which represent approximately 19.1 percent of market deposits. Wachovia is the largest depository organization in the market, controlling deposits of approximately $912 million, which represent approximately 26.6 percent of market deposits. To reduce the potential for adverse effects on competition in the Santa Cruz banking market, Wells Fargo has proposed to divest one of Wachovia's branches, with deposits of $285.2 million, to an out-of-market depository organization. On consummation of the proposal and after accounting for the proposed divestiture, Wells Fargo would become the largest depository organization in the market, controlling deposits of approximately $1.28 billion, which represent 37.4 percent of market deposits. The HHI would increase 394 points to 2103.

Several factors indicate that the proposal would not have significantly adverse competitive effects in the Santa Cruz banking market. After consummation of the proposal, 12 other commercial banking competitors would remain in the market. The Board notes that there are other competitors with a significant presence in the market, including three bank competitors that would each control more than 10 percent of the market.

The Board also has evaluated the competitive influence of three active community credit unions in the market. These credit unions control approximately $511 million of deposits in the market, which, on a 50 percent weighted basis, represents approximately 6.9 percent of market deposits. After accounting for these credit union deposits and for the branch divestiture, Wells Fargo on consummation of the proposal would control approximately 34.8 percent of market deposits, and the HHI would increase 341 points to 1855.[50]

In addition, the record of recent entry into the Santa Cruz banking market evidences the market's attractiveness for

46. With the deposits of these credit unions weighted at 50 percent, Wells Fargo would be the sixth largest depository organization in the market, with approximately 7.1 percent of market deposits, and Wachovia would be the largest largest depository organization in the market, controlling approximately 21.1 percent of market deposits.

47. The Placerville banking market in California is defined as western El Dorado County outside of the Sacramento banking market, including the cities of Diamond Springs, Georgetown, Placerville, and Pollock Pines.

48. With the deposits of these credit unions weighted at 50 percent, Wells Fargo would be the third largest depository organization in the market, with approximately 13 percent of market deposits, and Wachovia would be the largest depository organization in the market, controlling approximately 20.8 percent of market deposits.

49. The Santa Cruz banking market in California is defined as the Santa Cruz Ranally Metro Area.

50. With the deposits of these credit unions weighted at 50 percent, Wells Fargo would be the second largest depository organization in the market, with approximately 17.8 percent of market deposits, and Wachovia would be the largest depository organization in the market, controlling approximately 24.8 percent of market deposits.

entry. The Board notes that two depository institutions have entered the market de novo since 2004.

BANKING MARKET IN COLORADO

Grand Junction. In the Grand Junction banking market,[51] Wells Fargo is the largest depository organization, controlling deposits of approximately $500.9 million, which represent approximately 23.7 percent of market deposits. Wachovia operates the second largest depository organization in the market, controlling deposits of approximately $291.8 million, which represent approximately 13.8 percent of market deposits. On consummation of the proposal, Wells Fargo would remain the largest depository institution in the market, controlling deposits of approximately $792.7 million, which represent 37.5 percent of market deposits. The HHI would increase 653 points to 1877.

Several factors indicate that the increase in concentration in the Grand Junction banking market, as measured by the HHI and Wells Fargo's market share, overstates the potential competitive effects of the proposal in the market. After consummation of the proposal, 13 other commercial bank competitors would remain in the market.

The Board also has evaluated the competitive influence of two active community credit unions in the market. These credit unions control approximately $83.6 million in deposits in the market, which, on a 50 percent weighted basis, represents approximately 1.9 percent of market deposits. After accounting for these credit union deposits, Wells Fargo on consummation of proposal would control approximately 36.7 percent of market deposits, and the HHI would increase 628 points to 1808.[52]

In addition, the record of recent entry into the Grand Junction banking market evidences the market's attractiveness for entry. The Board notes that two depository institutions have entered the market de novo since 2004. Other factors indicate that the market remains attractive for entry. From 2004 to 2007, the market's annualized population growth exceeded the average annualized population growth for metropolitan counties in Colorado.

D. Views of Other Agencies and Conclusion on Competitive Considerations

The DOJ also has reviewed the proposal and has advised the Board that it does not believe that the proposal would likely have a significant adverse effect on competition in any relevant banking market at this time. The appropriate federal supervisory agencies have been afforded an opportunity to comment and have not objected to the proposal.

Accordingly, based on all the facts of record, the Board has concluded that consummation of the proposal would not have a significantly adverse effect on competition or on the concentration of resources in any relevant banking market and that competitive considerations are consistent with approval.

FINANCIAL, MANAGERIAL, AND SUPERVISORY CONSIDERATIONS

Section 3 of the BHC Act requires the Board to consider the financial and managerial resources and future prospects of the companies and banks involved in the proposal and certain other supervisory factors. The Board also reviews the financial and managerial resources of the organizations involved in the proposal under section 4 of the BHC Act. The Board has carefully considered these factors in light of all the facts of record, including confidential supervisory and examination information received from the relevant federal and state supervisors of the organizations involved, publicly reported and other financial information, information provided by Wells Fargo and Wachovia, and public comments received on the proposal.[53]

In evaluating the financial resources in expansion proposals by banking organizations, the Board reviews the financial condition of the organizations involved on both a parent-only and consolidated basis, as well as the financial condition of the subsidiary depository institutions and significant nonbanking operations. In this evaluation, the Board considers a variety of information, including capital adequacy, asset quality, and earnings performance. In assessing financial resources, the Board consistently considers capital adequacy to be especially important. The Board also evaluates the financial condition of the resulting organization at consummation, including its capital position, asset quality, earnings prospects, and the impact of the proposed funding of the transaction.

The Board has carefully considered the proposal under the financial factors.[54] The proposed transaction is structured as a share exchange. The subsidiary depository institutions of Wells Fargo and Wachovia are well capitalized and would remain so on consummation of this proposal. Wells Fargo is well capitalized and has announced that it intends to raise additional capital. In light of its capital-raising efforts, Wells Fargo would remain well capitalized after consummation of this proposal. The Board has also considered the other financial factors noted above

51. The Grand Junction banking market in Colorado is defined as Mesa County.

52. With the deposits of these credit unions weighted at 50 percent, Wells Fargo would be the largest depository organization in the market, with approximately 23.2 percent of market deposits, and Wachovia would be the second largest depository organization in the market, controlling approximately 13.5 percent of market deposits.

53. Citigroup contends that its acquisition of Wachovia ultimately would be less costly to the federal government than an acquisition by Wells Fargo. In addition, Citigroup claims that Wells Fargo's acquisition of Wachovia would discourage companies from future involvement in a proposal which, like Citigroup's proposed acquisition of Wachovia, involves FDIC assistance. These comments were weighed in the Board's consideration of the financial and managerial resources of the companies involved in the transaction to the extent they relate to those factors. *See Western.*

54. Citigroup asserted that Wells Fargo's financial condition could be adversely affected if a recent IRS ruling that provided banks accelerated tax relief on certain built-in loan losses is invalidated. In analyzing the financial factors in this proposal, the Board has reviewed carefully information regarding the impact of the ruling on Wells Fargo's overall financial condition.

in light of information provided by Wells Fargo and Wachovia and supervisory information available to the Federal Reserve through its supervision of these companies and from the primary supervisors of the depository institution subsidiaries of these companies. Based on its review of the record, the Board finds that Wells Fargo has sufficient resources to effect the proposal.

The Board also has considered the managerial resources of the organizations involved in the proposed transaction. The Board has reviewed the examination records of Wells Fargo and Wachovia, their respective subsidiary depository institutions, and other nonbanking companies involved in the proposal. In addition, the Board has considered its supervisory experience and that of other relevant supervisory agencies, including the OCC and the OTS, with the organizations and their records of compliance with applicable banking law and anti-money-laundering laws.

The Board also has considered the future prospects of the organizations involved in the proposal. As part of this evaluation, the Board considered information regarding how Wells Fargo would manage the integration of Wachovia into Wells Fargo.[55] The Board also considered Wells Fargo's extensive experience in acquiring bank holding companies and successfully integrating them into its organization. Moreover, as noted above, the Board found that expeditious approval of the proposal was warranted in light of the weakened condition of Wachovia and the turmoil in the financial markets. The record indicates that Wells Fargo has the financial and managerial resources to serve as a source of strength to Wachovia and its subsidiary depository institutions.

Based on all the facts of record, the Board has concluded that the financial and managerial resources and the future prospects of the organizations involved in the proposal are consistent with approval, as are the other supervisory factors.

Convenience and Needs and CRA Performance Considerations

In acting on a proposal under section 3 of the BHC Act, the Board must consider the effects of the proposal on the convenience and needs of the communities to be served and take into account the records of the relevant depository institutions under the CRA.[56] The Board also must review the records of performance under the CRA of the relevant insured depository institutions when acting on a notice under section 4 of the BHC Act to acquire voting securities of an insured savings association.[57]

The Board has carefully considered the convenience and needs factor and the CRA performance records of the subsidiary depository institutions of Wells Fargo and Wachovia. The Board has considered carefully all the facts of record, including the evaluations of the CRA performance records of the subsidiary depository institutions of Wells Fargo and Wachovia, data reported by Wells Fargo and Wachovia under the Home Mortgage Disclosure Act ("HMDA"),[58] other information provided by Wells Fargo, confidential supervisory information, and comments received on the proposal.[59]

As provided in the CRA, the Board evaluates the record of performance of an institution in light of examinations by the appropriate federal supervisors of the CRA performance records of the relevant institutions. An institution's most recent CRA performance evaluation is a particularly important consideration in the applications process because it represents a detailed, on-site evaluation of the institution's overall record of performance under the CRA by its appropriate federal supervisor.[60]

Wells Fargo's lead subsidiary insured depository institution, Wells Fargo Bank, National Association, Sioux Falls, South Dakota, received an "outstanding" rating at its most recent CRA performance evaluation by the OCC, as of September 30, 2004. Each of Wells Fargo's other subsidiary insured depository institutions received an "outstanding" or "satisfactory" rating at its most recent CRA performance evaluation.[61]

Wachovia's lead subsidiary insured depository institution, Wachovia Bank, received an "outstanding" rating at its most recent CRA performance evaluation by the OCC, as of June 30, 2006. Wachovia's other subsidiary insured depository institutions also received "outstanding" ratings at their most recent CRA performance evaluations.[62]

The Board also considered the fair lending records of, and the 2007 lending data reported under HMDA by, Wells Fargo and Wachovia in light of comment received on the proposal.[63] Although the HMDA data might reflect certain

55. Citigroup also questioned, in light of the risk profile of Wachovia's assets and the absence of FDIC assistance to the transaction, whether Wells Fargo possesses sufficient financial and managerial resources. The Board has considered carefully this comment in light of information received about Wachovia's asset portfolio from the relevant supervisors of Wachovia's subsidiary banks, other supervisory information, and information received from Wells Fargo, including information about due-diligence reviews performed by Wells Fargo with respect to Wachovia's asset portfolio.

56. 12 U.S.C. § 2901 et seq.; 12 U.S.C. § 1842(c)(2).

57. *See, e.g., North Fork Bancorporation, Inc.*, 86 *Federal Reserve Bulletin* 767 (2000).

58. 12 U.S.C. § 2801 et seq.

59. A commenter expressed concern about certain subprime lending activities of Wells Fargo.

60. The Interagency Questions and Answers Regarding Community Reinvestment provide that a CRA examination is an important and often controlling factor in the consideration of an institution's CRA record. *See* 64 *Federal Register* 23,641 (1999).

61. Appendix D provides the most recent CRA ratings of those institutions.

62. Wachovia Bank of Delaware, National Association, was last evaluated by the OCC as of June 30, 2006. Wachovia Bank, F.S.B., and Wachovia Mortgage, F.S.B., formerly known as World Savings Bank, F.S.B. (Texas) and World Savings Bank, F.S.B., respectively, were last evaluated by the OTS as of August 15, 2005. Wachovia Card Services, National Association, was established in January 2007, and has not yet been evaluated for CRA performance.

63. A commenter also asserted that Wachovia made a disproportionately larger percentage of higher-cost loans to Hispanic borrowers than to nonminority borrowers. In addition, the commenter referred to news

disparities in the rates of loan applications, originations, denials, or pricing among members of different racial or ethnic groups in certain local areas, the data provide an insufficient basis by themselves on which to conclude whether or not Wells Fargo or Wachovia has excluded or imposed higher costs on any group on a prohibited basis. The Board recognizes that HMDA data alone, even with the recent addition of pricing information,[64] provide only limited information about the covered loans.[65] HMDA data, therefore, provide an inadequate basis, absent other information, for concluding that an institution has engaged in illegal lending discrimination.

Accordingly, the Board has taken into account other information, including examination reports by the primary federal supervisors of the organizations' subsidiary institutions that provide on-site evaluations of compliance with fair lending laws by institutions, and has consulted with those supervisors. The record, including confidential supervisory information, also indicates that Wells Fargo has taken steps to ensure compliance with fair lending and other consumer protection laws and regulations, by establishing corporate policies and procedures and implementing audits of compliance management oversight. In addition, Wells Fargo employees involved in the lending process receive fair lending training, and Wells Fargo maintains second-review procedures for home mortgage lending.

Based on a review of the entire record, and for the reasons discussed above, the Board has concluded that considerations relating to the convenience and needs factor and the CRA performance records of the relevant insured depository institutions are consistent with approval of the proposal.

Public Benefits

As noted above, Wells Fargo has filed a notice under sections 4(c)(8) and 4(j) of the BHC Act for its proposed indirect acquisitions of Wachovia Mortgage, F.S.B. and Wachovia Bank, F.S.B. As part of its evaluation of the public interest factors under section 4 of the BHC Act, the Board has reviewed carefully the public benefits and possible adverse effects of the proposal. The record indicates that consummation of the proposal would benefit consumers currently served by Wachovia's subsidiary savings associations by providing them access to additional banking and nonbanking products and services of Wells Fargo. As noted, the proposal would also strengthen Wachovia and all its subsidiary depository institutions.

For the reasons discussed above, and based on the entire record, the Board has determined that the conduct of the proposed nonbanking activities within the framework of Regulation Y and Board precedent is not likely to result in significantly adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices. Moreover, based on all the facts of record, the Board has concluded that consummation of the proposal can reasonably be expected to produce public benefits that would outweigh any likely adverse effects. Accordingly, the Board has determined that the balance of the public benefits under the standard of section 4(j)(2) of the BHC Act is consistent with approval.

As noted, Wells Fargo also has provided notice under sections 25 and 25A of the FRA and the Board's Regulation K to acquire the agreement corporation and Edge Act subsidiaries and the foreign operations of Wachovia. The Board concludes that all factors required to be considered under the FRA and the Board's Regulation K are consistent with approval.

Conclusion

Based on the foregoing, the Board determined in its order of October 12 that the application and notices should be approved.[66] In reaching its conclusion, the Board considered all the facts of record in light of the factors that the

---

reports that the city of Baltimore filed litigation against Wells Fargo asserting that certain subsidiaries of Wells Fargo had engaged in predatory lending in predominantly African American areas of Baltimore. The litigation is before a court of competent jurisdiction, and the Board and the OCC will continue to monitor its progress and to review Wells Fargo's compliance with fair lending and other consumer protection laws and regulations in future examinations.

64. Beginning January 1, 2004, the HMDA data required to be reported by lenders were expanded to include pricing information for loans on which the annual percentage rate (APR) exceeds the yield for U.S. Treasury securities of comparable maturity 3 or more percentage points for first-lien mortgages and 5 or more percentage points for second-lien mortgages (12 CFR 203.4).

65. The data, for example, do not account for the possibility that an institution's outreach efforts may attract a larger proportion of marginally qualified applicants than other institutions attract and do not provide a basis for an independent assessment of whether an applicant who was denied credit was, in fact, creditworthy. In addition, credit history problems, excessive debt levels relative to income, and high loan amounts relative to the value of the real estate collateral (reasons most frequently cited for a credit denial or higher credit cost) are not available from HMDA data.

66. A commenter requested that the Board hold a public meeting or hearing on the proposal. Section 3 of the BHC Act does not require the Board to hold a public hearing on an application unless the appropriate supervisory authority for the bank to be acquired makes a written recommendation of denial of the application. The Board has not received such a recommendation from the appropriate supervisory authorities. The Board's regulations provide for a hearing on a notice filed under section 4 of the BHC Act if there are disputed issues of material fact that cannot be resolved in some other manner (12 CFR 225.25(a)(2)). Under its rules, the Board also may, in its discretion, hold a public meeting or hearing on an application to acquire a bank if necessary or appropriate to clarify factual issues related to the application and to provide an opportunity for testimony (12 CFR 225.16(e), 262.25(d)). The Board has considered carefully the commenter's requests in light of all the facts of record. The commenter's request fails to demonstrate why its written comments do not present its views adequately or why a meeting or hearing otherwise would be necessary or appropriate. In addition, in light of the unusual and exigent circumstances affecting the financial markets, the weakened financial condition of Wachovia, and all other facts and circumstances, the Board waived public notice of this proposal. For these reasons, and based on all the facts of record, the Board has determined that a public meeting or hearing was not required or warranted in this case, and the request for a public meeting or hearing on the proposal is accordingly denied.

Board is required to consider under the BHC Act. As noted in the Board's order, the Board's approval is specifically conditioned on compliance by Wells Fargo with all the commitments made to the Board in connection with the application and notices, including the commitments and conditions discussed in this order. The Board's approval of the nonbanking aspects of the proposal also is subject to all the conditions set forth in Regulation Y, including those in sections 225.7 and 225.25(c),[67] and to the Board's authority to require such modification or termination of the activities of a bank holding company or any of its subsidiaries as the Board finds necessary to ensure compliance with, and to prevent evasion of, the provisions of the BHC Act and the Board's regulations and orders issued thereunder. These commitments and conditions are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

October 21, 2008

Robert deV. Frierson
Deputy Secretary of the Board

67. 12 CFR 225.7 and 225.25(c).

Appendix A

Computation of the Amount of Deposits Held by Institutions Using the Revised Call Report and Thrift Financial Report Forms

Insured Banks without Foreign Deposits

The amount of deposits held by insured banks without foreign deposits using the revised Call Report was computed by adding the "Total deposit liabilities before exclusions (gross) as defined in Section 3(*l*) of the FDI Act and FDIC regulations," reported on Schedule RC-O, and the "Interest accrued and unpaid on deposits in domestic offices," reported on Schedule RC-G.

Insured Banks with Foreign Deposits

The amount of deposits held by insured banks with foreign deposits using the revised Call Report was computed by subtracting "Total foreign deposits" from the "Total deposit liabilities before exclusions (gross) as defined in Section 3(*l*) of the FDI Act and FDIC regulations," reported on Schedule RC-O, and adding the "Interest accrued and unpaid on deposits in domestic offices," reported on Schedule RC-G.

Insured Savings Associations

The amount of deposits held by insured savings associations using the revised Thrift Financial Report was computed by subtracting "Total foreign deposits" from the "Total deposit liabilities before exclusions (gross) as defined in Section 3(*l*) of the FDI Act and FDIC regulations," reported on Schedule DI, and adding the "Accrued Interest Payable—Deposits," reported on Schedule SC.

Appendix B

Wells Fargo and Wachovia Banking Markets Consistent with Board Precedent and DOJ Guidelines without Divestitures

Market	Increase in HHI	Pro Forma HHI	Pro Forma market share	Pro Forma rank
Arizona Banking Markets				
Phoenix	164	1,874	23.9	2
Prescott	395	1,708	28.7	1
Tucson	261	1,767	26.5	1
California Banking Markets				
Chico	344	1,702	26.2	1
Fresno	185	1,322	20.1	2
Hesperia–Apple Valley–Victorville	265	1,607	23.7	1
Lake County	183	1,732	27.1	1
Los Angeles	107	957	16.3	2
Modesto	275	1,215	23.5	1
Napa	493	1,593	31.7	1

Appendix B—*Continued*

Wells Fargo and Wachovia Banking Markets Consistent with Board Precedent and DOJ Guidelines without Divestitures—Continued

Market	Increase in HHI	Pro Forma HHI	Pro Forma market share	Pro Forma rank
Oxnard–Thousand Oaks–Ventura	361	1,607	27.2	1
Palm Springs–Cathedral City	219	1,148	21.1	1
Riverside–San Bernardino	70	1,541	15	2
Sacramento	414	1,550	30.8	1
Salinas	239	1,722	22.3	2
San Diego	198	1,265	22.8	1
San Francisco–Oakland–San Jose	236	1,681	28.3	1
Santa Barbara	149	1,672	17.4	2
Santa Maria	264	1,702	24.5	2
Santa Rosa	179	1,168	19.7	1
Stockton	209	1,229	21.2	1
Temecula	307	1,538	25.3	1
Colorado Banking Markets				
Colorado Springs	388	1,193	29.2	1
Denver–Boulder	324	1,185	28	1
Fort Collins–Loveland	88	1,428	15.2	2
Pueblo	571	1,797	34.1	1
Weld County	46	1,959	12.6	2
Illinois Banking Market				
Chicago	0	775	0.6	25
Nevada Banking Markets				
Las Vegas	16	3,547	5.6	3
Reno	69	2,697	17.4	2
Texas Banking Markets				
Amarillo	60	2,725	12.9	2
Austin	157	1,152	20.5	1
Beaumont–Port Arthur	234	1,701	23.9	2
Dallas	19	1,591	6.4	4
Fort Worth	6	5,894	4.5	3
Houston	100	1,806	14.3	2
San Antonio	28	2,243	8.3	4

Note: Data are as of June 30, 2007, adjusted to reflect merger and acquisitions through October 3, 2008. All rankings, market deposit shares, and HHIs are based on thrift institution deposits weighted at 50 percent, except for the savings association deposits of Wachovia, which are weighted at 100 percent both before and after consummation of the proposal. These savings associations are, and on consummation will continue to be, controlled by a bank holding company.

For purposes of this appendix, the definitions of the banking markets in Arizona, California, and Nevada may be found on the website of the Federal Reserve Bank of San Francisco, www.frbsf.org/publications/banking/market/marketdef.pdf; in Colorado on the website of the Federal Reserve Bank of Kansas City, www.kansascityfed.org/home/subwebnav.cfm?level=3&theID=9638&SubWeb=2; and in Texas on the website for the Federal Reserve Bank of Dallas, dallasfed.org/banking/apps/mkdef.html.

The Chicago, Illinois banking market is defined as Cook, Du Page, and Lake counties in Illinois.

Appendix C

Wells Fargo and Wachovia Banking Markets Consistent with Board Precedent and DOJ Guidelines after Divestitures

Market	Change in HHI	Pro Forma HHI	Pro Forma market share	Pro Forma rank
California Banking Markets				
Davis	0	1,852	18.3	3
Grass Valley	0	1,558	13.9	5
Monterey–Seaside–Marina	147	1,595	26.6	1
Sonora	–222	1,685	30.9	1
Colorado Banking Market				
Fremont County	0	1,726	15.3	4

Note: Data are as of June 30, 2007, adjusted to reflect merger and acquisitions through October 3, 2008. All rankings, market deposit shares, and HHIs are based on thrift institution deposits weighted at 50 percent, except for the savings association deposits of Wachovia, which are weighted at 100 percent both before and after consummation of the proposal. These savings associations are, and on consummation will continue to be, controlled by a bank holding company.

For purposes of this appendix, the definitions of the banking markets in California may be found on the website of the Federal Reserve Bank of San Francisco, www.frbsf.org/publications/banking/market/marketdef.pdf.

The Fremont County, Colorado banking market is defined as Fremont County.

Appendix D

Most Recent CRA Ratings of Wells Fargo's Subsidiaries

Subsidiary bank	CRA rating	Date	Supervisor
Wells Fargo Bank Northwest, National Association, Ogden, Utah	Satisfactory	December 2005	OCC
Wells Fargo HSBC Trade Bank, National Association, San Francisco, California	Outstanding	June 2006	OCC
Wells Fargo Financial National Bank, Las Vegas, Nevada	Outstanding	June 2006	OCC
Wells Fargo Financial Bank, Sioux Falls, South Dakota	Outstanding	March 2005	FDIC
Shoshone First Bank, Cody, Wyoming	Outstanding	February 2003	FRB
Sheridan State Bank, Sheridan, Wyoming	Satisfactory	February 2008	FRB
First State Bank of Pinedale, Pinedale, Wyoming	Satisfactory	August 2007	FRB
Jackson State Bank and Trust, Jackson, Wyoming	Satisfactory	July 2006	FRB

ORDERS ISSUED UNDER INTERNATIONAL BANKING ACT

Banco Espírito Santo de Investimento, S.A. Lisbon, Portugal

Order Approving Establishment of a Branch

Banco Espírito Santo de Investimento, S.A. ("Bank"), Lisbon, Portugal, a foreign bank within the meaning of the International Banking Act ("IBA"), has applied under section 7(d) of the IBA[1] to establish a branch in New York, New York. The Foreign Bank Supervision Enhancement Act of 1991, which amended the IBA, provides that a foreign bank must obtain the approval of the Board to establish a branch in the United States.

Notice of the application, affording interested persons an opportunity to comment, has been published in a newspaper of general circulation in New York, New York (*The New York Post*, October 18, 2007). The time for filing comments has expired, and the Board has considered all comments received.

Bank is a wholly owned subsidiary of Banco Espírito Santo, S.A. ("BES"), also in Lisbon, and an indirect subsidiary of Crédit Agricole S.A. ("Credit Agricole"), Paris, France. Bank provides investment banking and advisory services, including project finance, corporate restructuring, securities trading and brokerage, and securities underwriting and distribution. Outside Portugal, Bank operates branches in Spain and the United Kingdom, subsidiaries in Brazil and Ireland, and a joint venture in Poland. Bank would be a qualifying foreign banking organization under Regulation K.[2]

BES, with consolidated assets of $115 billion,[3] is the third largest banking group in Portugal and provides banking services to retail and corporate customers through more than 700 branches in Portugal. In the United States, BES operates a branch in New York City and controls Espirito Santo Bank, Miami, Florida. Credit Agricole provides a wide range of banking and financial services to retail and corporate customers around the world and is the largest banking group in France, with assets of approximately $2.3 trillion.

The proposed branch would facilitate transactions in the United States, Canada, and Latin America for Bank's clients by offering advisory and other services for project finance, leveraged financing, and structured commodity finance and by providing asset and derivatives trading.

Under the IBA and Regulation K, in acting on an application by a foreign bank to establish a branch, the Board must consider whether the foreign bank (1) engages directly in the business of banking outside of the United States; (2) has furnished to the Board the information it needs to assess the application adequately; and (3) is subject to comprehensive supervision on a consolidated basis by its home-country supervisors.[4] The Board also considers additional standards as set forth in the IBA and Regulation K.[5]

As noted above, Bank, BES, and Credit Agricole all engage directly in the business of banking outside the United States. Bank also has provided the Board with information necessary to assess the application through submissions that address the relevant issues.

With respect to supervision by home-country authorities in connection with applications involving other banks in Portugal, including BES, the Federal Reserve previously has determined that those banks were subject to comprehensive supervision on a consolidated basis by their home-country supervisor, Banco de Portugal.[6] Bank is, and BES remains, supervised by Banco de Portugal on substantially the same terms and conditions. The Federal Reserve also has previously determined that Credit Agricole is subject to comprehensive supervision on a consolidated basis by its home-country supervisor, the Commission Bancaire.[7] Credit Agricole also remains supervised by the Commission Bancaire on substantially the same terms and conditions. Based on all the facts of record, it has been determined that Bank, BES, and Credit Agricole are each subject to comprehensive supervision on a consolidated basis by their respective home-country supervisors.

The additional standards set forth in section 7 of the IBA and Regulation K have also been taken into account.[8]

1. 12 U.S.C. § 3105(d).
2. 12 CFR 211.23(a).
3. Asset and ranking data are as of June 30, 2008.

4. 12 U.S.C. §§ 3105(d)(2); 12 CFR 211.24. In assessing this standard, the Board considers, among other indicia of comprehensive, consolidated supervision, the extent to which the home-country supervisors (i) ensure that the bank has adequate procedures for monitoring and controlling its activities worldwide; (ii) obtain information on the condition of the bank and its subsidiaries and offices through regular examination reports, audit reports, or otherwise; (iii) obtain information on the dealings with and relationship between the bank and its affiliates, both foreign and domestic; (iv) receive from the bank financial reports that are consolidated on a worldwide basis or comparable information that permits analysis of the bank's financial condition on a worldwide consolidated basis; and (v) evaluate prudential standards, such as capital adequacy and risk asset exposure, on a worldwide basis. No single factor is essential, and other elements may inform the Board's determination.

5. 12 U.S.C. §§ 3105(d)(3)–(4); 12 CFR 211.24(c)(2)–(3).

6. *See Banco Santander Totta, S.A.*, 93 *Federal Reserve Bulletin* C71 (2007); *Caixa Económica Montepio Geral*, 86 *Federal Reserve Bulletin* 700 (2000); *Banco Comercial Português, S.A.*, 86 *Federal Reserve Bulletin* 613 (2000); *Banco Espírito Santo, S.A., et al.*, 86 *Federal Reserve Bulletin* 418 (2000).

7. *See Fédération Nationale du Crédit Agricole*, 92 *Federal Reserve Bulletin* C159 (2006).

8. The additional standards set forth in section 7 of the IBA and Regulation K include the following (1) whether the bank's home-country supervisor has consented to the establishment of the branch; the financial and managerial resources of the bank; (2) whether the appropriate supervisors in the home country may share information on the bank's operations with the Board; (3) whether the bank and its home country have adopted and implemented policies and procedures to address and combat money laundering; and (4) whether the bank and its U.S. affiliates are in compliance with U.S. law; the needs of the community; and the bank's record of operation.

Banco de Portugal has no objection to the establishment of the proposed branch.

Portugal's risk-based capital standards are consistent with those established by the Basel Capital Accord ("Accord"). Bank's capital is in excess of the minimum levels that would be required by the Accord and is considered equivalent to capital that would be required of a U.S. banking organization. Managerial and other financial resources of Bank are consistent with approval, and Bank appears to have the experience and capacity to support the proposed branch. In addition, Bank has established controls and procedures for the proposed branch to ensure compliance with U.S. law and for its operations in general.

Portugal is a member of the Financial Action Task Force ("FATF") and subscribes to its recommendations on measures to combat money laundering. In accordance with these recommendations, Portugal has enacted laws and developed regulatory standards to deter money laundering. Money laundering is a criminal offense in Portugal, and Portuguese financial institutions are required to establish internal policies, procedures, and systems for the detection and prevention of money laundering and terrorist financing throughout their worldwide operations. Bank has policies and procedures to comply with these laws and regulations that are monitored by governmental entities responsible for anti-money-laundering compliance.

With respect to access to information on Bank's operations, the restrictions on disclosure in relevant jurisdictions in which Bank operates have been reviewed and relevant government authorities have been contacted regarding access to information. Bank and its parent companies have committed to make available to the Board such information on the operations of Bank and any of its affiliates that the Board deems necessary to determine and enforce compliance with the IBA, the Bank Holding Company Act, and other applicable federal law. To the extent that the provision of such information to the Board may be prohibited by law or otherwise, Bank and its parent companies have committed to cooperate with the Board to obtain any necessary consents or waivers that might be required from third parties for disclosure of such information. In addition, subject to certain conditions, Banco de Portugal may share information on Bank's operations with other supervisors, including the Board. In light of these commitments and other facts of record, and subject to the conditions described below, it has been determined that Bank has provided adequate assurances of access to any necessary information that the Board may request.

Based on the foregoing and all the facts of record, Bank's application to establish a branch in New York, New York, is hereby approved.[9] Should any restrictions on access to information on the operations or activities of Bank and its affiliates subsequently interfere with the Board's ability to obtain information to determine and enforce compliance by Bank or its affiliates with applicable federal statutes, the Board may require termination of any of Bank's direct or indirect activities in the United States. Approval of this application also is specifically conditioned on compliance by Bank with the commitments made in connection with this application and with the conditions in this order.[10] For purposes of this action, these commitments and conditions are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under 12 U.S.C. § 1818 and other applicable law.

By order, approved pursuant to authority delegated by the Board, effective November 5, 2008.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

9. Approved by the Director of the Division of Banking Supervision and Regulation, with the concurrence of the General Counsel, pursuant to authority delegated by the Board.

10. The Board's authority to approve the establishment of the proposed branch parallels the continuing authority of the state of New York to license branches of a foreign bank. The Board's approval of this application does not supplant the authority of the state of New York or its agent, the New York State Banking Department ("Department"), to license the proposed branch of Bank in accordance with any terms or conditions that the Department may impose.

China Construction Bank Corporation Beijing, People's Republic of China

Order Approving Establishment of a Branch

China Construction Bank Corporation ("CCB"), Beijing, People's Republic of China, a foreign bank within the meaning of the International Banking Act ("IBA"), has applied under section 7(d) of the IBA[1] to establish a branch in New York, New York. The Foreign Bank Supervision Enhancement Act of 1991, which amended the IBA, provides that a foreign bank must obtain the approval of the Board to establish a branch in the United States.

Notice of the application, affording interested persons an opportunity to comment, has been published in a newspaper of general circulation in New York, New York (*The New York Post*, March 12, 2008). The time for filing comments has expired, and the Board has considered all comments received.

CCB, with total assets of approximately $1.1 trillion, is the second largest bank in China.[2] The government of China owns approximately 57.0 percent of CCB's shares.[3]

1. 12 U.S.C. § 3105(d).
2. Asset and ranking data are as of September 30, 2008.
3. Central SAFE Investments Limited (also known as "Huijin") directly and indirectly owns approximately 57.0 percent of CCB's shares. Huijin is currently owned directly by the government of China and was formed to assist in the restructuring of major Chinese banks. The government transferred shares of several Chinese banks, including CCB, to Huijin at the time of the recapitalization and restructuring of these banks between 2004 and 2006. Huijin also owns a majority interest in Bank of China Limited, which operates three branches in the United States, and, together with the Chinese Ministry of Finance, it owns a majority interest in Industrial and Commercial Bank of China Limited ("ICBC"), which operates a branch in New York. The government of China intends to transfer the ownership of Huijin to

Bank of America Corporation[4] and Temasek Holdings, a sovereign wealth fund owned by the government of Singapore, own 19.1 and 5.7 percent, respectively, of the shares of CCB. No other shareholder owns more than 5 percent of CCB's shares.[5]

CCB engages primarily in corporate and retail banking and treasury operations throughout China, including Hong Kong and Macau. Outside China, CCB operates branches in Singapore, Japan, South Africa, Korea, and Germany and representative offices in the United Kingdom and Australia. In the United States, CCB operates a representative office in New York.[6] CCB would meet the requirements for a qualifying foreign banking organization under Regulation K.[7]

The proposed New York branch would engage in wholesale deposit-taking, lending, trade finance, and other banking services.

Under the IBA and Regulation K, in acting on an application by a foreign bank to establish a branch, the Board must consider whether (1) the foreign bank engages directly in the business of banking outside the United States; (2) has furnished to the Board the information it needs to assess the application adequately; and (3) is subject to comprehensive supervision on a consolidated basis by its home-country supervisors.[8] The Board also considers additional standards as set forth in the IBA and Regulation K.[9]

The IBA includes a limited exception to the general standard relating to comprehensive, consolidated supervision.[10] This exception provides that, if the Board is unable to find that a foreign bank seeking to establish a branch, agency, or commercial lending company is subject to comprehensive supervision or regulation on a consolidated basis by the appropriate authorities in its home country, the Board may nevertheless approve the application provided that (i) the appropriate authorities in the home country of the foreign bank are actively working to establish arrangements for the consolidated supervision of such bank; and (ii) all other factors are consistent with approval.[11] In deciding whether to exercise its discretion to approve an application under authority of this exception, the Board must also consider whether the foreign bank has adopted and implemented procedures to combat money laundering.[12] The Board also may take into account whether the home country of the foreign bank is developing a legal regime to address money laundering or is participating in multilateral efforts to combat money laundering.[13] This is the standard applied by the Board in this case.

As noted above, CCB engages directly in the business of banking outside the United States. CCB also has provided the Board with information necessary to assess the application through submissions that address the relevant issues.

Based on all the facts of record, the Board has determined that CCB's home-country supervisory authority is actively working to establish arrangements for the consolidated supervision of the bank and that considerations relating to the steps taken by CCB and its home jurisdiction to combat money laundering are consistent with approval under this standard. The China Banking Regulatory Commission ("CBRC") is the principal supervisory authority of CCB, including its foreign subsidiaries and affiliates, for all matters other than laws with respect to anti-money laundering.[14] The CBRC has the authority to license banks, regulate their activities and approve expansion, both domestically and abroad. It supervises and regulates CCB, including its subsidiaries and foreign operations, through a com-

China Investment Corporation ("CIC"), an investment fund that is also wholly owned by the government of China. Both CIC and Huijin are non-operating companies that hold investments on behalf of the government of China. Neither CIC nor Huijin engages directly in commercial or financial activities.

Under the IBA, any company that owns a foreign bank with a branch in the United States is subject to the Bank Holding Company Act ("BHC Act") as if it were a bank holding company. As a result of the ownership by Huijin of Bank of China Limited and ICBC, Huijin is subject to the BHC Act. On the transfer of Huijin to CIC, CIC would also become subject to the BHC Act.

The Board has provided certain exemptions to CIC and Huijin under section 4(c)(9) of the BHC Act (12 U.S.C. § 1843(c)(9)), which authorizes the Board to grant exemptions to foreign companies from the nonbanking restrictions of the BHC Act where the exemptions would not be substantially at variance with the purposes of the act and would be in the public interest. The exemptions provided to CIC and Huijin would not extend to CCB or any other Chinese banking subsidiary of CIC or Huijin that operates a branch or agency in the United States. *See* Board letter to H. Rodgin Cohen, dated August 5, 2008.

4. Under the Board's Regulation K, Bank of America Corporation is required to seek the Board's approval to retain its investment in CCB once CCB establishes a branch in the United States.

5. HKSCC Nominees Limited holds 10.8 percent of the shares of CCB as the registered nominee of several shareholders that each owns less than 5 percent of the shares of CCB.

6. CCB represents that the New York representative office would be closed when the branch is established.

7. 12 CFR 211.23(a).

8. 12 U.S.C. §3105(d)(2); 12 CFR 211.24. In assessing this standard, the Board considers, among other indicia of comprehensive, consolidated supervision, the extent to which the home-country supervisors (i) ensure that the bank has adequate procedures for monitoring and controlling its activities worldwide; (ii) obtain information on the condition of the bank and its subsidiaries and offices through regular examination reports, audit reports, or otherwise; (iii) obtain information on the dealings with and relationship between the bank and its affiliates, both foreign and domestic; (iv) receive from the bank financial reports that are consolidated on a worldwide basis or comparable information that permits analysis of the bank's financial condition on a worldwide consolidated basis; and (v) evaluate prudential standards, such as capital adequacy and risk asset exposure, on a worldwide basis. No single factor is essential, and other elements may inform the Board's determination.

9. 12 U.S.C. §3105(d)(3)–(4); 12 CFR 211.24(c)(2)–(3).

10. 12 U.S.C. §3105(d)(6).

11. 12 U.S.C. §3105(d)(6)(A).

12. 12 U.S.C. §3105(d)(6)(B).

13. *Id.*

14. Before April 2003, the People's Bank of China ("PBOC") acted as both China's central bank and primary banking supervisor, including anti-money-laundering matters. In April 2003, the CBRC was established as the primary banking supervisor and assumed the majority of the PBOC's regulatory functions. The PBOC maintained its roles as China's central bank and primary supervisor for anti-money-laundering matters.

bination of targeted on-site examinations and continuous consolidated off-site monitoring. Since its establishment in 2003, the CBRC has enhanced existing supervisory programs and developed new policies and procedures designed to create a framework for the consolidated supervision of banks in China.

On-site examinations by the CBRC cover, among other things, the major areas of operation: corporate governance and senior management responsibilities; capital adequacy; asset structure and asset quality (including the structure and quality of loans); off-balance-sheet activities; earnings; liquidity; liability structure and funding sources; expansionary plans; internal controls (including accounting control and administrative systems); legal compliance; accounting supervision and internal auditing (including accounting control and administrative systems); and any other areas deemed necessary by the CBRC.

Off-site monitoring is conducted through the review of required annual, semiannual, quarterly, or monthly reports on, among other things, asset quality, capital adequacy, liquidity, risk management, corporate governance, affiliate transactions, and internal controls.

CCB is required to be audited annually by an accounting firm approved by the PBOC, and the results are shared with the CBRC and the PBOC. The scope of the required audit includes a review of CCB's financial statements, asset quality, and internal controls. The CBRC may order a special audit at any time. In addition, in connection with its listings on the Shanghai and Hong Kong stock exchanges, CCB is required to have external audits conducted under both International Financial Reporting Standards and generally accepted accounting practices under Chinese law. CCB is required to publish its financial statements annually. CCB conducts internal audits of its offices and operations, including its overseas operations, generally based on an annual schedule. The internal audit results are shared with the CBRC, the PBOC, and the external auditors of CCB. The proposed branch would be subject to internal audits.

Chinese laws impose various prudential limitations on banks, including limits on transactions with affiliates and large exposures. The CBRC is authorized to require any bank to provide information and to impose sanctions for failure to comply. The CBRC also has the power to apply administrative penalties, including warnings, fines, and removal from office, for violations of applicable laws and rules. Criminal violations are transferred to the judicial authorities for investigation and prosecution.

In recent years, the Chinese government has enhanced its anti-money-laundering regime. In 2005, the Chinese government took initial steps to adopt an anti-money-laundering law, the PRC Anti-Money Laundering Law ("AML Law"). The AML Law and two related rules, the Rules for Anti-Money Laundering by Financial Institutions ("AML Rules") and the Administrative Rules for the Reporting of Large Value and Suspicious Transactions by Financial Institutions ("LVT/STR Rules") were enacted in October 2006 and December 2006, respectively. The AML Law and AML Rules became effective on January 1, 2007, and the LVT/STR Rules became effective on March 1, 2007. Together, the law and related rules establish a regulatory infrastructure to assist China's anti-money-laundering effort.

An Anti-Money Laundering Bureau ("AML Bureau") was established within the PBOC in 2003.[15] The AML Bureau coordinates anti-money-laundering efforts at the PBOC and among other agencies. The AML Bureau also supervised the creation of the China Anti-Money Laundering Monitoring and Analysis Center ("AML Center") in September 2004. The AML Center collects, monitors, analyzes, and disseminates suspicious transaction reports and large-value transaction reports. The AML Center sends suspicious transaction reports to the AML Bureau for further investigation. The PBOC issued additional rules in June 2007 providing clarification on reporting suspicious transactions to the AML Center and on customer due diligence and recordkeeping.

China participates in international fora that address the prevention of money laundering and terrorist financing. China is a member of the Financial Action Task Force ("FATF")[16] and is a party to the 1988 U.N. Convention Against the Illicit Traffic of Narcotics and Psychotropic Substances, the U.N. Convention Against Transnational Organized Crime, the U.N. Convention Against Corruption, and the U.N. International Convention for the Suppression of the Financing of Terrorism.

As noted, the PBOC is China's primary supervisor for anti-money-laundering matters. Like the CBRC, the PBOC supervises and regulates CCB through a combination of on-site examinations and off-site monitoring. On-site examinations focus on CCB's compliance with anti-money-laundering laws and rules, including the AML Law, AML Rules, and LVT/STR Rules. Off-site monitoring is conducted through the review of periodic reports. In performing its responsibilities, the PBOC may require any bank to provide information and can impose administrative penalties for violations of applicable laws and rules.

CCB has policies and procedures to comply with Chinese laws and rules regarding anti-money laundering. CCB represents that it has taken additional steps on its own initiative to combat money laundering and other illegal activities. CCB states that it has implemented measures consistent with the recommendations of the FATF and that it has put in place policies, procedures, and controls to ensure ongoing compliance with all statutory and regulatory requirements, including designating anti-money-laundering compliance personnel and conducting routine employee training at all CCB branches. CCB's compliance with anti-money-laundering requirements is monitored by the PBOC and by CCB's internal and external auditors.

The Board also has taken into account the additional standards set forth in section 7 of the IBA and Regula-

15. The AML Bureau conducts administrative investigations and handles violations of AML Rules. Money laundering cases are referred to the Ministry of Public Security, China's main law enforcement body, for investigation and prosecution.

16. China became a member of FATF in June 2007.

tion K.[17] The CBRC has no objection to CCB's establishment of the proposed branch.

The Board has also considered carefully the financial and managerial factors in this case. China has adopted risk-based capital standards that are consistent with those established by the Basel Capital Accord ("Accord"). CCB's capital is in excess of the minimum levels that would be required by the Accord and is considered equivalent to capital that would be required of a U.S. banking organization. Managerial and other financial resources of CCB are consistent with approval, and CCB appears to have the experience and capacity to support the proposed branch. In addition, CCB has established controls and procedures for the proposed branch to ensure compliance with U.S. law. In particular, CCB has stated that it will apply strict anti-money-laundering policies and procedures at the branch consistent with U.S. law and regulation and will establish an internal control system at the branch consistent with U.S. requirements to ensure compliance with those policies and procedures.

With respect to access to information about CCB's operations, the Board has reviewed the restrictions on disclosure in relevant jurisdictions in which CCB operates and has communicated with relevant government authorities regarding access to information. CCB has committed to make available to the Board such information on its operations and any of its affiliates that the Board deems necessary to determine and enforce compliance with the IBA, the BHC Act, and other applicable federal law. To the extent that the provision of such information to the Board may be prohibited by law or otherwise, CCB has committed to cooperate with the Board to obtain any necessary consents or waivers that might be required from third parties for disclosure of such information. In light of these commitments and other facts of record, and subject to the conditions described below, the Board has determined that CCB has provided adequate assurances of access to any necessary information that the Board may request.

On the basis of all the facts of record, and subject to the commitments made by CCB, as well as the terms and conditions set forth in this order, CCB's application to establish a branch is hereby approved. Should any restrictions on access to information on the operations or activities of CCB and its affiliates subsequently interfere with the Board's ability to obtain information to determine and enforce compliance by CCB or its affiliates with applicable federal statutes, the Board may require termination of any of CCB's direct or indirect activities in the United States. Approval of this application also is specifically conditioned on compliance by CCB with the commitments made in connection with this application and with the conditions in this order.[18] The commitments and conditions referred to above are conditions imposed in writing by Board in connection with this decision and may be enforced in proceedings under 12 U.S.C. § 1818 against CCB and its affiliates.

By order of the Board of Governors, effective December 8, 2008.

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Kroszner, and Duke.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

17. *See* 12 U.S.C. § 3105(d)(3)–(4); 12 CFR 211.24(c)(2). The additional standards set forth in section 7 of the IBA and Regulation K include the following (1) whether the bank's home-country supervisor has consented to the establishment of the office; the financial and managerial resources of the bank; (2) whether the appropriate supervisors in the home country may share information on the bank's operations with the Board; and (3) whether the bank and its U.S. affiliates are in compliance with U.S. law; the needs of the community; the bank's record of operation.

18. The Board's authority to approve the establishment of the proposed branch parallels the continuing authority of the state of New York to license offices of a foreign bank. The Board's approval of this application does not supplant the authority of the state of New York or its agent, the New York State Banking Department ("Department"), to license the proposed office of CCB in accordance with any terms or conditions that the Department may impose.

Corpbanca
Santiago, Chile

Order Approving Establishment of a Branch

Corpbanca ("Bank"), Santiago, Chile, a foreign bank within the meaning of the International Banking Act ("IBA"), has applied under section 7(d) of the IBA[1] to establish a federal branch in New York, New York. The Foreign Bank Supervision Enhancement Act of 1991, which amended the IBA, provides that a foreign bank must obtain the approval of the Board to establish a branch in the United States.

Notice of the application, affording interested persons an opportunity to comment, has been published in a newspaper of general circulation in New York, New York (*New York Post*, July 11, 2007). The time for filing comments has expired, and all comments received have been considered.

Bank, with total consolidated assets of approximately $9.7 billion, is the fifth largest bank in Chile.[2] Corp Group Banking S.A., Santiago, owns approximately 49.6 percent of Bank's shares.[3] Two other entities, Compaña Inmobiliaria y de Inversiones Saga S.A. ("Saga") and Inversiones Mineras del Cantabrico S.A., directly own approximately 9.2 percent and 6.6 percent of Bank's shares, respectively.

1. 12 U.S.C. § 3105(d).

2. Asset and ranking data are as of June 30, 2008.

3. Silver Star Securities Ltd. ("Silverstar"), Tortola, British Virgin Islands, indirectly controls all the shares of Corp Group Banking S.A. through two levels of intermediate holding companies. Mr. Alvaro Saieh Bendeck, a citizen of Chile, and his family indirectly own all the shares of Silverstar. Mr. Saieh Bendeck, his wife, and their five children each hold their Silverstar shares through a personal holding company (collectively, "Personal Holding Companies").

The remaining shares of Bank are held by the public. No other shareholder owns more than 5 percent of Bank's shares.

Bank provides a variety of banking services to retail and corporate customers. Bank's subsidiaries engage in insurance brokerage, securities brokerage, mutual fund management, financial advisory services, and legal advisory services. Bank, Silverstar, and the Personal Holding Companies would be qualifying foreign banking organizations under Regulation K.[4]

The proposed New York branch would be Bank's only office outside Chile. It would engage in a wholesale banking business, with a focus on trade finance, lending, and banking services for high-net-worth individuals.

Under the IBA and Regulation K, in acting on an application by a foreign bank to establish a branch, the Board must consider whether the foreign bank (1) engages directly in the business of banking outside of the United States; (2) has furnished to the Board the information it needs to assess the application adequately; and (3) is subject to comprehensive supervision on a consolidated basis by its home-country supervisor.[5] The Board also considers additional standards set forth in the IBA and Regulation K.[6] As noted above, Bank engages directly in the business of banking outside the United States. Bank also has provided the Board with information necessary to assess the application through submissions that address the relevant issues.

With respect to supervision by home-country authorities, the Board previously has determined, in connection with applications involving other banks in Chile, that those banks were subject to comprehensive supervision on a consolidated basis by the Superintendencia de Bancos e Instituciones Financieras ("SBIF"), Bank's primary home-country supervisor.[7] Bank is supervised by the SBIF on substantially the same terms and conditions as those other banks. Based on all the facts of record, it has been determined that Bank is subject to comprehensive supervision on a consolidated basis by its home-country supervisor.[8]

The additional standards set forth in section 7 of the IBA and Regulation K also have been taken into account.[9] The SBIF has no objection to the establishment of the proposed branch.

Chile's risk-based capital standards are consistent with those established by the Basel Capital Accord. Bank's capital is in excess of the minimum levels that would be required by the Basel Capital Accord and is considered equivalent to capital that would be required of a U.S. banking organization. Managerial and other financial resources of Bank are consistent with approval, and Bank appears to have the experience and capacity to support the proposed branch. In addition, Bank has established controls and procedures for the proposed branch to ensure compliance with U.S. law, as well as controls and procedures for its worldwide operations generally.

Chile is a member of GAFISUD (Financial Action Task Force of South America), which is an associate member of the Financial Action Task Force. Chile has enacted laws and created legislative and regulatory standards to deter money laundering. Money laundering is a criminal offense in Chile, and financial institutions are required to establish internal policies, procedures, and systems for the detection and prevention of money laundering throughout their worldwide operations. Bank has policies and procedures to comply with these laws and regulations. Bank's compliance with applicable laws and regulations is monitored by the SBIF and Bank's internal and external auditors.

With respect to access to information about Bank's operations, the restrictions on disclosure in relevant jurisdictions in which Bank operates have been reviewed and relevant government authorities have been communicated with regarding access to information. Bank, Silverstar, and the Personal Holding Companies have committed to make available to the Board such information on the operations of Bank and any of its affiliates that the Board deems

4. 12 CFR 211.23(a).

5. 12 U.S.C. §3105(d)(2); 12 CFR 211.24. In assessing this standard, the Board considers, among other indicia of comprehensive, consolidated supervision, the extent to which the home-country supervisors (i) ensure that the bank has adequate procedures for monitoring and controlling its activities worldwide; (ii) obtain information on the condition of the bank and its subsidiaries and offices through regular examination reports, audit reports, or otherwise; (iii) obtain information on the dealings with and relationship between the bank and its affiliates, both foreign and domestic; (iv) receive from the bank financial reports that are consolidated on a worldwide basis or comparable information that permits analysis of the bank's financial condition on a worldwide consolidated basis; and (v) evaluate prudential standards, such as capital adequacy and risk asset exposure, on a worldwide basis. No single factor is essential, and other elements may inform the Board's determination.

6. 12 U.S.C. §3105(d)(3)–(4); 12 CFR 211.24(c)(2)–(3).

7. *See Banco del Estado de Chile*, 91 *Federal Reserve Bulletin* 442 (2005); *Banco de Chile*, 90 *Federal Reserve Bulletin* 550 (2004); and *Banco de Credito e Inversiones S.A.*, 85 *Federal Reserve Bulletin* 446 (1999). *See also, Banco de Chile*, 80 *Federal Reserve Bulletin* 179 (1994).

8. In reaching this conclusion, the oversight of Bank's parent holding companies has been considered. Bank's parent holding companies are required to provide financial and other relevant information to the SBIF on a regular basis. The SBIF has authority to limit transactions by Bank with its affiliates and can exercise direct supervision over all the subsidiaries of Bank. In addition, the Chilean General Banking Law and the Chilean Corporations Law contain restrictions on transactions with related parties. All the companies controlled by Mr. Saieh Bendeck are considered to be related parties of Bank.

9. *See* 12 U.S.C. §3105(d)(3)–(4); 12 CFR 211.24(c)(2)–(3). These standards include (1) whether the bank's home-country supervisor has consented to the establishment of the office; the financial and managerial resources of the bank; (2) whether the bank has procedures to combat money laundering, whether there is a legal regime in place in the home country to address money laundering, and whether the home country is participating in multilateral efforts to combat money laundering; (3) whether the appropriate supervisors in the home country may share information on the bank's operations with the Board; and (4) whether the bank and its U.S. affiliates are in compliance with U.S. law; the needs of the community; and the bank's record of operation.

necessary to determine and enforce compliance with the IBA, the Bank Holding Company Act, and other applicable federal law. To the extent that the provision of such information to the Board may be prohibited by law or otherwise, Bank, Silverstar, and the Personal Holding Companies have committed to cooperate with the Board to obtain any necessary consents or waivers that might be required from third parties for disclosure of such information. In addition, subject to certain conditions, the SBIF may share information on Bank's operations with other supervisors, including the Board. In light of these commitments and other facts of record, and subject to the condition described below, it has been determined that Bank has provided adequate assurances of access to any necessary information that the Board may request.

Based on the foregoing and all the facts of record, Bank's application to establish the proposed branch is hereby approved.[10] Should any restrictions on access to information on the operations or activities of Bank and its affiliates subsequently interfere with the Board's ability to obtain information to determine and enforce compliance by Bank or its affiliates with applicable federal statutes, the Board may require termination of any of Bank's direct or indirect activities in the United States, or in the case of any such operation licensed by the Office of the Comptroller of the Currency ("OCC"), recommend termination of such operation. Approval of this application also is specifically conditioned on compliance by Bank, Silverstar, and the Personal Holding Companies with the commitments made to the Board in connection with this application and with the conditions in this order.[11] These commitments and conditions are deemed to be conditions imposed in writing by the Board in connection with this decision and, as such, may be enforced in proceedings under applicable law against Bank and its affiliates.

By order, approved pursuant to authority delegated by the Board, effective October 22, 2008.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

10. Approved by the Director of the Division of Banking Supervision and Regulation, with the concurrence of the General Counsel, pursuant to authority delegated by the Board. *See* 12 CFR 265.7(d)(12).

11. The Board's authority to approve the establishment of the proposed branch parallels the continuing authority of the OCC to license offices of a foreign bank. The Board's approval of this application does not supplant the authority of the OCC to license the proposed office of Bank in accordance with any terms or conditions that it may impose.

Monte de Piedad y Caja de Ahorros San Fernando de Huelva, Jerez y Sevilla Seville, Spain

Order Approving Establishment of a Representative Office

Monte de Piedad y Caja de Ahorros San Fernando de Huelva, Jerez y Sevilla ("Bank"), Seville, Spain, a foreign bank within the meaning of the International Banking Act ("IBA"), has applied under section 10(a) of the IBA[1] to establish a representative office in Miami, Florida. The Foreign Bank Supervision Enhancement Act of 1991, which amended the IBA, provides that a foreign bank must obtain the approval of the Board to establish a representative office in the United States.

Notice of the application, affording interested persons an opportunity to comment, has been published in a newspaper of general circulation in Miami (*Miami Herald*, July 25, 2008). The time for filing comments has expired, and all comments received have been considered.

Bank, a savings bank with total consolidated assets of approximately $43.6 billion,[2] is the 15th largest bank in Spain.[3] Bank provides retail banking services through its branch network in Spain and provides corporate banking services to Spanish and foreign corporations. Bank also provides investment services primarily to its retail banking customers and distributes insurance products. Bank currently does not have any offices outside Spain. The proposed representative office would promote and market Bank's products and services, provide support to Spanish companies with respect to their U.S. activities, identify investment projects that could be financed from Spain, and perform other typical representative office functions.[4]

1. 12 U.S.C. §3107(a).

2. Asset data are as of June 30, 2008.

3. Bank has no shareholders. Bank's operations are controlled and governed by a general assembly and a board of directors. The membership of the 320-member general assembly includes representatives of the municipalities in which Bank operates (approximately 22 percent); Bank's depositors (approximately 27 percent); representatives designated by the regional parliament of the Autonomous Community of Andalusia (15 percent); and Bank's employees (15 percent). Bank's board of directors is composed of 40 members, proportionally representing the entities constituting the general assembly.

4. A representative office may engage in representational and administrative functions in connection with the banking activities of the foreign bank, including soliciting new business for the foreign bank; conducting research; acting as a liaison between the foreign bank's head office and customers in the United States; performing preliminary and servicing steps in connection with lending; and

In acting on an application under the IBA and Regulation K by a foreign bank to establish a representative office, the Board shall take into account whether the foreign bank engages directly in the business of banking outside the United States and has furnished to the Board the information it needs to assess the application adequately.[5] The Board shall also take into account whether the foreign bank is subject to comprehensive supervision on a consolidated basis by its home-country supervisor.[6] The Board also considers additional standards set forth in the IBA and Regulation K.[7]

As noted above, Bank engages directly in the business of banking outside the United States. Bank also has provided the Board with information necessary to assess the application through submissions that address the relevant issues.

With respect to supervision by home-country authorities, the Board previously has determined, in connection with applications involving other banks in Spain, that those banks were subject to comprehensive supervision on a consolidated basis by their home-country supervisor, the Bank of Spain.[8] Bank is supervised by the Bank of Spain on substantially the same terms and conditions as those other banks. Based on all the facts of record, it has been determined that Bank is subject to comprehensive supervision on a consolidated basis by its home-country supervisor.

The additional standards set forth in section 7 of the IBA and Regulation K also have been taken into account.[9] With respect to the financial and managerial resources of Bank, taking into consideration its record of operations in its home country, its overall financial resources, and its standing with its home-country supervisor, financial and managerial factors are considered consistent with approval. Bank appears to have the experience and capacity to support the proposed representative office. In addition, Bank has established controls and procedures for the proposed representative office to ensure compliance with U.S. law and for its operations generally. The Bank of Spain has no objection to the establishment of the proposed office.

Spain is a member of the Financial Action Task Force and subscribes to its recommendations on measures to combat money laundering and international terrorism. In accordance with those recommendations, Spain has enacted laws and created legislative and regulatory standards to deter money laundering, terrorist financing, and other illicit activities. Money laundering is a criminal offense in Spain, and Bank is subject to laws that require it to establish internal policies, procedures, and systems for the detection and prevention of money laundering throughout its worldwide operations. Bank has policies and procedures to comply with these laws and regulations that are monitored by governmental entities responsible for anti-money-laundering compliance.

With respect to access to information about Bank's operations, the restrictions on disclosure in relevant jurisdictions in which Bank operates have been reviewed and the relevant government authorities have been communicated with regarding access to information. Bank has committed to make available to the Board such information on the operations of Bank and any of its affiliates that the Board deems necessary to determine and enforce compliance with the IBA, the Bank Holding Company Act of 1956, as amended, and other applicable federal law. To the extent that the provision of such information to the Board may be prohibited by law or otherwise, Bank has committed to cooperate with the Board to obtain any necessary consents or waivers that might be required from third parties for disclosure of such information. In light of these commitments and other facts of record, and subject to the condition described below, it has been determined that Bank has provided adequate assurances of access to any necessary information that the Board may request.

On the basis of the foregoing and all the facts of record, and subject to the commitments made by Bank to the Board, as well as the terms and conditions set forth in this order, Bank's application to establish a representative office in Miami, Florida, is hereby approved.[10] Should any restrictions on access to information regarding the operations or activities of Bank and its affiliates subsequently interfere with the Board's ability to obtain information to determine and enforce compliance by Bank or its affiliates with applicable federal statutes, the Board may require termina-

---

performing back-office functions. A representative office may not contract for any deposit or deposit-like liability, lend money, or engage in any other banking activity (12 CFR 211.24(d)(1)).

5. 12 U.S.C. § 3107(a)(2).

6. *Id.*; 12 CFR 211.24(d)(2). In assessing this standard, the Board considers, among other factors, the extent to which the home-country supervisors (i) ensure that the bank has adequate procedures for monitoring and controlling its activities worldwide; (ii) obtain information on the condition of the bank and its subsidiaries and offices through regular examination reports, audit reports, or otherwise; (iii) obtain information on the dealings with and relationship between the bank and its affiliates, both foreign and domestic; (iv) receive from the bank financial reports that are consolidated on a worldwide basis or comparable information that permits analysis of the bank's financial condition on a worldwide consolidated basis; and (v) evaluate prudential standards, such as capital adequacy and risk exposure on a worldwide basis. These are indicia of comprehensive, consolidated supervision. No single factor is essential, and other elements may inform the Board's determination.

7. *See* 12 U.S.C. § 3105(d)(3)–(4); 12 CFR 211.24(c)(2). These standards include (1) whether the bank's home-country supervisor has consented to the establishment of the office; the financial and managerial resources of the bank; (2) whether the bank has procedures to combat money laundering, whether there is a legal regime in place in the home country to address money laundering, and whether the home country is participating in multilateral efforts to combat money laundering; (3) whether the appropriate supervisors in the home country may share information on the bank's operations with the Board; and (4) whether the bank and its U.S. affiliates are in compliance with U.S. law; the needs of the community; and the bank's record of operation.

8. *See Caja de Ahorros del Mediterráneo*, 92 *Federal Reserve Bulletin* C133 (2006); *Caja de Ahorros de Galicia, Caixa Galicia*, 92 *Federal Reserve Bulletin* C132 (2006); *Banco Popular Español S.A.*, 92 *Federal Reserve Bulletin* C130 (2006).

9. *See supra* note 7.

10. Approved by the Director of the Division of Banking Supervision and Regulation, with the concurrence of the General Counsel, pursuant to authority delegated by the Board. *See* 12 CFR 265.7(d)(12).

tion of any of Bank's direct or indirect activities in the United States. Approval of this application also is specifically conditioned on compliance by Bank with the commitments made in connection with this application and with the conditions in this order.[11] The commitments and conditions referred to above are conditions imposed in writing by the Board in connection with this decision and may be enforced in proceedings under applicable law against Bank and its affiliates.

By order, approved pursuant to authority delegated by the Board, effective December 19, 2008.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

FINAL ENFORCEMENT DECISION ISSUED BY THE BOARD

IN THE MATTER OF

Kelly M. Dulaney, A former Institution-Affiliated Party of Fifth Third Bank, Grand Rapids, Michigan, Respondent.

Docket Nos. 08-008-B-I, 08-008-E-I

FINAL DECISION

This is an administrative proceeding pursuant to the Federal Deposit Insurance Act ("the FDI Act") in which the Board Enforcement Counsel seeks to prohibit the Respondent, Kelly M. Dulaney ("Respondent"), from further participation in the affairs of any financial institution and to require her to pay restitution based on actions she took while employed at Fifth Third Bank, Grand Rapids, Michigan (the "Bank").

Upon review of the administrative record, the Board issues this Final Decision adopting the Recommended Decision ("Recommended Decision") of Administrative Law Judge C. Richard Miserendino (the "ALJ"), and orders the issuance of the attached Order of Prohibition and to Cease and Desist.

I. STATEMENT OF THE CASE

A. Statutory and Regulatory Framework

Under the FDI Act and the Board's regulations, the ALJ is responsible for conducting proceedings on a notice of charges relating to a proposed order requiring payment of restitution or prohibition from banking (12 U.S.C. §§ 1818(b), 1818(e)(4)). The ALJ issues a recommended decision that is referred to the Board together with any exceptions to those recommendations filed by the parties. The Board makes the final findings of fact, conclusions of law, and determination whether to issue the requested orders (12 CFR 263.38).

The FDI Act sets forth the substantive basis upon which a federal banking agency may issue against a bank official or employee an order of prohibition from further participation in banking. To issue such an order, the Board must make each of three findings (1) that the respondent engaged in identified *misconduct*, including a violation of law or regulation, an unsafe or unsound practice, or a breach of fiduciary duty; (2) that the conduct had a specified *effect*, including financial loss to the institution or gain to the respondent; and (3) that the respondent's conduct involved either personal dishonesty or a willful or continuing disregard for the safety or soundness of the institution (12 U.S.C. § 1818(e)(1)(A)–(C)).

The FDI Act also spells out the requirements for an order requiring restitution, which is a type of cease-and-desist order under the Act. Specifically, a cease-and-desist order may be imposed when the agency has reasonable cause to believe that the respondent has engaged or is about to engage in an unsafe or unsound practice in conducting the business of a depository institution, or that the respondent has violated or is about to violate a law, rule, or regulation or condition imposed in writing by the agency (12 U.S.C. § 1818(b)(1)). Such an order may require the respondent to make restitution if the respondent was "unjustly enriched" in connection with the violation or practice, or the violation or practice in involved "reckless disregard" of the law or applicable regulations or a prior agency order (12 U.S.C. § 1818(b)(6)(A)).

An enforcement proceeding is initiated by filing and serving on the respondent a notice of charges setting forth the basis for relief and the relief sought. Under the Board's regulations, the respondent must file an answer within 20 days of service of the notice (12 CFR 263.19(a)). Failure to file an answer constitutes a waiver of the respondent's right to contest the allegations in the notice, and a final order may be entered unless good cause is shown for failure to file a timely answer (12 CFR 263.19(c)(1)).

B. Procedural History

On April 11, 2008, the Board issued a Notice of Intent to Prohibit and Notice of Charges and of Hearing ("Notice") that sought an order of prohibition against Respondent based on her conduct while employed at the Bank and an order requiring her to make restitution to the Bank. Enforcement Counsel sent the Notice to Respondent by Federal Express and by certified mail on the date of issuance, but both copies were returned stating that Respondent had moved and left no forwarding address. At the direction of Enforcement Counsel, a licensed process server personally served the Notice on Respondent on June 4,

11. The Board's authority to approve the establishment of the proposed representative office parallels the continuing authority of the State of Florida to license offices of a foreign bank. The Board's approval of this application does not supplant the authority of the State of Florida or its agent, the Florida Office of Financial Regulation, to license the proposed representative office of Bank in accordance with any terms or conditions that it may impose.

2008. The Notice directed Respondent to file a written answer within 20 days of the date of service of the Notice in accordance with 12 CFR 263.19, and warned that failure to do so would constitute a waiver of her right to appear and contest the allegations. Nonetheless, Respondent failed to file an answer within the 20-day period or thereafter.

On July 11, 2008, Enforcement Counsel filed a Motion for Entry of an Order of Default against Respondent. On July 28, 2008, the ALJ issued an Order to Show Cause, providing Respondent until August 18, 2008, to show cause why a timely answer to the Notice was not filed and why a default judgment granting the relief requested in the Notice should not be entered against Respondent. The Order was delivered by overnight delivery to Respondent's address. To date, Respondent has not filed any reply to the Order to Show Cause or answered the Notice.

C. Respondent's Actions

The Notice alleges that Respondent was employed as a customer service manager at the Port Orange, Florida, branch location of the Bank and its predecessors from no later than April 2004 through August 2006, when she resigned from the Bank. Her responsibilities included maintaining relationships with customers, creating certain accounting entries, and reconciling the Bank's cash items account. The cash items account was a general ledger account where "rejected items," such as deposit tickets with incorrect account numbers, were sent for reconciliation. Respondent had complete control over the cash items account until shortly before she resigned.

By virtue of her responsibilities, Respondent was able to falsify Bank debit and credit tickets and customer checks to make unauthorized withdrawals from the certificate of deposit ("CD") accounts of three of the Bank's customers, using the proceeds for her own purposes. She concealed her activity by making unauthorized transfers between the CD accounts of the customers and the general ledger account. When one of the Bank's customers sought to roll over a matured CD into a new CD, Respondent provided the customer with a CD account receipt and subsequently requested that the CD be purged from the Bank's records in order to conceal her activity.

Respondent's actions were discovered when that customer asked the Bank about the status of his CD accounts and learned that one account had no remaining funds and the other CD account had been purged. Respondent resigned several months before the customer's inquiry and before the Bank's discovery of her defalcation. The Bank restored its customer's accounts with interest for the amounts defalcated by Respondent. As a result of these actions, the Bank's total loss was approximately $203,923.

II. DISCUSSION

The Board's Rules of Practice and Procedure set forth the requirements of an answer and the consequences of a failure to file an answer to a Notice. Under the Rules, failure to file a timely answer "constitutes a waiver of [a respondent's] right to appear and contest the allegations in the notice" (12 CFR 263.19(c)). If the ALJ finds that no good cause has been shown for the failure to file, the judge "shall file . . . a recommended decision containing the findings and the relief sought in the notice." *Id.* An order based on a failure to file a timely answer is deemed to be issued by consent. *Id.*

In this case, Respondent failed to file an answer to the Notice despite notice to her of the consequences of such failure, and also failed to respond to the ALJ's Order to Show Cause. Respondent's failure to file an answer constitutes a default.

Respondent's default requires the Board to consider the allegations in the Notice as uncontested. The allegations in the Notice, described above, meet all the criteria for entry of an order of prohibition under 12 U.S.C. § 1818(e). It was a breach of fiduciary duty, unsafe and unsound practice, and violation of law, for Respondent to falsify Bank debit and credit tickets and customer checks to make unauthorized withdrawals from the CD accounts of the Bank's customers and to manipulate the Bank's systems and records to conceal her actions. Respondent's actions resulted in loss to the Bank and financial gain to the Respondent, in that the Respondent used the proceeds for her own purposes and the Bank was forced to repay its customer for the amounts defalcated by Respondent. Finally, such actions also exhibit personal dishonesty and willful or continuing disregard for the safety and soundness of the Bank.

For the same reasons, the allegations in the Notice meet all the criteria for the entry of an order requiring restitution. Respondent engaged in unsafe or unsound practices and violations of law when she falsified Bank debit and credit tickets and customer checks to make unauthorized withdrawals from the CD accounts of the Bank's customers and manipulated the Bank's systems and records to conceal her actions, and she was unjustly enriched by her actions in that she used the proceeds of her defalcation for her own purposes. Respondent's unsafe or unsound practices and violations of law also involved a reckless disregard for the law.

Accordingly, the requirements for an order of prohibition and for an order for restitution have been met and the Board hereby issues such an order.

CONCLUSION

For these reasons, the Board orders the issuance of the attached Order of Prohibition and Order to Cease and Desist.

By Order of the Board of Governors, this 15th day of December, 2008.

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

ORDER OF PROHIBITION AND TO CEASE AND DESIST

Whereas, pursuant to sections 8(b) and 8(e) of the Federal Deposit Insurance Act, as amended, (the "FDI Act") (12 U.S.C. § 1818(b) and (e)), the Board of Governors of the Federal Reserve System ("the Board") is of the opinion, for the reasons set forth in the accompanying Final Decision, that a final Order of Prohibition and to Cease and Desist should issue against KELLY M. DULANEY ("Dulaney"), a former employee and institution-affiliated party, as defined in Section 3(u) of the FDI Act (12 U.S.C. § 1813(u)), of Fifth Third Bank, Grand Rapids, Michigan (the "Bank").

NOW, THEREFORE, IT IS HEREBY ORDERED, pursuant to section 8(e) of the FDI Act, 12 U.S.C. § 1818(e), that:

1. In the absence of prior written approval by the Board, and by any other federal financial institution regulatory agency where necessary pursuant to section 8(e)(7)(B) of the FDI Act (12 U.S.C. § 1818(e)(7)(B)), Dulaney is hereby prohibited:
   (a) from participating in any manner in the conduct of the affairs of any institution or agency specified in section 8(e)(7)(A) of the FDI Act (12 U.S.C. § 1818(e)(7)(A)), including, but not limited to, any insured depository institution, any insured depository institution holding company or any U.S. branch or agency of a foreign banking organization;
   (b) from soliciting, procuring, transferring, attempting to transfer, voting or attempting to vote any proxy, consent or authorization with respect to any voting rights in any institution described in subsection 8(e)(7)(A) of the FDI Act (12 U.S.C. § 1818(e)(7)(A));
   (c) from violating any voting agreement previously approved by any federal banking agency; or
   (d) from voting for a director, or from serving or acting as an institution-affiliated party as defined in section 3(u) of the FDI Act (12 U.S.C. § 1813(u)), such as an officer, director, or employee in any institution described in section 8(e)(7)(A) of the FDI Act (12 U.S.C. § 1818(e)(7)(A)).
2. (a) Dulaney shall make restitution to the Bank in the sum of $203,923 for its loss as a result of Dulaney's violations of law and unsafe or unsound practices;
   (b) the restitution shall be remitted in full, payable to the "Board of Governors of the Federal Reserve System" and forwarded to Jennifer J. Johnson, Secretary of the Board, Board of Governors of the Federal Reserve System, Washington, DC 20551, who shall make remittance of the same to the Bank.
3. Any violation of this Order shall separately subject Dulaney to appropriate civil or criminal penalties or both under section 8 of the FDI Act (12 U.S.C. § 1818).
4. This Order, and each and every provision hereof, is and shall remain fully effective and enforceable until expressly stayed, modified, terminated, or suspended in writing by the Board.

This Order is effective upon service on the Respondent.

By Order of the Board of Governors, this 15th day of December, 2008.

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

Legal Developments: First Quarter, 2009

ORDERS ISSUED UNDER BANK HOLDING COMPANY ACT

Orders Issued under Section 3 of the Bank Holding Company Act

Protective Life Corporation Birmingham, Alabama

Order Approving Formation of Bank Holding Company

Protective Life Corporation ("Protective Life") has requested the Board's approval under section 3 of the Bank Holding Company Act ("BHC Act")[1] to become a bank holding company by acquiring all the shares of Bonifay Holding Company, Inc. ("BHCI") and its subsidiary bank, the Bank of Bonifay ("Bank"), both of Bonifay, Florida.

Notice of the proposal under section 3 of the BHC Act, affording interested persons an opportunity to submit comments, has been published (73 *Federal Register* 69,663 (2008)). The time for filing comments has expired, and the Board has considered the proposal and all comments received in light of the factors set forth in section 3 of the BHC Act.

Protective Life, with total consolidated assets of $41.1 billion, is an insurance and financial services firm engaged principally in the business of underwriting life and property insurance.[2] Protective Life also offers annuity and other investment products and related services.

Bank, which is the primary asset of BHCI, has total consolidated assets of $220.0 million and is the 143rd largest depository institution in Florida. It controls deposits of approximately $209.4 million in the state, which represents less than 1 percent of the total amount of deposits of insured depository institutions in the state.[3]

1. 12 U.S.C. § 1842.
2. Asset data for Protective Life are as of September 30, 2008.
3. Asset data for Bank are as of September 30, 2008, and deposit and ranking data are as of June 30, 2008.

Factors Governing Board Review of the Proposed Bank Holding Company

The BHC Act sets forth the factors the Board must consider when reviewing the formation of a bank holding company or the acquisition of a bank. These factors are the competitive effects of the proposal in the relevant geographic markets; the financial and managerial resources and future prospects of the companies and banks involved in the proposal; the convenience and needs of the community to be served, including the records of performance under the Community Reinvestment Act ("CRA")[4] of the insured depository institutions involved in the transaction; and the availability of information needed to determine and enforce compliance with the BHC Act and other applicable federal banking laws.[5]

Competitive Considerations

Section 3 of the BHC Act prohibits the Board from approving a proposal that would result in a monopoly. The BHC Act also prohibits the Board from approving a proposed bank acquisition that would substantially lessen competition in any relevant banking market unless the anticompetitive effects of the proposal are clearly outweighed in the public interest by the probable effect of the proposal in meeting the convenience and needs of the community to be served.[6]

The proposal involves the acquisition of a bank by Protective Life, which does not own a commercial bank or savings association. Based on all the facts of record, the Board concludes that consummation of the proposal would not result in any significantly adverse effects on competition or on the concentration of banking resources in any relevant banking market and that the competitive factors are consistent with approval of the proposal.

4. 12 U.S.C. § 2901 et seq.
5. In cases involving interstate bank acquisitions by bank holding companies, the Board also must consider the concentration of deposits in the nation and relevant individual states, as well as compliance with the other provisions of section 3(d) of the BHC Act. Because the proposed transaction does not involve an interstate bank acquisition by a bank holding company, the provisions of section 3(d) of the BHC Act do not apply in this case.
6. 12 U.S.C. § 1842(c)(1).

FINANCIAL, MANAGERIAL, AND SUPERVISORY CONSIDERATIONS

Section 3 of the BHC Act requires the Board to consider the financial and managerial resources and future prospects of the companies and banks involved in a proposal and certain other supervisory factors.[7] The Board has carefully considered these factors in light of all the facts of record, including supervisory and examination information received from the relevant federal and state supervisors of the organizations involved in the proposal, publicly reported and other available financial information, and information provided by Protective Life. In addition, the Board has consulted with the Federal Deposit Insurance Corporation ("FDIC"), the primary federal supervisor of Bank, about the proposal's effect on the financial and managerial resources and future prospects of Bank.

In evaluating financial factors, the Board consistently has considered capital adequacy to be an especially important aspect. Protective Life is well capitalized, and all entities of Protective Life that are subject to regulatory capital requirements currently have capital levels that exceed those relevant minimum requirements. Although Bank reports capital ratios that meet the well-capitalized standards under applicable federal guidelines, Bank's capital level is not considered sufficient given its current risk profile.[8] Bank's financial position would be improved, however, through this transaction because a significant portion of Bank's assets to be chosen by Protective Life would be retained by BHCI's existing shareholders. Protective Life would remain well capitalized on consummation of the proposal. Based on its review of the record, the Board finds that Protective Life has sufficient resources to effect the proposal and that all other financial factors are consistent with approval.

In addition, the Board has carefully considered the managerial resources of Protective Life in light of all the facts of record, including confidential supervisory and examination information and information provided by Protective Life. The Board has considered the supervisory experience of the relevant state supervisory agencies of Protective Life and considered information submitted by state insurance regulators in response to requests by the Board. The Board has likewise considered its supervisory experience with BHCI and the supervisory experience of the relevant federal and state supervisory agencies of Bank and Bank's record of compliance with applicable banking law and anti-money-laundering laws. In addition, the Board has carefully considered information from Protective Life about its business plans for BHCI and Bank, and the actions it is taking and proposing to take to strengthen the organization's risk-management infrastructure.

Based on all the facts of record, the Board concludes that considerations relating to the financial and managerial resources and future prospects of the organizations involved are consistent with approval, as are the other supervisory factors under the BHC Act.

The Board notes further that a substantial proportion of Protective Life's activities are conducted in subsidiaries that are subject to functional regulation by state insurance commissions or by the Securities and Exchange Commission ("SEC"). The Board will, consistent with the provisions of section 5 of the BHC Act, as amended by the Gramm-Leach-Bliley Act, rely on the appropriate state insurance regulators and the SEC for examination and other supervisory information to the extent appropriate in fulfilling the Board's responsibilities as the holding company's supervisor.

CONVENIENCE AND NEEDS AND CRA PERFORMANCE CONSIDERATIONS

In acting on a proposal under section 3 of the BHC Act, the Board must consider the effects of the proposal on the convenience and needs of the communities to be served and take into account the records of the relevant depository institutions under the CRA.[9] The Board has carefully considered the convenience and needs factor and the CRA performance records of Bank in light of all the facts of record. As provided in the CRA, the Board evaluates the record of performance of an institution in light of examinations by the appropriate federal supervisors of the CRA performance records of the relevant institutions.[10] Bank received a "satisfactory" rating under the CRA at its most recent performance evaluation by the FDIC, as of October 1, 2004 (the "FDIC Examination"). The FDIC Examination indicated that Bank's loans were reasonably dispersed among borrowers of different incomes and businesses of different sizes and that its average loan-to-deposit ratio was excellent in light of Bank's capacity and lending opportunities within the assessment area. Protective Life has represented that consummation of the proposal would permit Bank to continue its existing CRA programs and strengthen its ability to service low- and moderate-income communities. Based on a review of the entire record, the Board has concluded that considerations relating to convenience and needs considerations and the CRA performance record of Bank are consistent with approval of the proposal.

NONBANKING ACTIVITIES

Protective Life engages in insurance and securities activities that are only permissible for a bank holding company that elects to become a financial holding company[11] and in activities that may not conform to the requirements of the BHC Act. Section 4 of the BHC Act by its terms provides

7. 12 U.S.C. § 1842(c)(2) and (3).

8. Bank is subject to a cease and desist order from the Florida Office of Financial Regulation.

9. 12 U.S.C. §2903; 12 U.S.C. § 1842(c)(2).

10. The Interagency Questions and Answers Regarding Community Reinvestment provide that a CRA examination is an important and often controlling factor in the consideration of an institution's CRA record. *See* 74 *Federal Register* 498 at 527 (2009).

11. *See* 12 U.S.C. § 1843(k).

any company that becomes a bank holding company two years within which to conform its existing nonbanking investments and activities to the section's requirements, with the possibility of three one-year extensions.[12] Protective Life must conform any impermissible nonfinancial activities to the BHC Act and investments that it currently conducts or holds, directly or indirectly, within the time requirements of the act. Protective Life should be able to conform the majority of its activities to the requirements of the BHC Act by filing an effective election to become a financial holding company under section 4(*l*) of the BHC Act.[13]

CONCLUSION

Based on the foregoing and all the facts of record, the Board has determined that the application under section 3 of the BHC Act should be, and hereby is, approved. In reaching its conclusion, the Board has considered all the facts of record in light of the factors that the Board is required to consider under the BHC Act and other applicable statutes. The Board's approval is specifically conditioned on compliance by Protective Life with the conditions imposed in this order and all the commitments it made to the Board in connection with the application. For purposes of this action, the conditions and commitments are deemed to be conditions imposed in writing by the Board in connection with its findings and decision herein and, as such, may be enforced in proceedings under applicable law.

The proposed transaction may not be consummated before the 15th calendar day after the effective date of this order, or later than three months after the effective date of this order, unless such period is extended for good cause by the Board or by the Federal Reserve Bank of Atlanta, acting pursuant to delegated authority.

By order of the Board of Governors, effective January 15, 2009.

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Kroszner, and Duke.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

12. *See* 12 U.S.C. § 1843(a)(2).

13. 12 U.S.C. 1843(*l*)(1); 12 CFR 225.82.

Southern BancShares (N.C.), Inc. Mount Olive, North Carolina

Order Approving the Acquisition of Shares of a Bank Holding Company

Southern BancShares (N.C.), Inc. ("Southern"), a bank holding company within the meaning of the Bank Holding Company Act ("BHC Act"), has requested the Board's approval under section 3 of the BHC Act[1] to increase its ownership interest to 9.9 percent of the voting shares of ECB Bancorp, Inc. ("ECB") and thereby increase its indirect interest in ECB's subsidiary bank, The East Carolina Bank ("East Carolina Bank"), both of Engelhard, North Carolina. Southern currently owns 4.9 percent of ECB's voting shares.

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (73 *Federal Register* 78,359 (2008)). The time for filing comments has expired, and the Board has considered the application and all comments received in light of the factors set forth in section 3 of the BHC Act.

Southern, with total banking assets of approximately $1.2 billion, controls one depository institution, Southern Bank and Trust Company ("Southern Bank"), Mount Olive, that operates only in North Carolina. Southern Bank is the 17th largest insured depository institution in North Carolina, controlling deposits of approximately $1.01 billion, which represent less than 1 percent of the total amount of deposits of insured depository institutions in the state ("state deposits").[2]

East Carolina Bank, with total assets of approximately $738 million, is the 33rd largest insured depository institution in North Carolina. The bank operates only in North Carolina and controls deposits of approximately $588.9 million. If Southern were deemed to control ECB on consummation of the proposal,[3] Southern would become the seventh largest banking organization in North Carolina, controlling approximately $1.6 billion in deposits, which would represent less than 1 percent of state deposits.

Southern has stated that it does not propose to control or exercise a controlling influence over ECB and that its indirect investment in East Carolina Bank would also be a passive investment. In this light, Southern has agreed to abide by certain commitments on which the Board has previously relied in determining that an investing bank holding company would not be able to exercise a control-

1. 12 U.S.C. § 1842.

2. Asset data are as of June 30, 2008; statewide deposit and ranking data are also as of June 30, 2008, and reflect merger and acquisition activity through that date. In this context, insured depository institutions include commercial banks, savings banks, and savings associations.

3. Although the acquisition of less than a controlling interest in a bank or bank holding company is not a normal acquisition for a bank holding company, the requirement in section 3(a)(3) of the BHC Act that the Board's approval be obtained before a bank holding company acquires more than 5 percent of the voting shares of a bank suggests that Congress contemplated the acquisition by bank holding companies of between 5 percent and 25 percent of the voting shares of banks. *See* 12 U.S.C. § 1842(a)(3). On this basis, the Board previously has approved the acquisition by a bank holding company of less than a controlling interest in a bank or bank holding company. *See, e.g., Penn Bancshares, Inc.*, 92 *Federal Reserve Bulletin* C37 (2006) (acquisition of up to 24.89 percent of the voting shares of a bank holding company); *S&T Bancorp Inc.*, 91 *Federal Reserve Bulletin* 74 (2005) (acquisition of up to 24.9 percent of a bank holding company); *Brookline Bancorp, MHC*, 86 *Federal Reserve Bulletin* 52 (2000) (acquisition of up to 9.9 percent of the voting shares of a bank holding company).

ling influence over another bank holding company or bank for purposes of the BHC Act ("Passivity Commitments").[4] For example, Southern has committed not to exercise or attempt to exercise a controlling influence over the management or policies of ECB or any of its subsidiaries; not to have or seek to have any employee or representative of Southern or its affiliates serve as an officer, agent, or employee of ECB or any of its subsidiaries; and not to seek or accept representation on the board of directors of ECB or any of its subsidiaries. Southern has additionally committed not to enter into any agreement with ECB or any of its subsidiaries that substantially limits the discretion of ECB's management over major policies or decisions.

Based on these considerations and all the other facts of record, the Board has concluded that Southern would not acquire control of, or have the ability to exercise a controlling influence over, ECB or East Carolina Bank through the proposed acquisition of the ECB's voting shares. The Board notes that the BHC Act would require Southern to file an application and receive the Board's approval before the company could directly or indirectly acquire additional shares of ECB or attempt to exercise a controlling influence over ECB or East Carolina Bank.[5]

COMPETITIVE CONSIDERATIONS

The Board has considered carefully the competitive effects of the proposal in light of all the facts of record. Section 3 of the BHC Act prohibits the Board from approving a proposal that would result in a monopoly or would be in furtherance of an attempt to monopolize the business of banking in any relevant banking market. The BHC Act also prohibits the Board from approving a bank acquisition that would substantially lessen competition in any relevant banking market, unless the anticompetitive effects of the proposal are clearly outweighed in the public interest by the probable effect of the proposal in meeting the convenience and needs of the community to be served.[6]

Southern Bank and East Carolina Bank compete directly in six banking markets in North Carolina. The Board has reviewed carefully the competitive effects of the proposal in this banking market in light of all the facts of record. In particular, the Board has considered the number of competitors that would remain in the banking markets; the relative shares of total deposits in depository institutions in the markets ("market deposits") controlled by Southern Bank and East Carolina Bank;[7] the concentration level of market deposits and the increase in the level as measured by the Herfindahl–Hirschman Index ("HHI") under the Department of Justice Merger Guidelines ("DOJ Guidelines");[8] other characteristics of the market; and the Passivity Commitments made by Southern with respect to ECB and East Carolina Bank.

A. Banking Markets within Established Guidelines

Consummation of the proposal would be consistent with Board precedent and within the thresholds in the DOJ Guidelines in five of the banking markets in which Southern Bank and East Carolina Bank directly compete.[9] On consummation of the proposal, four markets would remain highly concentrated, and one market would remain moderately concentrated, as measured by the HHI. The change in HHI in the four highly concentrated markets would be consistent with Board precedent and the thresholds in the DOJ Guidelines. In each of the five banking markets, a number of competitors would remain.

B. Banking Market Warranting Special Scrutiny

Southern Bank and East Carolina Bank compete directly in one banking market in North Carolina that warrants a detailed review: the Washington County banking market.[10] In this banking market, the concentration levels on consummation of the proposal would exceed the threshold levels in the DOJ Guidelines. Southern Bank is the fifth largest depository institution in the market, controlling \$11.8 million in deposits, which represents 8.9 percent of market deposits. East Carolina Bank is the third largest depository institution in the market, controlling \$24.2 million in deposits, which represents 18.3 percent of market deposits. If considered a combined organization on consummation of the proposal, Southern Bank and East Carolina Bank would be the second largest depository organization in the Washington County banking market, controlling \$36 million in deposits, which would represent approximately 27.2 percent of market deposits. The proposal would exceed the DOJ Guidelines because the HHI for the Washington County banking market would increase 326 points to 2609.

4. The commitments made by Southern are set forth in Appendix A.

5. *See, e.g., Emigrant Bancorp, Inc.*, 82 *Federal Reserve Bulletin* 555 (1996); *First Community Bancshares, Inc.*, 77 *Federal Reserve Bulletin* 50 (1991).

6. 12 U.S.C. § 1842(c)(1).

7. Deposit and market share data are as of June 30, 2008, and are based on calculations in which the deposits of thrift institutions are included at 50 percent. The Board previously has indicated that thrift institutions have become, or have the potential to become, significant competitors of commercial banks. *See, e.g., Midwest Financial Group*, 75 *Federal Reserve Bulletin* 386, 387 (1989); *National City Corporation*, 70 *Federal Reserve Bulletin* 743, 744 (1984). The Board regularly has included thrift institution deposits in the market share calculation on a 50 percent weighted basis. *See, e.g., First Hawaiian, Inc.*, 77 *Federal Reserve Bulletin* 52, 55 (1991).

8. Under the DOJ Guidelines, a market is considered unconcentrated if the post-merger HHI is under 1000, moderately concentrated if the post-merger HHI is between 1000 and 1800, and highly concentrated if the post-merger HHI exceeds 1800. The Department of Justice ("DOJ") has informed the Board that a bank merger or acquisition generally will not be challenged (in the absence of other factors indicating anticompetitive effects) unless the post-merger HHI is at least 1800 and the merger increases the HHI more than 200 points. The DOJ has stated that the higher-than-normal HHI thresholds for screening bank mergers and acquisitions for anticompetitive effects implicitly recognize the competitive effects of limited-purpose and other nondepository financial entities.

9. These banking markets and the effects of the proposal on their concentrations of banking resources are described in Appendix B.

10. The Washington County banking market includes Washington County, North Carolina.

The market indexes suggest that consummation of the proposal would raise competitive issues in the Washington County banking market. After careful analysis of the record, however, the Board has concluded that no significant reduction in competition is likely to result from Southern's proposed indirect investment in East Carolina Bank. Of particular significance in this case is the structure of the proposed investment and the commitments Southern has provided to the Board, which are designed to limit the ability of Southern to use its proposed investment to engage in any anticompetitive behavior.

The Board previously has noted that one company need not acquire control of another company to lessen competition between them substantially and has recognized that a significant reduction in competition can result from the sharing of nonpublic financial information between two organizations that are not under common control. In each case, the Board analyzes the specific facts to determine whether the minority investment in a competitor would result in significant adverse competitive effects in a banking market.[11]

The Board has concluded, after careful analysis of the entire record, that no significant reduction in competition will likely result from Southern's proposed minority investment in ECB. As noted, Southern has committed not to exercise a controlling influence over ECB or East Carolina Bank and not to seek or accept representation on the board of directors of ECB or East Carolina Bank. Southern also has committed not to acquire or seek to acquire nonpublic financial information from ECB or East Carolina Bank. These commitments are designed to prevent anticompetitive behavior that otherwise might occur through either influencing the behavior of ECB or East Carolina Bank or the coordination of Southern's activities with those of ECB or East Carolina Bank. In addition, there are no legal, contractual, or statutory provisions that would otherwise allow Southern to have any access to financial information of ECB or East Carolina Bank beyond the information already available to it as a shareholder with a less than 5 percent interest. These limitations restrict Southern's access to confidential information that could enable it to engage in anticompetitive behavior in the Washington County banking market with respect to East Carolina Bank.

The Board also has considered additional facts indicating that the proposal is not likely to have a significantly adverse effect on competition in the Washington County banking market. In addition to Southern Bank and East Carolina Bank, three other bank competitors, each with market shares of at least 15 percent, provide additional sources of banking services to the market. The Board also notes that the market includes one community credit union with broad membership criteria that include most of the residents in the market, offers a wide range of consumer banking products, and operates street-level branches with drive-up service lanes.[12]

C. Views of Other Agencies and Conclusion on Competitive Considerations

The DOJ also has reviewed the proposal and has advised the Board that it does not believe that the acquisition would likely have a significantly adverse effect on competition in any relevant banking market. The appropriate banking agencies have been afforded an opportunity to comment and have not objected to the proposal.

Accordingly, in light of all the facts of record, the Board concludes that consummation of the proposal would not have a significantly adverse effect on competition or on the concentration of resources in any relevant banking market and that competitive considerations are consistent with approval.

FINANCIAL, MANAGERIAL, AND SUPERVISORY CONSIDERATIONS

Section 3 of the BHC Act requires the Board to consider the financial and managerial resources and future prospects of the companies and depository institutions involved in the proposal and certain other supervisory factors. The Board has considered these factors in light of all the facts of record, including confidential reports of examination, other supervisory information from the primary supervisors of the organizations involved in the proposal, publicly reported and other financial information, and information provided by Southern.

In evaluating financial factors in expansion proposals by banking organizations, the Board reviews the financial condition of the organizations involved on both a parent-only and consolidated basis, as well as the financial condition of the subsidiary banks and significant nonbanking operations. The Board also evaluates the financial condition of the combined organization, including its capital position, asset quality, and earnings prospects, and the impact of the proposed funding of the transaction. In assessing financial factors, the Board consistently has considered capital adequacy to be especially important.

The Board has carefully considered the financial factors of the proposal. Southern and Southern Bank are well capitalized and would remain so on consummation of the proposal. Based on its review of the record, the Board also finds that Southern has sufficient financial resources to effect the proposal and that the financial resources of Southern and its subsidiaries would not be adversely

11. *See, e.g., The Bank of Nova Scotia*, 93 *Federal Reserve Bulletin* C136 (2007); *Passumpsic Bancorp*, 92 *Federal Reserve Bulletin* C175 (2006) ("Passumpsic"); *BOK Financial Corp.*, 81 *Federal Reserve Bulletin* 1052, 1053–54 (1995); *Sun Banks, Inc.*, 71 *Federal Reserve Bulletin* 243 (1985).

12. The Board previously has considered competition from certain active credit unions as a mitigating factor. *See Passumpsic* at C177; *Capital City Group, Inc.*, 91 *Federal Reserve Bulletin* 418 (2005); *F.N.B. Corporation*, 90 *Federal Reserve Bulletin* 481 (2004); *Gateway Bank & Trust Co.*, 90 *Federal Reserve Bulletin* 547 (2004). If Southern Bank and East Carolina Bank were considered as a combined organization on consummation of the proposal, the HHI for the Washington County banking market would increase 263 points to 2209 when the deposits of the credit union are weighted at 50 percent.

affected by the proposal. The proposed transaction would be funded by a dividend from Southern Bank and by Southern's existing financial resources.

The Board also has considered the managerial resources of Southern, ECB, and their subsidiary banks. The Board has reviewed the examination records of these institutions, including assessments of their management, risk-management systems, and operations. In addition, the Board has considered its supervisory experiences and those of other relevant banking supervisory agencies with the organizations and their records of compliance with applicable banking law, including anti-money-laundering laws. Southern, ECB, and their subsidiary banks are considered to be well managed.

Based on all the facts of record, the Board has concluded that considerations relating to the financial and managerial resources and future prospects of the organizations involved are consistent with approval, as are the other supervisory factors under the BHC Act.

CONVENIENCE AND NEEDS AND CRA PERFORMANCE CONSIDERATIONS

In acting on a proposal under section 3 of the BHC Act, the Board must consider the effects of the proposal on the convenience and needs of the communities to be served and take into account the records of the relevant depository institutions under the Community Reinvestment Act ("CRA").[13] The Board has carefully considered the convenience and needs factor and the CRA performance records of Southern Bank and East Carolina Bank in light of all the facts of record. As provided in the CRA, the Board evaluates the record of performance of an institution in light of examinations by the appropriate federal supervisors of the CRA performance records of the relevant institutions.[14] Southern Bank received an "outstanding" rating and East Carolina Bank received a "satisfactory" rating at their most recent examinations for CRA performance by the Federal Deposit Insurance Corporation, as of February 28, 2006, and October 3, 2006, respectively. Based on a review of the entire record, the Board has concluded that considerations relating to convenience and needs considerations and the CRA performance records of Southern Bank and East Carolina Bank are consistent with approval of the proposal.

CONCLUSION

Based on the foregoing and all the facts of record, the Board has determined that the application under section 3 of the BHC Act should be, and hereby is, approved. In reaching its conclusion, the Board has considered all the facts of record in light of the factors that it is required to consider under the BHC Act and other applicable statutes. The Board's approval is specifically conditioned on compliance by Southern with the conditions imposed in this order and the commitments made to the Board in connection with the application. For purposes of this action, the conditions and commitments are deemed to be conditions imposed in writing by the Board in connection with its findings and decision herein and, as such, may be enforced in proceedings under applicable law.

The proposed transaction may not be consummated before the 15th calendar day after the effective date of this order, or later than three months after the effective date of this order, unless such period is extended for good cause by the Board or the Federal Reserve Bank of Richmond, acting pursuant to delegated authority.

By order of the Board of Governors, effective March 9, 2009.

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Duke, and Tarullo.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

Appendix A

PASSIVITY COMMITMENTS

Southern BancShares (N.C.), Inc., Mount Olive, North Carolina ("Southern"), will not, without the prior approval of the Board or its staff, directly or indirectly

1. Exercise or attempt to exercise a controlling influence over the management or policies of ECB Bancorp, Inc., Engelhard, North Carolina ("ECB"), or any of its subsidiaries, including The East Carolina Bank, Engelhard, North Carolina;
2. Seek or accept representation on the board of directors of ECB or any of its subsidiaries;
3. Have or seek to have any employee or representative of Southern and its affiliates (the "Southern Group") serve as an officer, agent, or employee of ECB or any of its subsidiaries;
4. Take any action that would cause ECB or any of its subsidiaries to become a subsidiary of Southern;
5. Own, control, or hold with power to vote securities that (when aggregated with securities that the officers and directors of the Southern Group own, control, or hold with power to vote) represent 25 percent or more of any class of voting securities of ECB or any of its subsidiaries;
6. Own or control equity interests that would cause the combined voting and nonvoting equity interests of the Southern Group and its officers and directors to equal or exceed 25 percent of the total equity capital of ECB or any of its subsidiaries;
7. Propose a director or slate of directors in opposition to a nominee or slate of nominees proposed by the management or board of directors of ECB or any of its subsidiaries;
8. Enter into any agreement with ECB or any of its subsidiaries that substantially limits the discretion of ECB's management over major policies and decisions, including, but not limited to, policies or decisions about employing and compensating executive officers;

13. 12 U.S.C. §2901 et seq.; 12 U.S.C. §2903; 12 U.S.C. §1842(c)(2).

14. The Interagency Questions and Answers Regarding Community Reinvestment provide that a CRA examination is an important and often controlling factor in the consideration of an institution's CRA record. *See* 74 *Federal Register* 498 at 527 (2009).

engaging in new business lines; raising additional debt or equity capital; merging or consolidating with another firm; or acquiring, selling, leasing, transferring, or disposing of material assets, subsidiaries, or other entities;
9. Solicit or participate in soliciting proxies with respect to any matter presented to the shareholders of ECB or any of its subsidiaries;
10. Dispose or threaten to dispose (explicitly or implicitly) of equity interests of ECB or any of its subsidiaries in any manner as a condition or inducement of specific action or non-action by ECB or any of its subsidiaries; or
11. Enter into any other banking or nonbanking transactions with ECB or any of its subsidiaries, except that the Southern Group may establish and maintain deposit accounts with The East Carolina Bank, provided that the aggregate balance of all such deposit accounts does not exceed $500,000 and that the accounts are maintained on substantially the same terms as those prevailing for comparable accounts of persons unaffiliated with ECB.

The terms used in these commitments have the same meanings as set forth in the Bank Holding Company Act of 1956, as amended, and the Board's Regulation Y.

Appendix B

SOUTHERN AND ECB BANKING MARKETS CONSISTENT WITH BOARD PRECEDENT AND DOJ GUIDELINES

Bank	Rank	Amount of deposits (millions of dollars)	Market deposit shares (percent)	Resulting HHI	Change in HHI	Remaining number of competitors
Beaufort County, North Carolina—Beaufort County						
Southern Pre-consummation	4	58.8	8.5	2,303	59	5
ECB	7	24.0	3.5	2,303	59	5
Southern Post-consummation	4	82.8	12.0	2,303	59	5
Dare, North Carolina–Dare, Hyde, and Tyrrell counties						
Southern Pre-consummation	7	27.9	2.4	2,084	148	10
ECB	1	356.7	30.7	2,084	148	10
Southern Post-consummation	1	384.6	33.1	2,084	148	10
Greenville, North Carolina—Includes the Ranally Metro Area (RMA) and non-RMA portions of Pitt County						
Southern Pre-consummation	6	111.5	6.7	1,487	48	11
ECB	9	59.5	3.6	1,487	48	11
Southern Post-consummation	5	171.0	10.3	1,487	48	11
Martin County, North Carolina—Martin County						
Southern Pre-consummation	3	25.6	8.4	2,817	108	6
ECB	5	19.6	6.4	2,817	108	6
Southern Post-consummation	3	45.2	14.8	2,817	108	6
New Bern, North Carolina—Carteret County (excluding the Jacksonville RMA portion), Craven County, Pamlico County, and the eastern half of Jones County (excluding the Jacksonville RMA portion)						
Southern Pre-consummation	10	8.2	.4	2,223	1	11
ECB	9	29.9	1.3	2,223	1	11
Southern Post-consummation	9	38.2	1.7	2,223	1	11

NOTE: Data are as of June 30, 2008. All amounts of deposits are unweighted. All rankings, market deposit shares, and HHIs are based on thrift institution deposits weighted at 50 percent.

Orders Issued under Section 4 of the Bank Holding Company Act

Allianz SE
Munich, Germany

Order Approving the Acquisition of Shares of a Savings Association

Allianz SE ("Allianz"), a company that is treated as a financial holding company within the meaning of the Bank Holding Company Act ("BHC Act"), has requested the Board's approval under sections 4(c)(8) and 4(j) of the BHC Act and section 225.24 of the Board's Regulation Y[1] to retain its interest in The Hartford Financial Services Group, Inc. ("The Hartford"), Hartford, Connecticut, on consummation of The Hartford's proposal to become a savings and loan holding company by indirectly acquiring all the shares of Federal Trust Bank ("Federal Trust"), Sanford, Florida, a federal savings association.

Section 4 of the BHC Act requires a bank holding company to obtain the Board's approval before acquiring more than 5 percent of the voting shares of a savings association, regardless of whether the acquisition would represent a controlling interest.[2] Allianz is subject to the BHC Act as a result of its ownership of Dresdner Bank AG ("Dresdner"), Frankfurt am Main, Germany, which operates a branch in New York, New York.[3] Allianz owns 23.7 percent of the voting shares of The Hartford, a diversified financial services company. On November 14, 2008, The Hartford applied to the Office of Thrift Supervision ("OTS") to acquire Federal Trust Corporation ("FTC"), the parent savings and loan holding company of Federal Trust, and thereby acquire control of Federal Trust.

Section 4(i)(4) of the BHC Act requires the Board to provide the director of OTS with notice of an application to acquire a savings association and to provide the director a period of time (normally 30 days) within which to submit views and recommendations on the proposal.[4] The BHC Act also authorizes the Board to reduce or eliminate this notice period under certain circumstances.[5]

In light of the unusual and exigent circumstances affecting the financial markets, and all other facts and circumstances, the Board has determined that emergency conditions exist that justify expeditious action on this proposal in accordance with the provisions of the BHC Act and the Board's regulations.[6] The Board has provided notice to OTS, the primary federal supervisor of FTC and Federal Trust, and to the Department of Justice ("DOJ"). Those agencies have indicated they have no objection to approval of the proposal. For the same reasons, and because this transaction represents a minority, noncontrolling investment in The Hartford and its proposed subsidiary depository institution, the Board has waived public notice of the proposal.

Allianz, with total consolidated assets of approximately $1.4 trillion, provides insurance, banking, and asset-management products and services in more than 70 countries. Allianz's banking activities are conducted primarily through Dresdner. Dresdner also owns Dresdner Kleinwort Securities, LLC, a U.S. broker-dealer.

The Hartford, with total consolidated assets of $312 billion, is a diversified insurance and financial services company, with international operations in Japan, the United Kingdom, Canada, Brazil, and Ireland. FTC, with total consolidated assets of approximately $602 million, operates one insured depository institution, Federal Trust, which has offices only in Florida and controls deposits of approximately $415 million.[7]

The Board previously has determined by regulation that the operation of a savings association by a bank holding company is closely related to banking for purposes of section 4(c)(8) of the BHC Act.[8] The Board requires that savings associations acquired by bank holding companies or financial holding companies conform their direct and indirect activities to those permissible for bank holding companies under section 4(c)(8) of the BHC Act. Allianz has committed to conform or divest its interests in The Hartford if The Hartford, FTC, Federal Trust, or any of their subsidiaries engage in activities that are impermissible under the BHC Act.

In reviewing the proposal, the Board is required by section 4(j)(2)(A) of the BHC Act to determine that the proposed acquisition of FTC and Federal Trust "can reasonably be expected to produce benefits to the public that outweigh possible adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices."[9] As part of its evaluation of a proposal under these public interest factors, the Board reviews the financial and managerial resources of the companies involved, the effect of the proposal on competition in the relevant markets, and the public benefits of the proposal.[10] In acting on a notice to acquire a savings association, the Board also reviews the

1. 12 U.S.C. §§ 1843(c)(8) and (j); 12 CFR 225.24.

2. *See* 12 U.S.C. §§ 1843(c)(8), 1843(i). As discussed more fully below, the Board has determined that Allianz would not control or exercise a controlling influence over The Hartford based on all the facts and circumstances of the investment, including commitments and representations provided by Allianz to the Board.

3. A foreign bank that operates a branch or agency in the United States (and any company that owns or controls such foreign bank) is subject to the BHC Act as if it were a bank holding company. 12 U.S.C. § 3106(a).

4. 12 U.S.C. § 1843(i)(4).

5. *Id.*

6. 12 U.S.C. § 1843(i)(4); 12 CFR 225.25(d) and 262.3(*l*).

7. Asset data are as of June 30, 2008. Deposit data are as of September 30, 2008.

8. 12 CFR 225.28(b)(4)(ii).

9. 12 U.S.C. § 1843(j)(2)(A).

10. *See* 12 CFR 225.26; *see, e.g., BancOne Corporation*, 83 *Federal Reserve Bulletin* 602 (1997).

records of performance of the relevant insured depository institutions under the Community Reinvestment Act ("CRA").[11]

In reviewing the proposal under section 4 of the BHC Act, the Board has considered the financial resources of Allianz, The Hartford, FTC, and Federal Trust. The Board has also reviewed the effect that the transaction would have on those resources in light of all the facts of record, including confidential reports of examination, other supervisory information from the primary federal and state supervisors of the organizations involved in the proposal, publicly reported and other financial information, and information provided by Allianz.

Noncontrolling Investment

Allianz has stated that it does not propose to control or exercise a controlling influence over The Hartford and that as a result, its indirect investment in FTC and Federal Trust would be a passive investment. Allianz has provided certain commitments that are similar to commitments previously relied on by the Board in determining that an investing bank holding company would not be able to exercise a controlling influence over another company for purposes of the BHC Act. For example, Allianz has committed not to exercise or attempt to exercise a controlling influence over the management or policies of The Hartford or any of its subsidiaries and has committed not to have more than one representative serve on the board of The Hartford or its subsidiaries. The commitments also include certain restrictions on the business relationships of Allianz with The Hartford, FTC, and Federal Trust.

Based on these considerations and all other facts of record, the Board has concluded that Allianz would not control The Hartford or its subsidiary depository institution solely by virtue of the proposed retention of its interest in The Hartford. The Board notes that the BHC Act would require Allianz to file an application and receive the Board's approval before it could directly or indirectly acquire additional shares of, or attempt to exercise a controlling influence over, The Hartford.[12]

Financial and Managerial Resources

In evaluating financial resources, the Board reviews the financial condition of the organizations involved on both a parent-only and consolidated basis, as well as the financial condition of the subsidiary insured depository institutions and significant nonbanking operations. In this evaluation, the Board considers a variety of measures, including capital adequacy, asset quality, and earnings performance. In assessing financial resources, the Board consistently has considered capital adequacy to be especially important. The Board also evaluates the financial condition of the pro forma organization, including its capital position, asset quality, and earnings prospects, and the impact of the proposed funding of the transaction.

The capital levels of Allianz exceed the minimum levels that would be required of a foreign bank under the Basel Capital Accord and are, therefore, considered to be equivalent to the capital levels that would be required of a U.S. banking organization. The Board has also consulted with the OTS about the financial resources of The Hartford, FTC, and Federal Trust, including those resources on consummation of the proposal. Based on its review of the record, the Board finds that Allianz has sufficient resources to retain its interest in The Hartford.

The Board also has considered the managerial resources of the organizations involved. The Board has considered available supervisory information concerning Dresdner's U.S. operations, FTC, and Federal Trust. In addition, the Board has considered its supervisory experiences and those of the other relevant banking supervisory agencies with the organizations and their records of compliance with applicable banking laws and with anti-money-laundering laws. The Board has also consulted with the OTS about the managerial resources of, and its supervisory experiences with, FTC and Federal Trust.

Based on all the facts of record, the Board has concluded that the financial and managerial resources of the organizations involved in the proposal are consistent with approval under section 4 of the BHC Act.

Competitive Considerations and CRA Performance Records

As part of the Board's consideration of the public interest factors under section 4 of the BHC Act, the Board has considered carefully the competitive effects of the proposal in light of all the facts of record. The Board has found that noncontrolling interests in directly competing depository institutions may raise serious questions under the BHC Act and has stated that the specific facts of each case will determine whether the minority investment in a company would be anticompetitive.[13] Dresdner, the subsidiary foreign bank of Allianz, however, does not compete directly with FTC in any relevant banking market. Based on all the facts record, the Board concludes that the consummation of the proposal would have no significantly adverse effect on competition or on the concentration of banking resources in any relevant banking market.

As provided in the CRA, the Board has evaluated the proposal in light of the evaluations by the appropriate federal supervisors of the CRA performance records of the relevant insured depository institutions. An institution's most recent CRA performance evaluation is a particularly important consideration in the applications process because it represents a detailed, on-site evaluation of the institution's overall record of performance under the CRA by its

11. 12 U.S.C. §2901 et seq.

12. *See, e.g., Emigrant Bancorp, Inc.*, 82 *Federal Reserve Bulletin* 555 (1996); *First Community Bancshares, Inc.*, 77 *Federal Reserve Bulletin* 50 (1991).

13. *See, e.g., BOK Financial Corp.*, 81 *Federal Reserve Bulletin* 1052, 1053–54 (1995).

appropriate federal supervisor.[14] Federal Trust received a "satisfactory" rating on June 26, 2006, its most recent CRA examination. Based on a review of the entire record and for the reasons stated above, the Board concludes that the CRA performance records of the relevant depository institutions are consistent with approval.

Public Benefits

As part of its evaluation of the public interest factors under section 4 of the BHC Act, the Board has reviewed carefully the public benefits and possible adverse effects of the proposal. The record indicates that consummation of the proposal would result in benefits to consumers currently served by FTC and Federal Trust by strengthening the financial and managerial resources available to Federal Trust and thereby enhancing Federal Trust's future prospects.

For the reasons discussed above and based on all the facts of record, the Board has determined that the conduct of the proposed nonbanking activities within the framework of Regulation Y and Board precedent is not likely to result in significantly adverse effects, such as undue concentration of resources, decreased or unfair competition, conflicts of interests, or unsound banking practices. Based on all the facts of record, the Board has concluded that consummation of the proposal can reasonably be expected to produce public benefits that would outweigh any likely adverse effects. Accordingly, the Board has determined that the balance of the public benefits under the standard of section 4(j)(2) of the BHC Act is consistent with approval.

Conclusion

Based on the foregoing and all the facts of record, the Board has determined that the notice should be, and hereby is, approved. In reaching its conclusion, the Board has considered all the facts of record in light of the factors that it is required to consider under the BHC Act. The Board's approval is specifically conditioned on compliance by Allianz with the conditions imposed in this order and the commitments made to the Board in connection with the notice. The Board's approval also is subject to all the conditions set forth in Regulation Y, including those in sections 225.7 and 225.25(c),[15] and to the Board's authority to require such modification or termination of the activities of Allianz or any of its subsidiaries as the Board finds necessary to ensure compliance with, and to prevent evasion of, the provisions of the BHC Act and the Board's regulations and orders issued thereunder. For purposes of this action, these conditions and commitments are deemed to be conditions imposed in writing by the Board in connection with its findings and decisions herein and, as such, may be enforced in proceedings under applicable law.

14. *See Interagency Questions and Answers Regarding Community Reinvestment*, 74 *Federal Register* 498 at 527 (2009).

15. 12 CFR 225.7 and 225.25(c).

By order of the Board of Governors, effective January 14, 2009.

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Kroszner, and Duke.

Robert deV. Frierson
Deputy Secretary of the Board

ORDERS ISSUED UNDER FEDERAL RESERVE ACT

ICE US Trust LLC
New York, New York

Order Approving Application for Membership

ICE US Trust LLC ("ICE Trust"), a de novo uninsured trust company organized under New York law,[1] has requested the Board's approval under section 9 of the Federal Reserve Act ("Act")[2] to become a member of the Federal Reserve System.[3] ICE Trust proposes to operate as a central counterparty ("CCP") and clearinghouse for credit default swap ("CDS") transactions conducted by its participants.

ICE Trust will become a wholly owned subsidiary of ICE US Holding Company LP ("ICE LP"),[4] which will be controlled indirectly by Intercontinental-Exchange, Inc. ("ICE"),[5] an operator of futures exchanges and over-the-counter markets for commodities and derivative financial products.[6] ICE has entered into an agreement to acquire

1. Under New York law, a limited liability trust company may not accept deposits from the general public and must obtain an exemption from the general requirement under state law that New York-chartered banks and trust companies have federal deposit insurance. *See* New York Banking Law §§ 32, 102a. The New York State Banking Board ("NYSBB") has approved ICE Trust's charter application and its exemption from the deposit insurance requirement. Letter from NYSBB to Bradley K. Sabel, Esq., December 4, 2008.

2. 12 U.S.C. § 321 et seq.

3. 12 U.S.C. §§ 221 and 321. ICE Trust is a bank for purposes of the Act and, therefore, is eligible for membership in the Federal Reserve System.

4. ICE LP is organized under the law of the Cayman Islands but has consented to the jurisdiction of United States courts and government agencies with respect to matters arising out of federal banking laws. ICE LP also has committed to make available to the Board such information on the operations of ICE Trust and its affiliates as the Board deems necessary to enforce compliance with the Act and other applicable federal law.

5. ICE's wholly owned subsidiary, ICE US Holding Company GP LLC ("ICE GP"), a Delaware limited liability company, will be the general partner of ICE LP. ICE, ICE GP, and ICE LP have committed that ICE LP will not, without the prior approval of the Board, engage in any activity or make any investment other than holding an interest in ICE Trust and TCC.

6. ICE Trust is not a bank as defined in the Bank Holding Company Act ("BHC Act") (12 U.S.C. § 1841 et seq.). *See* 12 U.S.C. § 1841(c)(1). ICE LP, ICE GP, and ICE, therefore, would not be bank holding companies for purposes of the BHC Act. No bank holding

The Clearing Corporation ("TCC"), a derivatives clearinghouse.[7]

ICE Trust is being organized to reduce the risk associated with the trading and settlement of CDS transactions.[8] The CDS market as measured by the total notional amount of outstanding contracts has grown significantly, from approximately $6.4 trillion by year-end 2004 to approximately $57.3 trillion by mid-year 2008.[9] In the second half of 2008, however, dealers in CDS contracts were able to reduce the total notional amount of outstanding contracts by approximately $32 trillion through regular and frequent portfolio compression activity. CCPs interpose themselves between counterparties to financial contracts, becoming the buyer to the seller of the contract and the seller to the contract's buyer. In the absence of a CCP, each market participant bears the risk, known as counterparty credit risk, that one or more of its counterparties will default. By interposing itself between participants and thereby assuming counterparty credit risk, a CCP enables market participants to accept the best bids and offers without concern that a counterparty may default.

By assuming counterparty credit risk and enforcing participation standards and margin requirements, CCPs also can help diminish systemic risk in market settlement activities. In addition, establishment of a CCP can lower systemic risk by instituting procedures for the orderly close out of the positions of any participant who defaults and by mutualizing the cost of the close-out process.

PROPOSED ACTIVITIES

ICE Trust would act as the CCP for its participating financial institutions by novating CDS contracts between participants. Through novation, ICE Trust would be positioned between the parties to a CDS contract, thereby becoming the counterparty to each party. ICE Trust would net out the overall positions of each participant and, accordingly, would receive payments from and make payments to each participant on a net basis. In this manner, ICE Trust would reduce the volume of settlement payments among participants and reduce the counterparty, credit, and other risks and the transaction costs associated with CDS contracts.

Initially, ICE Trust proposes to clear only contracts that are based on certain CDX North American indices and are submitted by the participants as principals.[10] Incidental to clearing such transactions, ICE Trust also would provide certain transaction-related administrative services to participants. ICE Trust proposes to charge a fee for its CDS clearing services to participants primarily on a per-transaction basis.

As a member of the Federal Reserve System, ICE Trust would be eligible to open an account with, and receive payment services from, the Federal Reserve Bank of New York. ICE Trust proposes to obtain a number of services from TCC and ICE. ICE Trust would use TCC's existing infrastructure for clearing operations and its risk-management services. ICE would provide internal audit functions for ICE Trust.

FACTORS GOVERNING BOARD REVIEW OF THE PROPOSAL

In acting on an application for membership in the Federal Reserve System, the Board is required by the Act and Regulation H to consider the financial history and condition of the applying bank; the adequacy of its capital in relation to its assets and to its prospective deposit liabilities and other corporate responsibilities; its future earnings prospects; the general character of its management; whether its corporate powers are consistent with the purposes of the Act; and the convenience and needs of the community to be served.[11] Because ICE Trust's primary business would be acting as a CCP and clearinghouse for CDS transactions, the Board has reviewed the applicable financial and managerial factors in light of the Federal Reserve's Policy on Payments System Risk ("PSR Policy"), including its minimum standards for systemically important central counterparties.[12] These standards address, among other matters, financial resources, measurement and management of credit exposures, margin requirements, and default procedures.

FINANCIAL CONSIDERATIONS

In considering the financial history and condition, future earnings prospects, capital adequacy of ICE Trust, and other financial factors, the Board has reviewed its business plan and financial projections and has assessed the adequacy of ICE Trust's anticipated capital levels in light of

company will directly or indirectly control more than 5 percent of the voting shares of ICE Trust.

7. TCC also will become a wholly owned subsidiary of ICE LP. TCC will provide certain clearing services to ICE Trust.

8. In the simplest form of a CDS arrangement, the seller of a CDS agrees to pay the buyer the full principal amount of the debt obligation underlying the CDS in exchange for periodic payments to cover the cost of the credit-risk protection. The seller is then obligated to pay the buyer if the maker of the obligation defaults or declares bankruptcy. In index-based CDS contracts, the parties' payment obligations are based on an index of debt obligations of multiple companies, such as an index of U.S. investment-grade or emerging-market bonds, rather than on a single obligation.

9. *See* Bank for International Settlements, *OTS Derivatives Market Activity in the First Half of 2008* (November 2008); Bank for International Settlements, *OTS Derivatives Market Activity in the Second Half of 2005* (May 2006). The notional amount refers to the principal amount of obligations underlying CDS contracts.

10. These indices include certain investment-grade indices; investment-grade, high-volatility sub-indices; and high-yield indices.

11. 12 U.S.C. §§322 and 329; 12 CFR 208.3(b)(3).

12. *Federal Reserve Policy on Payments System Risk*, available at www.federalreserve.gov/paymentsystems/psr/default.htm. The PSR Policy incorporates the minimum standards for systemically important central counterparties in the *Recommendations for Central Counterparties* ("RCCP"), jointly issued in November 2004 by the Committee on Payment Settlement Systems of the Bank for International Settlements and by the Technical Committee of the International Organization of Securities Commissioners.

its proposed assets and liabilities.[13] ICE Trust would maintain capital that is adequate to cover its start-up costs, projected operational losses, and unanticipated losses and to allow for an orderly wind-down of positions if confronted with the need to cease operations.

In assessing the adequacy of ICE Trust's capital levels, the Board has taken into account the financial resources maintained by ICE Trust to enable it to withstand a default in extreme but plausible market conditions by the participant to which it has the largest exposure.[14] For ICE Trust, as for many CCPs, these resources include margin collateral posted by participants based on the value and risk associated with their open positions and participants' contributions to a guaranty fund. The Board expects ICE Trust at all times to maintain financial resources commensurate with the level and nature of the risks to which it is exposed.

If a participant defaults, ICE Trust would draw on margin collateral posted by the participant. If the margin collateral is insufficient, ICE Trust would then look to the defaulting participant's guaranty fund contribution. Should the defaulting participant's margin collateral and guaranty fund contribution be insufficient to cover any losses on the defaulted obligations, ICE Trust would be authorized to use, as needed, other participants' guaranty fund contributions to satisfy any remaining obligations of the defaulting party. If the guaranty fund in total is inadequate to cover losses on the defaulted obligations, ICE Trust would have the ability to assess additional guaranty fund contributions on nondefaulting participants.

To limit the risk of default by participants, ICE Trust proposes to establish strong and objective participant eligibility requirements. For example, only a firm with a net worth of $5 billion or more and a credit rating of "A" or better may become a participant. Among other criteria, each prospective participant also would be required to demonstrate that it has systems, management, and risk-management expertise with respect to CDS transactions.

Margin requirements for participants in ICE Trust would be comprised of two components: (1) initial margin collateral provided at the time of contract novation that is intended to cover losses from a defaulting participant's positions under normal market conditions; and (2) mark-to-market margin requirements that are calculated at the end of each day based on a participant's outstanding positions. ICE Trust plans to regularly perform stress testing on its calculations of credit exposure and margin requirements to determine the sufficiency of the financial resources needed to withstand participant defaults under a range of plausible market scenarios. To ensure its liquidity, margin collateral would be required to be in the form of cash or G7 government debt.

In addition to margin requirements, ICE Trust would require each participant to contribute a minimum of $20 million to the guaranty fund plus additional amounts based on the participant's expected level of position exposures. Additional contributions would be assessed at least quarterly.

The establishment of ICE Trust as a CCP for CDS contracts is expected to minimize the impact on financial markets of a failure by a single participant by collateralizing counterparty risk exposures through the standardized application of margin and guaranty fund requirements, by reducing exposures through the netting of CDS transactions on a multilateral basis, and by standardizing and centrally managing the close out of a defaulting participant's positions with the CCP.

After carefully considering all the facts of record, the Board has concluded that ICE Trust's financial condition, capital adequacy, future earnings prospects, and other financial factors are consistent with approval of the proposal.

Managerial Considerations

In reviewing ICE Trust's managerial resources, the Board has considered carefully the experience of ICE Trust's proposed management, as well as its planned risk-management systems, operations, and anti-money-laundering compliance program. In addition, because ICE Trust proposes to be a CCP, the Board has considered ICE Trust's plans for managing the counterparty credit risk, operational risk, legal risk, and other risks that CCPs commonly encounter.[15]

The most significant risk that a CCP for CDS transactions experiences is counterparty credit risk. The Board has carefully reviewed ICE Trust's risk-management framework and its ability to measure accurately its exposure to counterparty credit risk. ICE Trust proposes to measure its credit-risk exposures to clearing participants on a daily basis, using a value-at-risk methodology to calculate the appropriate level of margin, and to calculate the margin requirement and collect the required margin collateral from each participant daily. ICE Trust has conducted extensive validation of its models for each of the products it initially intends to clear. The Board also has reviewed independent assessments of ICE Trust's models. To manage concentration risk, ICE Trust will charge additional margin collateral for positions exceeding pre-set notional thresholds. To

13. 12 U.S.C. §§322 and 329; 12 CFR 208.3(b)(3). As required by its regulations, the Board has used the definition of capital in Appendix A to Regulation H in assessing ICE Trust's capital adequacy (12 CFR 208.4(a)). In light of the fact that ICE Trust would (1) take no deposits from the general public, (2) have no federal deposit insurance, (3) engage in no activities apart from serving as a CCP and clearinghouse, and (4) have assets and liabilities that reflect its status as a CCP and clearinghouse, the Board will not require ICE Trust to meet the risk-based capital requirements or the leverage requirements set forth in Appendices A, B, E, and F of Regulation H. The Board retains the authority, however, to specify capital requirements for ICE Trust and to require ICE Trust to increase its capital if the Board at any time concludes that ICE Trust's capital is inadequate in view of its assets, liabilities, and responsibilities (12 CFR 208.4(a)).

14. RCCP at 23.

15. ICE Trust has committed that it will provide the Federal Reserve System with a 60-day prior notice of material changes to its rules to provide time for an adequate review by the Federal Reserve System and the opportunity to raise any supervisory or regulatory objections.

address liquidity risk, ICE Trust will ensure that it has ready access to sufficient sources of liquidity to meet its payment obligations on a same-day basis.

The Board also has reviewed ICE Trust's other mechanisms for controlling counterparty credit risk, including the adequacy of its policies and procedures for identifying any instance of default by a participant and for the orderly close out of a defaulting participant's positions. The Board has carefully reviewed ICE Trust's plan to limit investment risk by investing cash margin it receives in certain highly liquid instruments. To address settlement risks associated with participants' payments of margin collateral, guaranty fund contributions, and other monies, ICE Trust will establish a program to monitor payment concentration among settlement banks, evaluate the impact of settlement-bank failure, and develop measures to mitigate associated risks.

The Board has also considered the legal framework within which ICE Trust would operate as a CCP, including the planned contractual arrangements and applicable governing statutes and regulations with respect to the novation process, netting arrangements, settlements, and procedures in the event of a participant default. The Board also has considered information regarding the legal implications of cross-border participation in ICE Trust. In addition, the Board has reviewed ICE Trust's proposed operational and information technology infrastructure, including its business continuity plans and the adequacy of its management controls.

Based on this review and all the facts of record, the Board has concluded that the general character of ICE Trust's management is consistent with approval of the proposal.

Other Considerations

In considering whether the corporate powers exercised by ICE Trust are consistent with the purposes of the Act, the Board notes that ICE Trust's proposed activities are permissible for a state member bank under the Act's applicable provisions.[16] Under Regulation H, ICE Trust would be required to obtain the Board's approval before changing the general character of its business or the scope of the corporate powers it exercises.[17] In addition, ICE Trust has provided the Board with several commitments intended to ensure that the Board will have adequate enforcement authority over ICE Trust as an uninsured state member bank.[18] For these reasons and based on a review of the entire record, the Board has concluded that this consideration is consistent with approval of the proposal.

The Board also has considered the convenience and needs of the community to be served.[19] As noted, the establishment of ICE Trust as a CCP for CDS contracts is expected to benefit financial markets significantly, by reducing systemic risks associated with counterparty credit exposures in CDS transactions, and thereby enhance the stability of the overall financial system. In addition, ICE Trust would promote greater market transparency by making publicly available the closing settlement price and related volume and open interest data for each cleared product, on terms that are fair, reasonable, and not unreasonably discriminatory. For these reasons and based on a review of the entire record, the Board has concluded that the convenience and needs considerations are consistent with approval of the proposal.

Conclusion

Based on the foregoing and all the facts of record, including all the commitments, stipulations, and representations made in connection with the application, and subject to all the terms and conditions set forth in this order, the Board has determined that ICE Trust's proposed membership in the Federal Reserve System should be, and hereby is, approved. The Board's approval is specifically conditioned on compliance with Regulation H,[20] with receipt of required authorizations from certain other agencies,[21] and with all the commitments, stipulations, and representations made in connection with the application, including the commitments and conditions discussed in this order. The commitments, stipulations, representations, and conditions relied on in reaching this decision shall be deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

ICE Trust will become a member of the Federal Reserve System on its purchase of stock in the Federal Reserve Bank of New York ("Reserve Bank"). This transaction must occur not later than three months after the effective date of this order, unless such period is extended for good cause by the Board or the Reserve Bank acting pursuant to delegated authority.

By order of the Board of Governors, effective March 4, 2009.

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Duke, and Tarullo.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

16. *See* 12 U.S.C. §§ 330 and 335.

17. 12 CFR 208.3(d)(2).

18. ICE Trust has stipulated that it would be subject to the supervisory, examination, and enforcement authority of the Board under the Federal Deposit Insurance Act as if ICE Trust were an insured depository institution for which the Board is the appropriate federal banking agency under that act.

19. Because ICE Trust will not accept deposits or have federal deposit insurance, it will not be subject to the Community Reinvestment Act (12 U.S.C. §2901 et seq.).

20. 12 CFR Part 208.

21. Those agencies are the NYSBB and the Securities and Exchange Commission.

ORDERS ISSUED UNDER INTERNATIONAL BANKING ACT

DekaBank Deutsche Girozentrale Frankfurt am Main, Germany

Order Approving Establishment of a Representative Office

DekaBank Deutsche Girozentrale ("Bank"), Frankfurt am Main, Germany, a foreign bank within the meaning of the International Banking Act ("IBA"), has applied under section 10(a) of the IBA[1] to establish a representative office in New York, New York. The Foreign Bank Supervision Enhancement Act of 1991, which amended the IBA, provides that a foreign bank must obtain the approval of the Board to establish a representative office in the United States.

Notice of the application, affording interested persons an opportunity to submit comments, has been published in a newspaper of general circulation in New York (*The New York Times*, October 3, 2007). The time for filing comments has expired, and all comments received have been considered.

Bank, with total consolidated assets of approximately $198 billion,[2] is the 18th largest bank in Germany by asset size. Bank engages in wholesale banking and investment fund activities and provides investment fund management services to German savings banks and other financial service providers. Outside Germany, Bank has subsidiaries in Luxembourg, Switzerland, Ireland, and Grand Cayman and representative offices in Italy and Spain.

Deutscher Sparkassen- und Giroverband ö.K. ("DSGV"), Bonn, Germany, owns 50 percent of Bank.[3] GLB GmbH & Co. OHG ("GLB"), Frankfurt am Main, owns 49.2 percent of Bank. The remaining shares of Bank are owned by Niedersächsische Bank GmbH ("Nieba").

Landesbank Baden-Württemberg ("LBBW"), Stuttgart, Germany, owns 30.05 percent of GLB.[4] LBBW is one of the largest savings banks in Germany. In the United States it operates through a New York branch and nonbanking subsidiaries. Both LBBW and its parent, SBW, are treated as financial holding companies. Norddeutsche Landesbank Girozentrale, directly and through its subsidiaries, Bremer Landesbank Kreditanstalt Oldenburg-Girozentrale and Nieba, controls 19.22 percent of GLB.[5]

The proposed representative office would market real estate credit and loan products on behalf of the Bank's head office in Germany. The office would perform representational and administrative functions, such as acting as a liaison between Bank's offices outside the United States and correspondent banks in the United States, and would engage in market research, business solicitation, loan production, and relationship-management activities.[6]

In acting on an application under the IBA and Regulation K by a foreign bank to establish a representative office, the Board shall take into account whether the foreign bank and any parent foreign bank directly engages in the business of banking outside of the United States and whether the foreign bank has furnished to the Board the information it needs to assess the application adequately.[7] The Board shall also take into account whether the foreign bank and any foreign bank parent are subject to comprehensive supervision on a consolidated basis by their home-country supervisor.[8] The Board also considers additional standards set forth in the IBA and Regulation K.[9]

As noted above, Bank and its parent bank, LBBW, engage directly in the business of banking outside the

1. 12 U.S.C. § 3107(a).

2. Unless otherwise indicated, data are as of September 30, 2008.

3. The 12 shareholders of DSGV, all of which are German regional savings banks associations, exercise their voting rights directly in Bank in proportion to their participation in DSGV. The seven savings banks associations that own an interest of 5 percent or more in DSGV are Sparkassenverband Baden-Württemberg, Rheinischer Sparkassen- und Giroverband, Westfälisch-Lippischer Sparkassen- und Giroverband, Sparkassen- und Giroverband Hessen-Thüringen, Sparkassenverband Bayern, Sparkassenverband Niedersachsen, and Sparkassen- und Giroverband Rheinland-Pfalz.

4. Sparkassenverband Baden-Württemberg ("SBW"), Stuttgart, owns 35.61 percent of LBBW.

5. Other shareholders that own an interest of more than 5 percent in GLB are HSH Nordbank AG, WestLB AG, Landesbank Hessen-Thüringen Girozentrale, and Bayerische Landesbank.

6. A representative office may engage in representational and administrative functions in connection with the banking activities of the foreign bank, including soliciting new business for the foreign bank, conducting research, acting as a liaison between the foreign bank's head office and customers in the United States, performing preliminary and servicing steps in connection with lending, and performing back-office functions. A representative office may not contract for any deposit or deposit-like liability, lend money, or engage in any other banking activity (12 CFR 211.24(d)(1)).

7. 12 U.S.C. § 3107(a)(2).

8. *Id.*; 12 CFR 211.24(d)(2). In assessing this standard, the Board considers, among other factors, the extent to which the home-country supervisors (i) ensure that the bank has adequate procedures for monitoring and controlling its activities worldwide; (ii) obtain information on the condition of the bank and its subsidiaries and offices through regular examination reports, audit reports, or otherwise; (iii) obtain information on the dealings with and relationship between the bank and its affiliates, both foreign and domestic; (iv) receive from the bank financial reports that are consolidated on a worldwide basis or comparable information that permits analysis of the bank's financial condition on a worldwide consolidated basis; and (v) evaluate prudential standards, such as capital adequacy and risk asset exposure, on a worldwide basis. These are indicia of comprehensive, consolidated supervision. No single factor is essential, and other elements may inform the Board's determination.

9. *See* 12 U.S.C. § 3105(d)(3)–(4); 12 CFR 211.24(c)(2)–(3). These standards include (1) whether the bank's home-country supervisor has consented to the establishment of the office; the financial and managerial resources of the bank; (2) whether the bank has procedures to combat money laundering, whether there is a legal regime in place in the home country to address money laundering, and whether the home country is participating in multilateral efforts to combat money laundering; (3) whether the appropriate supervisors in the home country may share information on the bank's operations with the Board; and (4) whether the bank and its U.S. affiliates are in compliance with U.S. law; the needs of the community; and the bank's record of operation.

United States. Bank also has provided the Board with information necessary to assess the application through submissions that address the relevant issues.

With respect to supervision by home-country authorities, the Board previously has determined that LBBW's predecessor, Südwestdeutsche Landesbank Girozentrale, was subject to comprehensive consolidated supervision and regulation in connection with its application to establish a branch office in the United States.[10] In addition, the Board has determined that other German banks are subject to home-country supervision on a consolidated basis by the Bundesanstalt Finanzdiestleistungsaufsicht ("BaFin"), the primary regulator of commercial banks in Germany.[11] Bank is supervised by BaFin on substantially the same terms and conditions as those other banks. Based on all the facts of record, it has been determined that Bank is, and LBBW continues to be, subject to comprehensive supervision and regulation on a consolidated basis by their home-country supervisor.

The additional standards set forth in section 7 of the IBA and Regulation K have also been taken into account.[12] BaFin has no objection to the establishment of the proposed representative office.

With respect to the financial and managerial resources of Bank, taking into consideration its record of operations in its home country, its overall financial resources, and its standing with its home-country supervisor, financial and managerial factors are consistent with approval. Bank appears to have the experience and capacity to support the proposed representative office and has established controls and procedures for the proposed representative office to ensure compliance with U.S. law.

Germany is a member of the Financial Action Task Force ("FATF") and subscribes to its recommendations on measures to combat money laundering. In accordance with these recommendations, Germany has enacted laws and created legislative and regulatory standards to deter money laundering, terrorist financing, and other illicit activities. Money laundering is a criminal offense in Germany, and credit institutions are required to establish internal policies, procedures, and systems for the detection and prevention of money laundering throughout their worldwide operations. Bank has policies and procedures to comply with these laws and regulations that are monitored by governmental entities responsible for anti-money-laundering compliance.

With respect to access to information on Bank's operations, the restrictions on disclosure in relevant jurisdictions in which Bank operates have been reviewed and relevant government authorities have been communicated with regarding access to information. Bank, GLB, and DSGV have committed to make available to the Board such information on the operations of Bank and any of its affiliates as the Board deems necessary to determine and enforce compliance with the IBA, the BHC Act, and other applicable federal law. To the extent that the provision of such information to the Board may be prohibited by law or otherwise, Bank, GLB, and DSGV have committed to cooperate with the Board to obtain any necessary consents or waivers that might be required from third parties for disclosure of such information. In addition, subject to certain conditions, BaFin may share information on Bank's operations with other supervisors, including the Board. In light of these commitments and other facts of record, and subject to the condition described below, it has been determined that Bank, GLB, and DSGV have provided adequate assurances of access to any necessary information that the Board may request.

On the basis of the foregoing and all the facts of record, and subject to the commitments made by Bank, GLB, and DSGV, and the terms and conditions set forth in this order, Bank's application to establish the representative office is hereby approved.[13] Should any restrictions on access to information on the operations or activities of Bank and its affiliates subsequently interfere with the Board's ability to obtain information to determine and enforce compliance by Bank or its affiliates with applicable federal statutes, the Board may require termination of any of Bank's direct and indirect activities in the United States. Approval of this application also is specifically conditioned on compliance by Bank with the conditions imposed in this order and the commitments made to the Board in connection with this application.[14] For purposes of this action, these commitments and conditions are deemed to be conditions imposed in writing by the Board in connection with its finding and decision and may be enforced in proceedings under 12 U.S.C. § 1818 against Bank and its affiliates.

By order, approved pursuant to authority delegated by the Board, effective January 13, 2009.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

10. *See Südwestdeutsche Landesbank Girozentrale*, 83 *Federal Reserve Bulletin* 937 (1997).

11. *See e.g., Deutsche Genossenschafts-Hypothekenbank AG*, 92 *Federal Reserve Bulletin* C61 (2006).

12. *See supra* note 9.

13. Approved by the Director of the Division of Banking Supervision and Regulation, with the concurrence of the General Counsel, pursuant to authority delegated by the Board. *See* 12 CFR 265.7(d)(12).

14. The Board's authority to approve the establishment of the proposed representative office parallels the continuing authority of the state of New York to license offices of a foreign bank. The Board's approval of this application does not supplant the authority of the state of New York or its agent, the New York State Banking Department, to license the proposed office of Bank in accordance with any terms or conditions that it may impose.

FINAL ENFORCEMENT DECISION ISSUED BY THE BOARD

In the Matter of

G. Craig Chupik, A former Institution-Affiliated Party of PlainsCapital Bank, Dallas, Texas

Docket Nos. 09-37-E-I, 09-37-CMP-I

ORDER OF PROHIBITION AND ORDER OF ASSESSMENT OF CIVIL MONEY PENALTY ISSUED UPON CONSENT PURSUANT TO SECTIONS 8(E) AND 8(I) OF THE FEDERAL DEPOSIT INSURANCE ACT, AS AMENDED

WHEREAS, pursuant to sections 8(e), 8(i)(2) and 8(i)(3) of the Federal Deposit Insurance Act, as amended (the "FDI Act"), 12 U.S.C. §§ 1818(e), (i)(2) and (i)(3), the Board of Governors of the Federal Reserve System (the "Board of Governors") issues this combined Order of Prohibition and Order of Assessment of Civil Money Penalty (the "Order") upon the consent of G. Craig Chupik, a former employee and institution-affiliated party, as defined in section 3(u) of the FDI Act, 12 U.S.C. § 1813(u), of PlainsCapital Bank (the "Bank"), a state member bank;

WHEREAS, Chupik, while employed as a vice president and loan officer at the Bank, allegedly engaged in violations of law, unsafe and unsound banking practices, and breaches of fiduciary duty, including, inter alia, Chupik's (i) receipt of cash fees from prospective bank customers in exchange for recommending the approval of Bank loans to such customers; (ii) withdrawal of proceeds from a relative's line of credit at the Bank for Chupik's personal use; and (iii) check writing activities from his personal accounts.

WHEREAS, by affixing his signature hereunder, Chupik has consented to the issuance of this Order by the Board of Governors and has agreed to comply with each and every provision of this Order, and has waived any and all rights he might have pursuant to 12 U.S.C. § 1818, 12 CFR Part 263, or otherwise (a) to the issuance of a notice of intent to prohibit or notice of assessment of civil money penalty on any matter implied or set forth in this Order; (b) to a hearing for the purpose of taking evidence with respect to any matter implied or set forth in this Order; (c) to obtain judicial review of this Order or any provision hereof; and (d) to challenge or contest in any manner the basis, issuance, terms, validity, effectiveness, or enforceability of this Order or any provision hereof.

NOW THEREFORE, prior to the taking of any testimony or adjudication of or finding on any issue of fact or law implied or set forth herein, and without this Order constituting an admission by Chupik of any allegation made or implied by the Board of Governors in connection with this proceeding, and solely for the purpose of settlement of this proceeding without protracted or extended hearings or testimony:

IT IS HEREBY ORDERED, pursuant to sections 8(e), (i)(2) and (i)(3) of the FDI Act, 12 U.S.C. §§ 1818(e), (i)(2) and (3), that:

1. Chupik, without the prior written approval of the Board of Governors and, where necessary pursuant to section 8(e)(7)(B) of the FDI Act, 12 U.S.C. § 1818(e)(7)(B), another federal financial institutions regulatory agency, is hereby and henceforth prohibited from:
   (a) participating in any manner in the conduct of the affairs of any institution or agency specified in section 8(e)(7)(A) of the FDI Act, 12 U.S.C. § 1818(e)(7)(A), including, but not limited to, any insured depository institution or any holding company of an insured depository institution;
   (b) soliciting, procuring, transferring, attempting to transfer, voting or attempting to vote any proxy, consent, or authorization with respect to any voting rights in any institution described in section 8(e)(7)(A) of the FDI Act, 12 U.S.C. § 1818(e)(7)(A);
   (c) violating any voting agreement previously approved by any federal banking agency; or
   (d) voting for a director, or serving or acting as an institution-affiliated party, as defined in section 3(u) of the FDI Act, 12 U.S.C. § 1813(u), such as an officer, director or employee, in any institution described in section 8(e)(7)(A) of the FDI Act, 12 U.S.C. § 1818(e)(7)(A).

IT IS HEREBY FURTHER ORDERED, pursuant to section 8(i) of the FDI Act, 12 U.S.C. § 1818(i), that:

2. Chupik shall forfeit and pay a civil money penalty in the amount of $20,000.
3. The civil money penalty paid by Chupik pursuant to this Order shall be remitted in full prior to the date this Order becomes effective, payable to "the Board of Governors of the Federal Reserve System" and forwarded with an executed copy of this Order to Jennifer J. Johnson, Secretary of the Board, Board of Governors of the Federal Reserve System, Washington, DC, 20551, or, alternatively, by Fedwire transfer to the Federal Reserve Bank of Richmond, ABA No. 05 1000033, beneficiary, Board of Governors of the Federal Reserve System. The Board of Governors or the Federal Reserve Bank of Richmond on its behalf shall remit the funds to the United States Treasury as required by statute.
4. No portion of the penalty paid pursuant to this Order shall be, directly or indirectly, paid, advanced, reimbursed or otherwise funded by Bank.
5. All communications regarding this Order shall be addressed to:
   (a) Richard M. Ashton, Esq.
   Deputy General Counsel
   Board of Governors of the Federal Reserve System
   20th & C Sts. N.W.,
   Washington, DC 20551
   (b) Mr. G. Craig Chupik
   5109 Birchman Ave.
   Fort Worth, TX 76107
   With a copy to:
   David Reed
   Meadows Collier Reed Cousins & Blau LLP
   3700 Bank of America Plaza
   901 Main Street
   Dallas, TX 75202

6. Any violation of this Order shall separately subject Chupik to appropriate civil or criminal penalties, or both, under sections 8(i) and (j) of the FDI Act, 12 U.S.C §§ 1818(i) and (j).
7. The provisions of this Order shall not bar, estop, or otherwise prevent the Board of Governors, or any other federal or state agency or department, from taking any other action affecting Chupik; provided, however, that the Board of Governors shall not take any further action against Chupik relating to the matters addressed by this Order based upon facts presently known by the Board of Governors.
8. Each provision of this Order shall remain fully effective and enforceable until expressly stayed, modified, terminated, or suspended in writing by the Board of Governors.

By order of the Board of Governors of the Federal Reserve System, effective this 19th day of March, 2009.

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

(signed)

JENNIFER J. JOHNSON
Secretary of the Board

(signed)

G. Craig Chupik

August 2009

Legal Developments: Second Quarter, 2009

ORDERS ISSUED UNDER BANK HOLDING COMPANY ACT

Orders Issued under Section 3 of the Bank Holding Company Act

Allied Irish Banks, p.l.c.
Dublin, Ireland

M&T Bank Corporation
Buffalo, New York

First Empire State Holding Company
Buffalo, New York

Manufacturers and Traders Trust Company
Buffalo, New York

Order Approving the Acquisition of a Bank Holding Company, Merger of Banks, and Establishment of Branches

Allied Irish Banks, p.l.c. ("Allied Irish") and its subsidiary, M&T Bank Corporation ("M&T"), bank holding companies within the meaning of the Bank Holding Company Act ("BHC Act"), and First Empire State Holding Company ("First Empire")[1] (collectively, "Applicants") have requested the Board's approval under section 3 of the BHC Act[2] to acquire Provident Bankshares Corporation ("Provident") and thereby indirectly acquire Provident's subsidiary bank, Provident Bank of Maryland ("Provident Bank"), both of Baltimore, Maryland. In addition, M&T's subsidiary state member bank, Manufacturers and Traders Trust Company ("M&T Bank"), Buffalo, has requested the Board's approval under section 18(c) of the Federal Deposit Insurance Act[3] ("Bank Merger Act") to merge with Provident Bank, with M&T Bank as the surviving entity. M&T Bank also has applied under section 9 of the Federal Reserve Act to establish and operate branches at the main office and branches of Provident Bank.[4]

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (74 *Federal Register* 5656 (2009)). The time for filing comments has expired, and the Board has considered the proposal and all comments received in light of the factors set forth in the BHC Act.

Allied Irish, with total consolidated assets equivalent to approximately $244 billion, is the second largest depository organization in Ireland and provides a full range of banking, financial, and related services primarily in Ireland, the United Kingdom, and the United States.[5] Allied Irish operates a branch in New York and through M&T controls two subsidiary banks, M&T Bank and M&T Bank, National Association, Oakfield, New York, which operate in seven states and the District of Columbia.[6] M&T, with total consolidated assets of $64.8 billion, is the 23rd largest depository organization in the United States, controlling $38.4 billion in deposits. M&T is the fifth largest depository organization in Maryland, controlling deposits of approximately $7.4 billion.

Provident has total consolidated assets of approximately $6.6 billion, and Provident Bank, Provident's only subsidiary insured depository institution,[7] operates in Maryland, Pennsylvania, Virginia, and the District of Columbia. Provident is the eighth largest depository organization in Maryland, controlling deposits of approximately $3.85 billion.

On consummation of the proposal, M&T would become the 21st largest depository organization in the United States, with total consolidated assets of approximately $71.4 billion. M&T would control deposits of approximately $43.2 billion, which represent less than 1 percent of the total amount of deposits of insured depository institutions in the United States. In Maryland, M&T would become the second largest depository organization, controlling deposits of approximately $11.3 billion, which repre-

1. First Empire also has applied to become a bank holding company in connection with this application. First Empire is a newly formed, wholly owned subsidiary of M&T. M&T proposes to merge Provident into First Empire, with First Empire as the survivor.
2. 12 U.S.C. § 1842.
3. 12 U.S.C. § 1828(c).
4. 12 U.S.C. § 321.
5. Asset and nationwide deposit-ranking data are as of December 31, 2008. Statewide deposit and ranking data are as of June 30, 2008, and reflect merger activity through April 16, 2009.
6. M&T Bank operates in Delaware, Maryland, New Jersey, New York, Pennsylvania, Virginia, West Virginia, and the District of Columbia. Top of Form M&T Bank, National Association, operates only in New York.
7. For purposes of this order, insured depository institutions include commercial banks, savings banks, and savings associations.

sent approximately 12 percent of the total amount of deposits of insured depository institutions in the state.

INTERSTATE ANALYSIS

Section 3(d) of the BHC Act allows the Board to approve an application by a bank holding company to acquire control of a bank located in a state other than the bank holding company's home state if certain conditions are met. For purposes of the BHC Act, the home state of M&T is New York,[8] and Provident is located in Maryland, Pennsylvania, Virginia, and the District of Columbia.[9]

Based on a review of all the facts of record, including relevant state statutes, the Board finds that the conditions for an interstate acquisition enumerated in section 3(d) of the BHC Act are met in this case.[10] In light of all the facts of record, the Board is permitted to approve the proposal under section 3(d) of the BHC Act.

COMPETITIVE CONSIDERATIONS

The BHC Act and the Bank Merger Act prohibit the Board from approving a proposal that would result in a monopoly or would be in furtherance of an attempt to monopolize the business of banking in any relevant banking market. Both statutes also prohibit the Board from approving a bank acquisition that would substantially lessen competition in any relevant banking market, unless the anticompetitive effects of the proposal are clearly outweighed in the public interest by the probable effect of the proposal in meeting the convenience and needs of the community to be served.[11]

Applicants and Provident have subsidiary depository institutions that compete directly in three banking markets: Washington, DC-Maryland-Virginia-West Virginia; Baltimore, Maryland-Pennsylvania; and Annapolis, Maryland. The Board has reviewed carefully the competitive effects of the proposal in each of these banking markets in light of all the facts of record. In particular, the Board has considered the number of competitors that would remain in the banking markets, the relative shares of total deposits in depository institutions in the markets ("market deposits") controlled by Applicants' subsidiary depository institutions and by Provident Bank,[12] the concentration levels of market deposits and the increase in those levels as measured by the Herfindahl–Hirschman Index ("HHI") under the Department of Justice Merger Guidelines ("DOJ Guidelines"),[13] and other characteristics of the markets.

Consummation of the proposal would be consistent with Board precedent and within the thresholds in the DOJ Guidelines in all three banking markets.[14] On consummation of the proposal, each of the three markets would remain moderately concentrated, as measured by the HHI, and the change in the HHI would be less than 200 points in each market. In addition, numerous competitors would remain in all three banking markets.

The DOJ has conducted a detailed review of the potential competitive effects of the proposal and has advised the Board that consummation of the transaction would not likely have a significantly adverse effect on competition in any relevant banking market. In addition, the appropriate banking agencies have been afforded an opportunity to comment and have not objected to the proposal.

Based on all the facts of record, the Board concludes that consummation of the proposal would not have a significantly adverse effect on competition or on the concentration of resources in any of the three banking markets where the subsidiary depository institutions of Applicants and Provident compete directly or in any other relevant banking market. Accordingly, the Board has determined that competitive considerations are consistent with approval.

FINANCIAL, MANAGERIAL, AND SUPERVISORY CONSIDERATIONS

Section 3 of the BHC Act and the Bank Merger Act require the Board to consider the financial and managerial re-

8. *See* 12 U.S.C. § 1842(d). A bank holding company's home state is the state in which the total deposits of all banking subsidiaries of such company were the largest on July 1, 1966, or the date on which the company became a bank holding company, whichever is later.

9. For purposes of section 3(d) of the BHC Act, the Board considers a bank to be located in the states in which the bank is chartered or headquartered or operates a branch. *See* 12 U.S.C. §§ 1841(o)(4)–(7) and 1842(d)(1)(A) and 1842(d)(2)(B).

10. 12 U.S.C. §§ 1842(d)(1)(A)–(B) and 1842(d)(2)–(3). Applicants are adequately capitalized and adequately managed, as defined by applicable law. Provident Bank has been in existence and operated for the minimum period of time required by Maryland law and for more than five years. *See* 12 U.S.C. § 1842(d)(1)(B)(i)–(ii). On consummation of the proposal, Applicants would control less than 10 percent of the total amount of deposits of insured depository institutions in the United States (12 U.S.C. § 1842(d)(2)(A)). Applicants also would control less than 30 percent of, and less than the applicable state deposit cap for, the total amount of deposits in insured depository institutions in the relevant states (12 U.S.C. §§ 1842(d)(2)(B)–(D)). All other requirements of section 3(d) of the BHC Act would be met on consummation of the proposal.

11. 12 U.S.C. § 1842(c)(1) and 12 U.S.C. § 1828(c)(5).

12. Deposit and market share data are as of June 30, 2008, adjusted to reflect mergers and acquisitions through March 30, 2009, and are based on calculations in which the deposits of thrift institutions are included at 50 percent. The Board previously has indicated that thrift institutions have become, or have the potential to become, significant competitors of commercial banks. *See, e.g., Midwest Financial Group*, 75 *Federal Reserve Bulletin* 386, 387 (1989); *Provident Corporation*, 70 *Federal Reserve Bulletin* 743, 744 (1984). Thus, the Board regularly has included thrift institution deposits in the market share calculation on a 50 percent weighted basis. *See, e.g., First Hawaiian, Inc.*, 77 *Federal Reserve Bulletin* 52, 55 (1991).

13. Under the DOJ Guidelines, a market is considered unconcentrated if the post-merger HHI is under 1000, moderately concentrated if the post-merger HHI is between 1000 and 1800, and highly concentrated if the post-merger HHI exceeds 1800. The Department of Justice ("DOJ") has informed the Board that a bank merger or acquisition generally will not be challenged (in the absence of other factors indicating anticompetitive effects) unless the post-merger HHI is at least 1800 and the merger increases the HHI more than 200 points. The DOJ has stated that the higher-than-normal HHI thresholds for screening bank mergers and acquisitions for anticompetitive effects implicitly recognize the competitive effects of limited-purpose and other nondepository financial entities.

14. Those banking markets and the effects of the proposal on their concentrations of banking resources are described in the appendix.

sources and future prospects of the companies and depository institutions involved in the proposal and certain other supervisory factors. The Board has considered these factors carefully in light of all the facts of record, including confidential supervisory and examination information from the U.S. banking supervisors of the institutions involved, and publicly reported and other financial information, including information provided by Applicants. The Board also has consulted with the Irish Financial Services Regulatory Authority ("Financial Regulator"), the agency with primary responsibility for the supervision and regulation of Irish banks, including Allied Irish.[15]

In evaluating the financial resources in expansion proposals by banking organizations, the Board reviews the financial condition of the organizations involved on both a parent-only and consolidated basis, as well as the financial condition of the subsidiary depository institutions and significant nonbanking operations. In this evaluation, the Board considers a variety of information, including capital adequacy, asset quality, and earnings performance. In assessing financial resources, the Board consistently has considered capital adequacy to be especially important. The Board also evaluates the financial condition of the combined organization at consummation, including its capital position, asset quality, earnings prospects, and the impact of the proposed funding of the transaction.

The Board has carefully considered the financial resources of the organizations involved in the proposal. The capital levels of Allied Irish would continue to exceed the minimum levels that would be required under the Basel Capital Accord and are considered to be equivalent to the capital levels that would be required of a U.S. banking organization.[16] In addition, M&T, Provident, and the subsidiary depository institutions involved are well capitalized and would remain so on consummation. Based on its review of the record, the Board finds that Applicants have sufficient financial resources to effect the proposal. The proposed transaction is structured as a share exchange.

The Board also has considered the managerial resources of the organizations involved. The Board has reviewed the examination records of Applicants, Provident, and their subsidiary depository institutions, including assessments of their management, risk-management systems, and operations. In addition, the Board has considered its supervisory experiences and those of other relevant banking supervisory agencies, including the Federal Deposit Insurance Corporation ("FDIC"), with the organizations and their records of compliance with applicable banking law and with anti-money-laundering laws. The Board also has considered Applicants' plans for implementing the proposal, including the proposed management after consummation.

Based on all the facts of record, the Board has concluded that considerations relating to the financial and managerial resources and future prospects of the organizations involved in the proposal are consistent with approval, as are the other supervisory factors.[17]

Section 3 of the BHC Act also provides that the Board may not approve an application involving a foreign bank unless the bank is subject to comprehensive supervision or regulation on a consolidated basis by the appropriate authorities in the bank's home country.[18] As noted, the Financial Regulator is the primary supervisor of Irish banks, including Allied Irish. The Board previously has determined that Allied Irish is subject to comprehensive supervision on a consolidated basis by its home-country supervisor.[19] Based on this finding and all the facts of record, the Board has concluded that Allied Irish continues

15. The Central Bank of Ireland was restructured and renamed as the Central Bank and Financial Services Authority of Ireland ("CBFSAI") in 2003. The Financial Regulator is an autonomous entity within the CBFSAI and has responsibility for financial sector regulation and consumer protection.

16. The Irish government has announced a plan, subject to certain approvals, to invest up to $4.9 billion in Allied Irish in exchange for noncumulative preference shares plus warrants. The minister for finance would have the right to appoint 25 percent of the board of directors of Allied Irish and would have 25 percent of total ordinary voting rights for change of control proposals and board appointments. The recapitalization program will be funded from the National Pensions Reserve Fund ("Fund"), which is an asset of the Irish government and appears on the government's balance sheet. The Fund is controlled and managed by the National Pensions Reserve Fund Commission, which is a government agency and performs its functions through another government agency, the National Treasury Management Agency. Because the investment in Allied Irish is being made and managed by the Irish government, and not through a government-owned or government-controlled company, approval is not required under section 3 of the BHC Act for the government's indirect investment in M&T or Provident.

17. Section 3 of the BHC Act also requires the Board to determine that an applicant has provided adequate assurances that it will make available to the Board such information on its operations and activities and those of its affiliates that the Board deems appropriate to determine and enforce compliance with the BHC Act (12 U.S.C. § 1842(c)(3)(A)). The Board has reviewed the restrictions on disclosure in the relevant jurisdictions in which Allied Irish operates and has communicated with relevant government authorities concerning access to information. In addition, Allied Irish has committed that, to the extent not prohibited by applicable law, it will make available to the Board such information on its operations and those of its affiliates that the Board deems necessary to determine and enforce compliance with the BHC Act, the International Banking Act, and other applicable federal laws. Allied Irish also has committed to cooperate with the Board to obtain any waivers or exemptions that may be necessary to enable its affiliates to make such information available to the Board. Based on all the facts of record, the Board has concluded that Allied Irish has provided adequate assurances of access to any appropriate information the Board may request.

18. 12 U.S.C. § 1843(c)(3)(B). As provided in Regulation Y, the Board determines whether a foreign bank is subject to consolidated home-country supervision under the standards set forth in Regulation K. *See* 12 CFR 225.13(a)(4). Regulation K provides that a foreign bank will be considered subject to comprehensive supervision or regulation on a consolidated basis if the Board determines that the bank is supervised or regulated in such a manner that its home-country supervisor receives sufficient information on the worldwide operations of the bank, including its relationship with any affiliates, to assess the bank's overall financial condition and its compliance with laws and regulations. *See* 12 CFR 211.24(c)(1).

19. *See, e.g., Allied Irish Banks, p.l.c.*, 94 *Federal Reserve Bulletin* C11 (2007).

to be subject to comprehensive supervision on a consolidated basis by its home-country supervisor.

CONVENIENCE AND NEEDS CONSIDERATIONS

In acting on a proposal under section 3 of the BHC Act and the Bank Merger Act, the Board is required to consider the effects of the proposal on the convenience and needs of the communities to be served and to take into account the records of the relevant insured depository institutions under the Community Reinvestment Act ("CRA").[20] The CRA requires the federal financial supervisory agencies to encourage insured depository institutions to help meet the credit needs of the local communities in which they operate, consistent with their safe and sound operation, and requires the appropriate federal financial supervisory agency to take into account a relevant depository institution's record of meeting the credit needs of its entire community, including low- and moderate-income ("LMI") neighborhoods, in evaluating bank expansionary proposals.[21]

The Board has considered carefully all the facts of record, including evaluations of the CRA performance records of M&T Bank and Provident Bank, data reported by M&T under the Home Mortgage Disclosure Act ("HMDA"),[22] other information provided by Applicants, confidential supervisory information, and a public comment received on the proposal. The commenter generally commended M&T Bank's CRA performance record and commitment to community development, but the commenter recommended that M&T Bank strengthen its affordable home mortgage lending product, increase community development and multifamily loans in LMI census tracts, provide more community development loans to not-for-profit organizations, and increase the number of its branches in LMI neighborhoods.

A. CRA Performance Evaluations

As provided in the CRA, the Board has reviewed the convenience and needs factor in light of the evaluations by the appropriate federal supervisor of the CRA performance record of the relevant insured depository institution. An institution's most recent CRA performance evaluation is a particularly important consideration in the applications process because it represents a detailed, on-site evaluation of the institution's overall record of performance under the CRA by its appropriate federal supervisor.[23]

M&T Bank received an "outstanding" rating at its most recent CRA performance evaluation by the Federal Reserve Bank of New York ("Reserve Bank"), as of May 12, 2008 ("2008 Evaluation").[24] Provident Bank received a "satisfactory" rating at its most recent CRA performance evaluation by the FDIC, as of July 2, 2007.[25]

In addition to the overall "outstanding" rating that M&T Bank received in the 2008 Evaluation, the bank received separate overall "outstanding" or "satisfactory" ratings in all the states and multistate metropolitan areas reviewed.[26] Examiners reported that M&T Bank's geographic distribution of loans was good. They also stated that the bank's distribution of loans to borrowers reflected a good penetration among customers of different income levels and to businesses of different revenue sizes.[27] In addition, examiners noted that M&T Bank offered a Federal National Mortgage Association affordable mortgage product in all its assessment areas that had resulted in the origination of almost 1,000 mortgages totaling $89 million during the evaluation period.

In the 2008 Evaluation, examiners characterized M&T Bank as a leader in making community development loans in its assessment areas, reporting that the bank made more than 455 community development loans totaling $1.96 billion during the evaluation period.[28] Examiners noted that the bank's community development lending volume generally exceeded similarly situated banks in the New York, Pennsylvania, and Maryland assessment areas.[29]

In the 2008 Evaluation, examiners rated M&T Bank's overall performance under the investment test as "outstanding." Qualifying community development investments totaled more than $246 million, representing an increase from its previous evaluation.

In addition, examiners concluded that the bank's performance under the service test was "outstanding." Examiners found that the bank's retail delivery systems were readily accessible to all portions of its assessment areas.[30]

20. 12 U.S.C. § 1842(c)(2).

21. 12 U.S.C. § 2903.

22. 12 U.S.C. § 2801 et seq.

23. *See Interagency Questions and Answers Regarding Community Reinvestment*, 74 *Federal Register* 498 and 527 (2009).

24. M&T's other bank subsidiary, Manufacturers and Traders Bank, National Association, received a "satisfactory" rating at its most recent CRA performance evaluation by the Office of the Comptroller of the Currency, as of May 26, 2006.

25. Examiners considered home mortgage loans, small business loans, and consumer loans originated during 2005 and 2006. The bank did not originate any small farm loans during the evaluation period.

26. Examiners considered HMDA-related and CRA-reportable small business loans that were originated between January 1, 2006, and December 31, 2007. Examiners also reviewed community development loans, investments, services, and activities pertaining to the service test for the same period.

27. The commenter criticized M&T Bank's affordable mortgage product, alleging that it is less attractive than such products offered by other banks and that the bank does not have a sufficient number of loan officers who are familiar with New York City's lower-income communities and the housing groups that serve those communities. M&T has represented that the mortgage division of M&T Bank has added full-time originators to its staff who specialize in lending to LMI borrowers to better serve its urban markets.

28. The commenter asserted that the bank should commit to make at least 50 percent of its community development loans to not-for-profit borrowers. The CRA does not require banks to provide any particular type of qualified community development loans to meet the credit needs of their communities.

29. These states received full-scope assessments during the 2008 Evaluation.

30. The commenter criticized the fact that M&T Bank's branch network includes New York County (i.e., Manhattan) but excludes Bronx County, one of the area's poorest counties. Examiners reviewed the bank's activities in the New York-Northern New Jersey-Long

They reported that 20 percent of M&T Bank's branches were in LMI tracts and that 19 percent of the bank's ATMs were in LMI areas, which enhanced the bank's performance under the service test in those communities. Examiners also noted that M&T Bank's customers could use ATMs owned by institutions that had business relationships with the bank without paying a fee and that six of them were in LMI areas. In addition, examiners noted that M&T Bank is a leader in providing community development services throughout its assessment areas, including sponsoring and participating in a significant number of seminars and presentations relating to affordable mortgages, small business assistance, and other banking education. These types of events provided technical assistance and training to LMI individuals, community organizations, small businesses, and housing agencies.

B. Conclusion on Convenience and Needs and CRA Performance

The Board has considered carefully all the facts of record, including reports of examination of the CRA records of the institutions involved, information provided by Applicants, a public comment received on the proposal, and confidential supervisory information. Applicants represented that the proposal will result in increased credit availability and access to a broader range of financial services for customers of M&T Bank and Provident Bank. Based on a review of the entire record, and for the reasons discussed above, the Board concludes that considerations relating to the convenience and needs factor and the CRA performance records of the relevant insured depository institutions are consistent with approval of the proposal.

Island, NY-NJ-PA Multistate Metropolitan Area ("the Multistate Area") and concluded that the bank's retail delivery systems were reasonably accessible to significant portions of the bank's geographies and individuals of different income levels in the Multistate Area. Although the bank does not have any branches in Bronx County, the bank originated 22 HMDA-related loans and 17 small business loans in the county during 2007, representing 8.5 percent and 8.6 percent, respectively, of the bank's HMDA and small business loan volume in the five counties of New York City. In the Multistate Area, M&T Bank originated 132 community developments loans totaling $457 million and made 209 community development investments totaling $29 million during 2006 and 2007.

CONCLUSION

Based on the foregoing, and in light of all the facts of record, the Board has determined that the applications should be, and hereby are, approved. In reaching its conclusion, the Board has considered all the facts of record in light of the factors that it is required to consider under the BHC Act, the Bank Merger Act, the Federal Reserve Act, and the statutory factors it is required to consider when reviewing an application for retaining and operating branches. The Board's approval is specifically conditioned on compliance by Applicants with the conditions in this order and all the commitments made to the Board in connection with the proposal. For purposes of this proposal, these commitments and conditions are deemed to be conditions imposed in writing by the Board in connection with its findings and decision and, as such, may be enforced in proceedings under applicable law.

The proposal may not be consummated before the 15th calendar day after the effective date of this order, or later than three months after the effective date of this order, unless such period is extended for good cause by the Board or by the Reserve Bank, acting pursuant to delegated authority.

By order of the Board of Governors, effective May 8, 2009.

Voting for this action: Chairman Bernanke, Vice Chairman Kohn, and Governors Warsh, Duke, and Tarullo.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

Appendix

M&T AND PROVIDENT BANKING MARKETS CONSISTENT WITH BOARD PRECEDENT AND DOJ GUIDELINES

Bank	Rank	Amount of deposits (dollars)	Market deposit shares (percent)	Resulting HHI	Change in HHI	Remaining number of competitors
Washington DC-MD-VA-WV — includes the Washington, D.C. Ranally Metropolitan Area ("RMA"), the non-RMA portions of the counties of Calvert, Charles, Frederick, Prince George's, and St. Mary's, Maryland, and Fauquier and Loudoun, Virginia; the cities of Alexandria, Fairfax, Falls Church, and Manassas, Virginia; and Jefferson County, West Virginia						
M&T Pre-Consummation	10	2.04 bil.	1.9	1,259	3	91
Provident	14	1.14 bil.	.9	1,259	3	91
M&T Post-Consummation	8	3.18 bil.	2.8	1,259	3	91
Baltimore MD-PA—includes the Baltimore, Maryland RMA, the non-RMA portions of the counties of Harford and Carroll, Maryland (excludes the Washington DC-MD-VA-WV RMA portion); and Baltimore, Maryland						
M&T Pre-Consummation	2	5.2 bil.	12.5	1,430	185	73
Provident	5	3.1 bil.	7.4	1,430	185	73
M&T Post-Consummation	2	8.3 bil.	19.9	1,430	185	73
Annapolis—includes the Annapolis, Maryland RMA						
M&T Pre-Consummation	9	133 mil.	3.97	1,157	3	19
Provident	17	16 mil.	.48	1,157	3	19
M&T Post-Consummation	9	149 mil.	4.45	1,157	3	19

NOTE: Data are as of June 30, 2008. All amounts of deposits are unweighted. All rankings, market deposit shares, and HHIs are based on thrift institution deposits weighted at 50 percent.

Morgan Stanley New York, New York

Order Approving the Acquisition of Additional Shares of a Bank Holding Company

Morgan Stanley ("Morgan"), New York, New York, a financial holding company within the meaning of the Bank Holding Company Act ("BHC Act"), has requested the Board's approval under section 3 of the BHC Act[1] to acquire up to an additional 5.1 percent of the voting shares of Chinatrust Financial Holding Company, Ltd. ("Chinatrust"), Taipei, Taiwan,[2] and thereby increase its indirect interest up to 9.9 percent in Chinatrust Bank (U.S.A.)

1. 12 U.S.C. § 1842.

2. Morgan proposes to acquire the additional voting shares of Chinatrust through open market transactions by the following subsidiaries: (1) MS Holdings, Inc., Morgan Stanley Private Equity Asia III, Inc., Morgan Stanley Private Equity Asia III, L.L.C., and MSPEA Holdings, Inc., all of Wilmington, Delaware; and (2) Morgan Stanley Private Equity Asia III, L.P., Morgan Stanley Private Equity Asia Employee Investors III, L.P., Morgan Stanley Private Equity Asia III Holdings (Cayman) Ltd., MSPEA Formosa Holdings (Cayman) Limited, and Morgan Stanley Formosa Holdings (Cayman) Limited, all of George Town, Grand Cayman, Cayman Islands.

("Bank"), Torrance, California. Morgan has also filed a notice under section 4(c)(13) of the BHC Act[3] and the Board's Regulation K[4] to increase its indirect interest in Chinatrust.[5]

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (73 *Federal Register* 76,653 (2008)). The time for filing comments has expired, and the Board has considered the proposal and all comments received in light of the factors set forth in sections 3 and 4 of the BHC Act.[6]

Morgan, with total consolidated assets of approximately $626 billion, engages in commercial and investment banking, securities underwriting and dealing, asset management, trading, and other activities both in the United States and abroad. Morgan controls Morgan Stanley Bank, National Association ("Morgan Bank"), Salt Lake City, Utah, which operates one branch in the state, with total consolidated assets of approximately $66.2 billion and deposits of approximately $54.1 billion. In addition, Morgan controls Morgan Stanley Trust ("MS Trust"), Jersey City, New Jersey, a federal savings association, with total consolidated assets of $6.6 billion and deposits of $5.8 billion.[7]

Chinatrust, with total consolidated assets of $53.9 billion, is the sixth largest depository organization in Taiwan.[8] Chinatrust, through Chinatrust Bank, operates a state-licensed branch in New York, New York, a representative office in Los Angeles, California, and Bank.

Bank, with total consolidated assets of approximately $2.4 billion, operates in four states[9] and controls deposits of approximately $2 billion.[10]

NONCONTROLLING INVESTMENT

Morgan has stated that it does not propose to control or exercise a controlling influence over Chinatrust and that its indirect investment in Chinatrust Bank would be a passive investment.[11] In this light, Morgan has agreed to abide by certain commitments substantially similar to those on which the Board has previously relied in determining that an investing bank holding company would not be able to exercise a controlling influence over another bank holding company or bank for purposes of the BHC Act ("Passivity Commitments").[12] For example, Morgan has committed not to exercise or attempt to exercise a controlling influence over the management or policies of Chinatrust or any of its subsidiaries; not to seek or accept more than one representative on the board of directors of Chinatrust (the same director may serve on the board of directors of Chinatrust Bank under conditions outlined in the Passivity Commitments); and not to have any other director, officer, employee, or agent interlocks with Chinatrust or any of its subsidiaries. The Passivity Commitments also include certain restrictions on the business relationships of Morgan with Chinatrust.

Based on these considerations and all the other facts of record, the Board has concluded that Morgan would not acquire control of, or have the ability to exercise a controlling influence over, Chinatrust, Chinatrust Bank, or Bank through the proposed acquisition of the Chinatrust voting shares. The Board notes that the BHC Act requires Morgan to file an application and receive the Board's approval before it directly or indirectly acquires additional shares of Chinatrust or attempts to exercise a controlling influence over Chinatrust, Chinatrust Bank, or Bank.[13]

COMPETITIVE CONSIDERATIONS

The Board has considered carefully the competitive effects of the proposal in light of all the facts of the record. Section 3 of the BHC Act prohibits the Board from approving a proposal that would result in a monopoly or would be in furtherance of any attempt to monopolize the business of banking in any relevant banking market. The BHC Act also prohibits the Board from approving a proposal that would substantially lessen competition in any relevant banking market, unless the anticompetitive effects of the proposal clearly are outweighed in the public interest by the prob-

3. 12 U.S.C. § 1843(c)(13).

4. 12 CFR 211.

5. Chinatrust owns Bank indirectly through Chinatrust Commercial Bank, Ltd. ("Chinatrust Bank"), Taipei, and also engages in securities, insurance, venture-capital, and asset-management activities outside the United States.

6. Thirty-seven commenters expressed concerns about certain aspects of the proposal. Several commenters objected to the Board's waiver of public notice of Morgan's application last September to become a bank holding company. In its order approving that application and Morgan's election to become a financial holding company, the Board explained its rationale for waiving the public comment period. *Morgan Stanley*, 94 *Federal Reserve Bulletin* C103 (2008) ("*Morgan FHC Order*").

7. Asset and deposit data are as of March 31, 2009. Morgan also controls Morgan Stanley Trust, National Association ("MSTNA"), Wilmington, Delaware, a limited-purpose national bank that engages solely in trust or fiduciary activities and is exempt from the definition of "bank" under the BHC Act pursuant to section 2(c)(2)(D) of the BHC Act (12 U.S.C. § 1841(c)(2)(D)).

8. Taiwanese asset data are as of September 30, 2008, and ranking data are as of December 31, 2007.

9. Bank operates branches in California, New Jersey, New York, and Washington.

10. Asset and deposit data are as of March 31, 2009.

11. Although the acquisition of less than a controlling interest in a bank or bank holding company is not a normal acquisition for a bank holding company, the requirement in section 3(a)(3) of the BHC Act that the Board's approval be obtained before a bank holding company acquires more than 5 percent of the voting shares of a bank suggests that Congress contemplated the acquisition by bank holding companies of between 5 percent and 25 percent of the voting shares of banks. *See* 12 U.S.C. § 1842(a)(3). On this basis, the Board previously has approved the acquisition by a bank holding company of less than a controlling interest in a bank or bank holding company. *See, e.g., Mitsubishi UFG Financial Group, Inc.*, 95 *Federal Reserve Bulletin* B34 (2009) (acquisition of up to 24.9 percent of the voting shares of a bank holding company); *Brookline Bancorp, MHC*, 86 *Federal Reserve Bulletin* 52 (2000) (acquisition of up to 9.9 percent of the voting shares of a bank holding company); *Mansura Bancshares, Inc.*, 79 *Federal Reserve Bulletin* 37 (1993) (acquisition of 9.7 percent of the voting shares of a bank holding company).

12. These commitments are set forth in the appendix.

13. 12 U.S.C. § 1842. *See, e.g., Emigrant Bancorp, Inc.*, 82 *Federal Reserve Bulletin* 555 (1996).

able effect of the proposal in meeting the convenience and needs of the community to be served.[14]

Morgan and Chinatrust do not compete directly in any relevant banking market. Based on all the facts of record, the Board has concluded that consummation of the proposal would not have a significantly adverse effect on competition or on the concentration of banking resources in any relevant banking market and that competitive factors are consistent with approval of the proposal.

Financial, Managerial, and Other Supervisory Considerations

Section 3 of the BHC Act requires the Board to consider the financial and managerial resources and future prospects of the companies and depository institutions involved in the proposal and certain other supervisory factors. The Board has carefully considered these factors in light of all the facts of record, including confidential supervisory and examination information received from the relevant federal and state supervisors of the organizations involved, publicly reported and other financial information, information provided by Morgan, and public comment received on the proposal. Several commenters opposed the combination of commercial banking and investment banking in Morgan. Congress specifically has authorized the combination of commercial banking and investment banking for bank holding companies that meet certain requirements and elect to become financial holding companies.[15] Morgan met those requirements when it elected to be a financial holding company and has continued to satisfy the criteria for financial holding company status.[16]

In evaluating financial factors in expansion proposals by banking organizations, the Board reviews the financial condition of the organizations involved on both a parent-only and consolidated basis, as well as the financial condition of the subsidiary depository institutions and significant nonbanking operations. In this evaluation, the Board considers a variety of information, including capital adequacy, asset quality, and earnings performance. In assessing financial factors, the Board consistently has considered capital adequacy to be especially important. The Board also evaluates the effect of the transaction on the financial condition of the applicant, including its capital position, asset quality, earnings prospects, and the impact of the proposed funding of the transaction.[17]

The Board has carefully considered the financial factors of the proposal. Morgan, Morgan Bank, and MS Trust are well capitalized. Bank is also well capitalized, and the financial factors related to Chinatrust are consistent with approval. Based on its review of the record, the Board also finds that Morgan has sufficient capital and other resources to effect the proposal. The proposed transaction is structured as a share purchase in the open market and would be funded from Morgan's available funds. The Board also notes that Morgan has recently raised a substantial amount of private capital.[18]

The Board also has considered the managerial resources of the organizations involved in the proposed transaction.[19] The Board has reviewed the examination records of Morgan, Morgan's subsidiary depository institutions, Bank, and Chinatrust Bank's U.S. offices, including assessments of their management, risk-management systems, and operations. In addition, the Board has considered its supervisory experiences and those of the other relevant banking supervisory agencies with the organizations and their records of compliance with applicable banking law, including anti-money-laundering laws.

Based on all the facts of record, the Board has concluded that the financial and managerial resources and the future prospects of Morgan, its subsidiary depository institutions, and Bank are consistent with approval of this application, as are the other supervisory factors the Board must consider under section 3 of the BHC Act.

Convenience and Needs Considerations

In acting on a proposal under section 3 of the BHC Act, the Board also must consider the effects of the proposal on the convenience and needs of the communities to be served and take into account the records of the relevant insured depository institutions under the Community Reinvestment

14. 12 U.S.C. § 1842(c)(1).

15. *See* 12 U.S.C. § 1843(k); 12 U.S.C. § 1843(*l*).

16. *Morgan FHC Order*.

17. As previously noted, Morgan would acquire only up to 9.9 percent of Chinatrust. Under these circumstances, Morgan would not consolidate the financial statements of Chinatrust for regulatory purposes.

18. The Board also considered public comments related to Morgan's financial condition. Commenters alleged that Morgan does not have the financial capacity to complete the acquisition of Chinatrust, noting that a credit rating agency had lowered Morgan's credit rating with a negative outlook. Several comments also referenced funding that Morgan received from the U.S. Department of the Treasury under the Troubled Asset Relief Program and Morgan's alleged use of those funds for purposes other than providing liquidity to the credit markets in the United States.

19. Several commenters expressed general concerns about Morgan's management, including allegations about Morgan's accounting practices, activities relating to auction-rate securities, an investigation on energy pricing by a Morgan affiliate, and allegations that a Morgan Stanley employee violated the Foreign Corrupt Practices Act. In approving Morgan's application under the BHC Act last September, the Board carefully considered the managerial resources of Morgan in light of all the facts of record, including confidential supervisory information and information provided by Morgan. *See Morgan FHC Order*, at C105. The Board also has communicated with relevant federal and state agencies with respect to the auction-rate securities activities and pricing investigation. The Board considered the August 2008 settlement between Morgan and the Attorney General of the state of New York and pending litigation involving these matters. As part of its ongoing supervision of Morgan, the Board monitors the status of government investigations, consults as needed with relevant regulatory authorities, and periodically reviews Morgan's potential liability from material litigation. In addition, Morgan announced that it has fired the employee who allegedly violated the Foreign Corrupt Practices Act, reported the activity to appropriate authorities, and will continue to investigate the matter.

Act ("CRA").[20] The CRA requires the federal financial supervisory agencies to encourage insured depository institutions to help meet the credit needs of the local communities in which they operate, consistent with their safe and sound operation, and requires the appropriate federal financial supervisory agency to take into account a relevant depository institution's record of meeting the credit needs of its entire community, including low- and moderate-income ("LMI") neighborhoods, in evaluating expansionary proposals.[21]

The Board has considered carefully all the facts of record, including evaluations of the CRA performance records of Morgan's and Chinatrust's subsidiary banks, data reported by Morgan under the Home Mortgage Disclosure Act ("HMDA"),[22] other information provided by Morgan, confidential supervisory information, and public comments. Commenters criticized Morgan's record of lending in LMI communities and its CRA plan.[23] In addition, commenters alleged, based on HMDA data, that Morgan has engaged in disparate treatment of LMI and minority individuals in home mortgage lending. Some commenters expressed concern about the CRA performance record of Chinatrust Bank. Commenters also expressed concern over subprime lending by Morgan and by Saxon Mortgage, Inc. ("Saxon Mortgage"), a subsidiary Morgan acquired in 2006. Morgan represented that it currently does not directly or indirectly originate subprime loans, nor does it provide warehouse lending or custodian services for subprime lenders.

A. CRA Performance Evaluations

An institution's most recent CRA performance evaluation is a particularly important consideration in the applications process because it represents a detailed, on-site evaluation of the institution's overall record of performance under the CRA by its appropriate federal supervisor.[24]

Morgan Bank received an "outstanding" rating at its most recent CRA evaluation by the Federal Deposit Insurance Corporation ("FDIC"), as of January 30, 2006 ("2006 Evaluation").[25] The Board considered Morgan Bank's CRA performance record and discussed the 2006 Evaluation in the *Morgan FHC Order*. Based on a review of the record in this application, the Board hereby reaffirms and adopts the facts and findings concerning Morgan Bank's CRA performance record. The Board also has considered information provided by Morgan about its CRA performance since the Board reviewed such matters in connection with the *Morgan FHC Order*.

Consistent with the CRA regulations adopted by the federal banking agencies, the FDIC evaluated Morgan Bank under the community development test as a wholesale bank.[26] In the 2006 Evaluation, examiners found Morgan Bank to be highly proactive with regard to assessing the needs of its community and providing extensive resources in addressing the resulting needs identified. Examiners reported that the bank extended, funded, and committed almost $59 million in qualified community development loans and investments during the evaluation period.[27] Examiners also reported that bank personnel and affiliate staff provided more than 5,000 CRA qualified service hours to their respective communities.

Morgan Bank's current CRA plan prioritizes meeting the community development needs of its assessment area, which includes Salt Lake County, part of the Salt Lake City, Utah, Metropolitan Statistical Area ("MSA"), as well as the needs of the adjoining counties to its assessment area and the rest of Utah and the contiguous states.[28] The bank's CRA program is currently focused on community development activities that revitalize or stabilize LMI individuals and geographies. These activities include financing affordable housing construction and rehab financing; promoting economic development; targeting community services to LMI individuals; and using Morgan Bank's financial exper-

20. 12 U.S.C. §2901 et seq.; 12 U.S.C. §2903; 12 U.S.C. §1842(c)(2).

21. 12 U.S.C. §2903.

22. 12 U.S.C. §2801 et seq.

23. Two commenters also urged the Board to require Morgan to enter into agreements or to take certain future actions in connection with its community development activities. The Board consistently has stated that neither the CRA nor the federal banking agencies' CRA regulations require depository institutions to make pledges or enter into commitments or agreements with any organization and that the enforceability of any such third-party pledges, initiatives, or agreements is outside the CRA. *See, e.g., The PNC Financial Services Group, Inc.*, 95 *Federal Reserve Bulletin* B1 (2009); *Wachovia Corporation*, 91 *Federal Reserve Bulletin* 77 (2005). Instead, the Board focuses on the existing CRA performance record of an applicant and the programs that an applicant has in place to serve the credit needs of its assessment areas at the time the Board reviews a proposal under the convenience and needs factor.

24. The Interagency Questions and Answers Regarding Community Reinvestment provide that a CRA examination is an important and often controlling factor in the consideration of an institution's CRA record. *See Interagency Questions and Answers Regarding Community Reinvestment*, 74 *Federal Register* 498 at 527 (2009).

25. Morgan Bank converted to a national charter on September 23, 2008. MSTNA is not an insured depository institution, and MS Trust is not subject to the CRA pursuant to regulations issued by the Office of Thrift Supervision. *See* 12 CFR 563e.11(c)(2).

26. *See* 12 CFR 345.21(a)(2).

27. The 2006 Evaluation covered the period from March 11, 2003, through January 20, 2006.

28. Several commenters criticized Morgan and Morgan Bank's records of home mortgage lending in LMI communities, indicated that the bank's assessment area for purposes of CRA performance evaluation should be expanded to include the office locations of affiliates (such as Morgan's broker-dealer offices), and alleged that Morgan has not provided a sufficient CRA plan for making credit and other banking services available to LMI communities in such an expanded assessment area. Under the CRA regulations, the assessment area for a wholesale or limited-purpose bank consists generally of one or more MSAs or Metropolitan Divisions, or one or more contiguous subdivisions in which the bank has its main office, branches, and deposit-taking ATMs. *See* 12 CFR 25.41; 12 CFR 228.41; 12 CFR 345.41. A bank's CRA assessment area is not determined by the location of offices of affiliates. The Office of the Comptroller of the Currency ("OCC"), as the primary supervisor of Morgan Bank, will evaluate the bank's qualification as a wholesale bank and its assessment area and CRA plan as part of its ongoing supervision of the bank.

tise to provide financial services activities. Morgan Bank's community development lending and investment activities have included direct lending to nonprofit affordable housing organizations; construction participation loans with retail banks; investments in loan consortia that manage and fund small business loans, multifamily rental housing, and financing and construction of community facilities; and direct investments in Small Business Investment Company venture-capital and various national community reinvestment funds.

Bank received a "needs to improve" rating at its most recent CRA evaluation by the FDIC, as of July 16, 2007 ("2007 Evaluation"). Some commenters raised concerns about this rating and Bank's CRA performance generally. Chinatrust has developed a corrective action plan to improve Bank's CRA performance and has been submitting quarterly reports to the FDIC. The Board has consulted with the FDIC about actions Chinatrust has taken to improve Bank's CRA performance since the 2007 Evaluation.

B. HMDA and Fair Lending Record

The Board has carefully considered the fair lending records and HMDA data of Morgan in light of public comments received on the proposal. Several commenters alleged, based on 2007 HMDA data, that Saxon Mortgage made a disproportionately larger number of high-cost loans to African American, Hispanic, and other minority borrowers than to nonminority borrowers. This issue was previously raised by a different commenter and considered by the Board in the application by Morgan to retain up to 9.9 percent of the voting shares of Herald National Bank, New York, New York.[29] The Board hereby reaffirms and adopts the facts and findings concerning Morgan Bank's HMDA and fair lending record made in the *Morgan Herald Order*.

The Board's consideration of HMDA-related comments included a review of 2007 HMDA data reported by Saxon Mortgage and Morgan Stanley Credit Corporation ("MSCC"). Morgan acquired Saxon Capital, Inc. ("Saxon Capital"), the parent of Saxon Mortgage, in 2006 and MSCC in 1997. Morgan now originates residential mortgage loans only through MSCC, which currently originates only prime mortgage loans. Morgan services mortgage loans through Saxon Capital, including subprime loans originated by Morgan and others.

Although the HMDA data might reflect certain disparities in the rates of loan applications, originations, denials, or pricing among members of different racial or ethnic groups in certain local areas, they provide an insufficient basis by themselves on which to conclude whether or not Morgan is excluding or imposing higher costs on any racial or ethnic group on a prohibited basis. The Board recognizes that HMDA data alone, even with the recent addition of pricing information, provide only limited information about the covered loans.[30] HMDA data, therefore, have limitations that make them an inadequate basis, absent other information, for concluding that an institution has engaged in illegal lending discrimination.

The Board is nevertheless concerned when HMDA data for an institution indicate disparities in lending and believes that all lending institutions are obligated to ensure that their lending practices are based on criteria that ensure not only safe and sound lending but also equal access to credit by creditworthy applicants regardless of their race or ethnicity. Moreover, the Board believes that all bank holding companies and their affiliates must conduct their mortgage lending operations without any abusive lending practices and in compliance with all consumer protection laws.

Because of the limitations of HMDA data, the Board has considered these data carefully and taken into account other information, including examination reports that provide on-site evaluations of compliance by Morgan's subsidiary insured depository institutions with fair lending laws. The Board also has consulted with the FDIC and OCC, the former and current primary federal supervisors, respectively, of Morgan Bank. In addition, the Board has considered information provided by Morgan about its compliance risk-management systems.

As noted in the *Morgan Herald Order*, the record, including confidential supervisory information, indicates that Morgan has taken steps to ensure compliance with fair lending and other consumer protection laws and regulations.[31] Morgan currently originates residential mortgage loans only through MSCC and services subprime loans only through Saxon Capital. Morgan represented that MSCC and Saxon Capital have policies and procedures to help ensure compliance with fair lending and other consumer protection laws and regulations. For example, MSCC uses an automated underwriting and loan-pricing system that substantially limits discretionary criteria and, before

29. *Morgan Stanley*, 95 *Federal Reserve Bulletin* B93 (2009) ("*Morgan Herald Order*").

30. The data, for example, do not account for the possibility that an institution's outreach efforts may attract a larger proportion of marginally qualified applicants than other institutions attract and do not provide a basis for an independent assessment of whether an applicant who was denied credit was, in fact, creditworthy. In addition, credit history problems, excessive debt levels relative to income, and high loan amounts relative to the value of the real estate collateral (reasons most frequently cited for a credit denial or higher credit cost) are not available from HMDA data.

31. Commenters expressed concern about Morgan's alleged warehouse financing to subprime lenders and securitization of subprime loans. Morgan represented that it does not provide warehouse lending or custodian services for subprime lenders. To the extent it provides servicing activities for subprime loans, Morgan asserted that it conducts due diligence to promote compliance with fair lending laws. Morgan also has asserted that, to the extent it underwrites securities for or participates in commercial loans to subprime lenders, Morgan has no role in the lending or credit review practices of those lenders. In addition, Morgan has represented that, to the extent it underwrites securities for subprime lenders, its due diligence procedures seek to ensure that mortgage pools supporting securitizations do not include loans subject to the Home Ownership and Equity Protection Act of 1994 or loans with predatory lending features. As noted above, the Board will continue to require all bank holding companies and their affiliates to conduct their lending operations without any abusive lending practices and in compliance with all applicable laws.

denying a loan application, MSCC makes reasonable efforts to gather additional information that could appropriately qualify an applicant. MSCC employees do not have override authority in pricing loans, and their compensation is not based on loan pricing. Morgan has represented that Saxon Capital clearly discloses fees to consumers and monitors fees to ensure compliance with applicable law. In addition, MSCC and Saxon Capital provide training in fair lending and consumer protection law to employees involved in originating and servicing loans and maintain complaint resolution systems. MSCC's fair lending compliance procedures include reviews of loan origination and pricing data that use statistical and comparative file analyses.

The Board also has considered the HMDA data in light of other information, including the CRA performance record of Morgan Bank. These established efforts and this record of performance demonstrate that Morgan Bank is active in helping to meet the credit needs of its entire community.

C. Conclusion on Convenience and Needs and CRA Performance

The Board has carefully considered all the facts of record, including reports of examination of the CRA performance records of the institutions involved, information provided by Morgan, comments received on the proposal, and confidential supervisory information.[32] Based on a review of the entire record, including the noncontrolling nature of the proposed investment in Chinatrust, the Board concludes that considerations relating to the convenience and needs factor and the CRA performance records of the relevant insured depository institutions are consistent with approval.

CONCLUSION

Based on the foregoing and all the facts of record, the Board has determined that the application and notice[33] should be, and hereby are, approved.[34] In reaching its conclusion, the Board has considered all the facts of record in light of the factors that it is required to consider under the BHC Act and other applicable statutes.[35] The Board's approval is specifically conditioned on compliance by Morgan with the conditions imposed in this order and the commitments made to the Board in connection with the application. For purposes of this action, the conditions and commitments are deemed to be conditions imposed in writing by the Board in connection with its findings and decision herein and, as such, may be enforced in proceedings under applicable law.

The acquisition of Chinatrust's voting shares may not be consummated before the 15th calendar day after the effective date of this order, or later than three months after the effective date of this order, unless such period is extended for good cause by the Board or the Federal Reserve Bank of New York, acting pursuant to delegated authority.

By order of the Board of Governors, effective June 26, 2009.

Voting for this action: Chairman Bernanke and Governors Warsh, Duke, and Tarullo. Absent and not voting: Vice Chairman Kohn.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

32. Commenters also alleged that Morgan has not taken sufficient action to prevent foreclosures. Morgan noted that through Saxon Capital, it modified approximately 12,875 mortgages in 2008 and that Saxon Capital has initiatives underway to increase its modification capacity in 2009. In addition to modifications, Saxon Capital has pursued other forms of home preservation and loss mitigation to avoid foreclosures where possible. Finally, Morgan indicated that Saxon Capital remains actively engaged in industry-wide efforts and other public and private partnerships to address the current foreclosure crisis, including Hope Now, the State Foreclosure Prevention Working Group, the Ohio Compact to Prevent Foreclosures, and the National Community Stabilization Trust.

33. Morgan proposes to acquire an indirect interest in Chinatrust's FHC-permissible nonbanking business pursuant to section 4(k) of the BHC Act. As noted above, Morgan proposes to acquire its indirect interest in Chinatrust's businesses that are not being acquired pursuant to section 3 or 4(k) of the BHC Act pursuant to section 4(c)(13) of the BHC Act and Regulation K. Because Morgan's investment in Chinatrust qualifies as a portfolio investment under section 211.8 of Regulation K (12 CFR 211.8(e)), Chinatrust's U.S. activities are permitted, provided that Chinatrust derives no more than 10 percent of its total revenues from activities in the United States (12 CFR 211.8(e)(1)(ii)(A)). Based on all the facts of record, the Board has determined that all factors required to be considered under the BHC Act and Regulation K are consistent with approval.

34. The Board also has approved the indirect acquisition of the interest in Chinatrust by Mitsubishi UFJ Financial Group, Inc. ("MUFG"), Tokyo, Japan. MUFG, a financial holding company within the meaning of the BHC Act, currently controls approximately 21 percent of the voting shares of Morgan Stanley. The Board notes that MUFG has provided no funding for Morgan's acquisition of the Chinatrust shares, and Morgan's acquisition of the Chinatrust shares would not alter the current structure of MUFG's investment in Morgan. In addition, MUFG's U.S. subsidiary banks remain well capitalized. The Board previously has determined that the foreign banks controlled by MUFG are subject to comprehensive supervision on a consolidated basis by their home-country supervisor, the Japanese Financial Services Agency ("FSA"). The Board has determined that these banks continue to be subject to comprehensive supervision on a consolidated basis by the FSA. The other statutory factors are consistent with approval.

35. Several commenters requested that the Board hold a public meeting or hearing on the proposal. Section 3 of the BHC Act does not require the Board to hold a public hearing on an application unless the appropriate supervisory authority for the bank to be acquired makes a written recommendation of denial of the application. The Board has not received such a recommendation from the appropriate supervisory authorities. Under its rules, the Board also may, in its discretion, hold a public meeting or hearing on an application to acquire a bank if necessary or appropriate to clarify factual issues related to the application and to provide an opportunity for testimony (12 CFR 225.16(e) and 262.25(d)). The Board has considered carefully the commenters' requests in light of all the facts of record. In the Board's view, the commenters had ample opportunity to submit their views and, in fact, submitted written comments that the Board has considered carefully in acting on the proposal. The commenters' requests fail to demonstrate why written comments do not present their views adequately or why a meeting or hearing otherwise would be necessary or appropriate. For these reasons, and based on all the facts of record, the Board has determined that a public meeting or hearing is not required or warranted in this case. Accordingly, the requests for a public meeting or hearing on the proposal are denied.

Appendix

Passivity Commitments

Morgan Stanley ("Morgan"), New York, New York, and its subsidiaries (collectively, the "Morgan Stanley Group") will not, without the prior approval of the Board or its staff, directly or indirectly:

1. Exercise or attempt to exercise a controlling influence over the management or policies of Chinatrust Financial Holding Company, Ltd., Taipei, Taiwan, Republic of China ("Chinatrust") or any of its subsidiaries;
2. Have or seek to have any representative of the Morgan Stanley Group serve on the board of directors of any subsidiaries of Chinatrust, except that the single representative of Morgan Stanley Group who serves on the board of Chinatrust may also serve as a director of Chinatrust Commercial Bank, Ltd. ("CCB") if all other outside directors of Chinatrust also serve on the board of directors of CCB;
3. Have or seek to have more than one representative of the Morgan Stanley Group serve on the board of directors of Chinatrust, and CCB under the terms of the prior commitment, or permit any representative of the Morgan Stanley Group who serves on the board of directors of Chinatrust and CCB to serve (i) as the chairman of the board of directors of Chinatrust or CCB, (ii) as the chairman of any committee of the board of directors of Chinatrust or CCB, or (iii) serve as a member of any committee of the board of directors of Chinatrust or CCB if such representative occupies more than 25 percent of the seats on the committee;
4. Have or seek to have any employee or representative of the Morgan Stanley Group serve as an officer, agent, or employee of Chinatrust or any of its subsidiaries;
5. Take any action that would cause Chinatrust or any of its subsidiaries to become a subsidiary of Morgan;
6. Own, control, or hold with power to vote securities that (when aggregated with securities that the officers and directors of the Morgan Stanley Group own, control, or hold with power to vote) represent 25 percent or more of any class of voting securities of Chinatrust or any of its subsidiaries;
7. Own or control equity interests that would result in the combined voting and nonvoting equity interests of the Morgan Stanley Group and its officers and directors to equal or exceed 25 percent of the total equity capital of Chinatrust or any of its subsidiaries;
8. Except in connection with the Morgan Stanley Group's representation on the board of directors of Chinatrust or CCB (or efforts to continue such representation) consistent with paragraph 3 above, propose a director or slate of directors in opposition to a nominee or slate of nominees proposed by the management or board of directors of Chinatrust or any of its subsidiaries;
9. Enter into any agreement with Chinatrust or any of its subsidiaries that substantially limits the discretion of Chinatrust's management over major policies and decisions, including, but not limited to, policies or decisions about employing and compensating executive officers; engaging in new business lines; raising additional debt or equity capital; merging or consolidating with another firm; or acquiring, selling, leasing, transferring, or disposing of material assets, subsidiaries, or other entities;
10. Except in connection with the Morgan Stanley Group's representation on the board of directors of Chinatrust or CCB (or efforts to continue such representation) consistent with paragraph 3 above, solicit or participate in soliciting proxies with respect to any matter presented to the shareholders of Chinatrust or any of its subsidiaries;
11. Dispose or threaten to dispose (explicitly or implicitly) of equity interests of Chinatrust or any of its subsidiaries in any manner as a condition or inducement of specific action or nonaction by Chinatrust or any of its subsidiaries; or
12. Enter into any other banking or nonbanking transactions with Chinatrust or any of its subsidiaries, except for transactions in the ordinary course of business that are non-exclusive (except to the extent any individual transaction may contain an exclusivity provision limited to that transaction) and are on terms and under circumstances that in good faith would be offered to, or would apply to, companies that are not affiliated with Morgan or Chinatrust, including, but not limited to, securities underwriting, brokerage and trading, mergers and acquisitions advisory services and investment management services, provided that the aggregate balance of all deposit accounts held by the Morgan Stanley Group at Chinatrust and its subsidiaries does not exceed 1 percent of the total deposits held at Chinatrust and its subsidiaries and that the aggregate amount of (i) gross revenues Morgan, on a consolidated basis, earns from its business relationships with Chinatrust and its subsidiaries does not exceed 0.5 percent of Morgan's annual gross revenues, on a consolidated basis, and (ii) gross revenues Chinatrust, on a consolidated basis, earns from its business relationships with the Morgan Stanley Group does not exceed 0.5 percent of Chinatrust's annual gross revenues, on a consolidated basis, in each case under (i) and (ii) as calculated based on the rolling average of the prior four quarters.

The terms used in these commitments have the same meanings as those set forth in the Bank Holding Company Act of 1956 ("BHC Act"), as amended, and the Board's Regulation Y.

Morgan understands that these commitments constitute conditions imposed in writing in connection with the Board's findings and decisions in Morgan's application to acquire additional common shares up to 9.9 percent of the outstanding common shares of Chinatrust, pursuant to section 3(a)(3) of the BHC Act, and, as such, may be enforced in proceedings under applicable law. Morgan further understands that it generally must file an application and receive prior approval of the Board, pursuant to section 3(a)(3) of the BHC Act, for any subsequent acquisition of control of voting shares of Chinatrust that would result in Morgan, directly or indirectly, owning or controlling additional voting shares in excess of 9.9 percent of the outstanding common shares of Chinatrust.

Morgan Stanley
New York, New York

Order Approving Retention of Shares of a Bank

Morgan Stanley ("Morgan"), a financial holding company within the meaning of the Bank Holding Company Act ("BHC Act"), has requested the Board's approval under section 3 of the BHC Act[1] to retain up to 9.9 percent of the voting shares of Herald National Bank ("Herald"), both of New York, New York, a newly chartered national bank.[2]

Notice of the proposal, affording interested persons an opportunity to submit comments, has been published (73 *Federal Register* 66,246 (2008)). The time for filing comments has expired, and the Board has considered the proposal and all comments received in light of the factors set forth in section 3 of the BHC Act.[3]

Morgan, with total consolidated assets of approximately $626 billion, engages in commercial and investment banking, securities underwriting and dealing, asset management, trading, and other activities in the United States and abroad. Morgan controls Morgan Stanley Bank, National Association ("Morgan Bank"), Salt Lake City, Utah, which operates one branch in the state, with total consolidated assets of approximately $66.2 billion and deposits of approximately $54.1 billion. In addition, Morgan controls Morgan Stanley Trust ("MS Trust"), Jersey City, New Jersey, a federal savings association, with total consolidated assets of $6.6 billion and deposits of $5.8 billion.[4] Herald, which controls deposits of $114.7 million, operates only in New York.[5]

NONCONTROLLING INVESTMENT

Morgan has stated that it does not intend to control or exercise a controlling influence over Herald and that its investment in Herald is a passive investment.[6] In this light, Morgan has agreed to abide by certain commitments substantially similar to those on which the Board has previously relied in determining that an investing bank holding company would not be able to exercise a controlling influence over another bank holding company or bank for purposes of the BHC Act ("Passivity Commitments").[7] For example, Morgan has committed not to exercise or attempt to exercise a controlling influence over the management or policies of Herald or any of its subsidiaries; not to seek or accept more than one representative on the board of directors of Herald; and not to have any other officer, employee, or agent interlocks with Herald or any of its subsidiaries. The Passivity Commitments also include certain restrictions on the business relationships of Morgan with Herald.

Based on these considerations and all the other facts of record, the Board has concluded that Morgan has not acquired control of, nor has the ability to exercise a controlling influence over, Herald through the acquisition of the bank's voting shares. The Board notes that the BHC Act requires Morgan to file an application and receive the Board's approval before it directly or indirectly acquires additional shares of Herald or attempts to exercise a controlling influence over Herald.[8]

COMPETITIVE CONSIDERATIONS

The Board has considered carefully the competitive effects of the proposal in light of all the facts of the record. Section 3 of the BHC Act prohibits the Board from approving a proposal that would result in a monopoly or would be in furtherance of any attempt to monopolize the business of banking in any relevant banking market. The BHC Act also

1. 12 U.S.C. § 1842.

2. Herald began operations on November 24, 2008, as Heritage Bank, National Association, until it was renamed on January 2, 2009. Morgan holds the shares of Herald through two subsidiary hedge funds: Frontpoint Financial Services Fund, L.P. and Frontpoint Financial Horizons Fund, L.P., both of Greenwich, Connecticut. Morgan acquired the shares in Herald's public offering as a passive fund investment. No shareholder of Herald controls more than 10 percent of the bank's voting shares, although SCJ, Inc., Irvine, California, and the Carpenter Funds it controls, have received approval under section 3 of the BHC Act to acquire up to 18 percent of Herald's voting shares.

3. A commenter objected to the Board's waiver of public notice of Morgan's application last September to become a bank holding company. In its order approving that application and Morgan's election to become a financial holding company, the Board explained its rationale for waiving the public comment period. *Morgan Stanley*, 94 *Federal Reserve Bulletin* C103 (2008) ("*Morgan FHC Order*").

4. Asset and deposit data are as of March 31, 2009. Morgan also controls Morgan Stanley Trust National Association ("MSTNA"), Wilmington, Delaware, a limited-purpose national bank that engages only in trust or fiduciary activities and is exempt from the definition of "bank" under the BHC Act pursuant to section 2(c)(2)(D) of the BHC Act (12 U.S.C. § 1841(c)(2)(D)).

5. In acting on Morgan's application last September, the Board determined that emergency conditions existed at the time that justified the Board's expeditious action on the proposal. *Morgan FHC Order*. When Morgan's application was approved on September 21, 2008, Herald was well advanced in its preparations to commence operations. In light of the emergency conditions when the Board approved Morgan's application, the timing of Herald's plans to commence operations, and Morgan's status as a minority investor in Herald, Morgan has been permitted to retroactively file an application to retain the Herald shares.

6. Although the acquisition of less than a controlling interest in a bank or bank holding company is not a normal acquisition for a bank holding company, the requirement in section 3(a)(3) of the BHC Act that the Board's approval be obtained before a bank holding company acquires more than 5 percent of the voting shares of a bank suggests that Congress contemplated the acquisition by bank holding companies of between 5 percent and 25 percent of the voting shares of banks. *See* 12 U.S.C. § 1842(a)(3). On this basis, the Board previously has approved the acquisition by a bank holding company of less than a controlling interest in a bank or bank holding company. *See, e.g., Mitsubishi UFG Financial Group*, 95 *Federal Reserve Bulletin* B34 (2009) (acquisition of up to 24.9 percent of the voting shares of a bank holding company); *Brookline Bancorp, MHC*, 86 *Federal Reserve Bulletin* 52 (2000) (acquisition of up to 9.9 percent of the voting shares of a bank holding company); *Mansura Bancshares, Inc.*, 79 *Federal Reserve Bulletin* 37 (1993) (acquisition of 9.7 percent of the voting shares of a bank holding company).

7. These commitments are set forth in the appendix.

8. 12 U.S.C. § 1842. *See, e.g., Emigrant Bancorp, Inc.*, 82 *Federal Reserve Bulletin* 555 (1996).

prohibits the Board from approving a bank acquisition that would substantially lessen competition in any relevant banking market, unless the Board finds that the anticompetitive effects of the proposal clearly are outweighed in the public interest by the probable effect of the proposal in meeting the convenience and needs of the community to be served.[9]

The Board has previously stated that one company need not acquire control of another company to lessen competition between them substantially.[10] The Board has found that noncontrolling interests in directly competing depository institutions may raise serious questions under the BHC Act and has stated that the specific facts of each case will determine whether the minority investment in a company would be anticompetitive.[11]

Morgan and Herald compete directly in the Metro New York banking market.[12] The Board has reviewed carefully the competitive effects of the proposal in the Metro New York banking market in light of all the facts of the record. In particular, the Board has considered the number of competitors that remain in the banking market, the relative shares of total deposits in depository institutions in the market ("market deposits") controlled by Morgan and Herald,[13] and the concentration level of market deposits and the increase in the level as measured by the Herfindahl–Hirschman Index ("HHI") under the Department of Justice Merger Guidelines ("DOJ Guidelines").[14]

Consummation of the acquisition was consistent with Board precedent and within the thresholds in the DOJ Guidelines in the Metro New York banking market. On consummation, the banking market remained moderately concentrated, and numerous competitors remained in the market.[15]

The DOJ also has reviewed the matter and has advised the Board that it does not believe that Morgan's ownership interest in Herald is likely to have a significant adverse effect on competition in any relevant banking market. The appropriate banking agencies have been afforded an opportunity to comment and have not objected to the application.

Based on all the facts of record, the Board has concluded that approval of Morgan's application would not have a significantly adverse effect on competition or on the concentration of resources in any relevant banking market. Accordingly, the Board has determined that competitive factors are consistent with approval.

FINANCIAL, MANAGERIAL, AND SUPERVISORY CONSIDERATIONS

Section 3 of the BHC Act requires the Board to consider the financial and managerial resources and future prospects of the companies and depository institutions involved and certain other supervisory factors. The Board has carefully considered these factors in light of all the facts of record, including confidential supervisory and examination information received from the relevant federal and state supervisors of the organizations involved, publicly reported and other financial information, information provided by Morgan, and public comments received on the application.

In evaluating the financial factors in expansion proposals by banking organizations, the Board reviews the financial condition of the organizations involved on both a parent-only and consolidated basis, as well as the financial condition of the subsidiary depository institutions and significant nonbanking operations. In this evaluation, the Board considers a variety of information, including capital adequacy, asset quality, and earnings performance. In assessing financial factors, the Board consistently has considered capital adequacy to be especially important. The Board also evaluates the financial condition of the applicant, including its capital position, asset quality, earnings prospects, and the impact of the proposed funding of the transaction.

The Board has carefully considered the financial factors in this case. Morgan, its subsidiary depository institutions, and Herald are well capitalized. Based on its review of the record, the Board also finds that Morgan had sufficient capital and other resources to effect the acquisition. The

9. 12 U.S.C. § 1842(c)(1).

10. *See, e.g., SunTrust Banks, Inc.*, 76 *Federal Reserve Bulletin* 542 (1990).

11. *See, e.g., BOK Financial Corp.*, 81 *Federal Reserve Bulletin* 1052 (1995).

12. The Metro New York banking market includes Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, and Westchester counties in New York; Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union, and Warren counties and the northern portions of Mercer County in New Jersey; Monroe and Pike counties in Pennsylvania; and Fairfield County and portions of Litchfield and New Haven counties in Connecticut.

13. Except for deposit data for Herald, which are based on its March 31, 2009, call report, deposit and market share data are based on data reported by insured depository institutions in the summary of deposits data as of June 30, 2008. The data are also based on calculations in which the deposits of thrift institutions are included at 50 percent. The Board previously has indicated that thrift institutions have become, or have the potential to become, significant competitors of commercial banks. *See, e.g., Midwest Financial Group, Inc.*, 75 *Federal Reserve Bulletin* 386 (1989); *National City Corporation*, 70 *Federal Reserve Bulletin* 743 (1984). Thus, the Board regularly has included thrift institution deposits in the market share calculation on a 50 percent weighted basis. *See, e.g., First Hawaiian, Inc.*, 77 *Federal Reserve Bulletin* 52 (1991).

14. Under the DOJ Guidelines, a market is considered unconcentrated if the post-merger HHI is under 1000, moderately concentrated if the post-merger HHI is between 1000 and 1800, and highly concentrated if the post-merger HHI exceeds 1800. The Department of Justice ("DOJ") has informed the Board that a bank merger or acquisition generally will not be challenged (in the absence of other factors indicating anticompetitive effects) unless the post-merger HHI is at least 1800 and the merger increases the HHI more than 200 points. The DOJ has stated that the higher-than-normal HHI thresholds for screening bank mergers and acquisitions for anticompetitive effects implicitly recognize the competitive effects of limited-purpose and other nondepository financial entities.

15. Taking into account the deposits of Mitsubishi UFJ Financial Group, Inc. ("MUFG"), Tokyo, Japan, which controls approximately 21 percent of Morgan, the HHI would remain unchanged at 1357, with 284 insured depository institutions competing in the Metro New York banking market. The combined deposits of MUFG, Morgan, and Herald represent less than 1 percent of market deposits.

transaction was structured as a cash purchase using Morgan's existing resources.

The Board also has considered the managerial resources of the organizations involved.[16] The Board has reviewed the examination records of Morgan and its subsidiary depository institutions, including assessments of their management, risk-management systems, and operations. In addition, the Board has considered its supervisory experiences and those of the other relevant banking supervisory agencies with the U.S. banking operations of Morgan and their records of compliance with applicable banking law, including anti-money-laundering laws.

Based on all the facts of record, the Board has concluded that the financial and managerial resources and the future prospects of Morgan, Herald, and their subsidiaries are consistent with approval of this application, as are the other supervisory factors the Board must consider under section 3 of the BHC Act.

Convenience and Needs Considerations

In acting on a proposal under section 3 of the BHC Act, the Board also must consider the effects of the proposal on the convenience and needs of the communities to be served and take into account the records of the relevant insured depository institutions under the Community Reinvestment Act ("CRA").[17] The CRA requires the federal financial supervisory agencies to encourage insured depository institutions to help meet the credit needs of the local communities in which they operate, consistent with their safe and sound operation, and requires the appropriate federal financial supervisory agency to take into account a relevant depository institution's record of meeting the credit needs of its entire community, including low- and moderate-income neighborhoods, in evaluating expansionary proposals.[18]

The Board has considered carefully all the facts of record, including reports of examination of the CRA performance records of Morgan's subsidiary insured depository institutions, data reported by Morgan under the Home Mortgage Disclosure Act ("HMDA"),[19] as well as other information provided by Morgan, confidential supervisory information, and public comment received on the proposal. A commenter alleged, based on HMDA data, that Morgan has engaged in disparate treatment of minority individuals in home mortgage lending. The commenter also expressed concern over subprime lending by Morgan and by Saxon Mortgage, Inc. ("Saxon Mortgage"), a subsidiary Morgan acquired in 2006. Morgan represented that it currently does not directly or indirectly originate subprime loans and that it has no plans to engage in such lending.

A. CRA Performance Evaluations

As provided in the CRA, the Board has considered the convenience and needs factor in light of the evaluations by the appropriate federal supervisors of the CRA performance records of the insured depository institutions of Morgan. An institution's most recent CRA performance evaluation is a particularly important consideration in the applications process because it represents a detailed, on-site evaluation of the institution's overall record of performance under the CRA by its appropriate federal supervisor.[20]

Morgan Bank received an "outstanding" rating at its most recent CRA performance evaluation by the Federal Deposit Insurance Corporation ("FDIC"), as of January 30, 2006.[21] Herald has not yet been evaluated under the CRA by the Office of the Comptroller of the Currency ("OCC").

B. HMDA and Fair Lending Record

The Board has carefully considered the fair lending records and HMDA data of Morgan in light of public comments received on the application. Those comments alleged, based on 2007 HMDA data, that in certain metropolitan statistical areas (MSAs), Saxon Mortgage disproportionately made higher-cost loans to African American and Hispanic borrowers than to nonminority borrowers.[22] The Board's consideration of HMDA-related comments included a review of 2007 HMDA data reported by Saxon Mortgage and Morgan Stanley Credit Corporation ("MSCC"). Morgan acquired Saxon Capital, Inc. ("Saxon Capital"), the parent of Saxon Mortgage, in 2006 and MSCC in 1997. Morgan now originates residential mortgage loans only through MSCC, which currently originates only prime mortgage loans. Morgan services mortgage loans through Saxon Capital, including subprime loans originated by Morgan and others.

---

16. A commenter expressed concern about Morgan's role in the auction-rate securities market. The Board considered the August 2008 settlement between Morgan and the Attorney General of the state of New York and pending litigation involving these matters. As part of its ongoing supervision of Morgan, the Board monitors the status of government investigations, consults as needed with relevant regulatory authorities, and periodically reviews Morgan's potential liability from material litigation.

17. 12 U.S.C. §2901 et seq.; 12 U.S.C. §2903; 12 U.S.C. §1842(c)(2).

18. 12 U.S.C. §2903.

19. 12 U.S.C. §2801 et seq.

20. The Interagency Questions and Answers Regarding Community Reinvestment provide that a CRA examination is an important and often controlling factor in the consideration of an institution's CRA record. *See Interagency Questions and Answers Regarding Community Reinvestment*, 74 *Federal Register* 498 at 527 (2009).

21. Morgan Bank became a national bank on September 23, 2008, on its conversion from a Utah-chartered industrial bank. The 2006 evaluation was conducted before this conversion. MSTNA is not an insured depository institution, and MS Trust is a limited-purpose savings association not subject to the CRA. *See* 12 CFR 563e.11(c)(2).

22. Beginning January 1, 2004, the HMDA data required to be reported by lenders were expanded to include pricing information for loans on which the annual percentage rate exceeds the yield for U.S. Treasury securities of comparable maturity 3 or more percentage points for first-lien mortgages and 5 or more percentage points for second-lien mortgages (12 CFR 203.4).

Although the HMDA data might reflect certain disparities in the rates of loan applications, originations, denials, or pricing among members of different racial or ethnic groups in certain local areas, they provide an insufficient basis by themselves on which to conclude whether or not Morgan is excluding or imposing higher costs on any racial or ethnic group on a prohibited basis. The Board recognizes that HMDA data alone, even with the recent addition of pricing information, provide only limited information about the covered loans.[23] HMDA data, therefore, have limitations that make them an inadequate basis, absent other information, for concluding that an institution has engaged in illegal lending discrimination.

The Board is nevertheless concerned when HMDA data for an institution indicate disparities in lending and believes that all lending institutions are obligated to ensure that their lending practices are based on criteria that ensure not only safe and sound lending but also equal access to credit by creditworthy applicants regardless of their race or ethnicity. Moreover, the Board believes that all bank holding companies and their affiliates must conduct their mortgage lending operations without any abusive lending practices and in compliance with all consumer protection law.

Because of the limitations of HMDA data, the Board has considered these data carefully and taken into account other information, including examination reports that provide on-site evaluations of compliance by Morgan's subsidiary insured depository institutions with fair lending laws. The Board also has consulted with the FDIC and OCC, Morgan Bank's former and current primary federal supervisors, respectively. In addition, the Board has considered information provided by Morgan about its compliance risk-management systems.

The record of this application, including confidential supervisory information, indicates that Morgan has taken steps to ensure compliance with fair lending and other consumer protection laws and regulations.[24] As noted, Morgan currently originates residential mortgage loans only through MSCC and services subprime loans only through Saxon Capital. Morgan represented that MSCC and Saxon Capital have policies and procedures to help ensure compliance with fair lending and other consumer protection laws and regulations. For example, MSCC uses an automated underwriting and loan-pricing system that substantially limits discretionary criteria and, before denying a loan application, MSCC makes reasonable efforts to gather additional information that could appropriately qualify an applicant. MSCC employees do not have override authority in pricing loans, and their compensation is not based on loan pricing. Morgan has represented that Saxon Capital clearly discloses fees to consumers and monitors fees to ensure compliance with applicable law. In addition, MSCC and Saxon Capital provide training in fair lending and consumer protection law to employees involved in originating and servicing loans and maintain complaint resolution systems. MSCC's fair lending compliance procedures include reviews of loan origination and pricing data that use statistical and comparative file analyses.

C. Conclusion on Convenience and Needs and CRA Performance

The Board has carefully considered all the facts of record, including the evaluation of the CRA performance record of Morgan Bank, information provided by Morgan, comments received on the proposal, and confidential supervisory information. Morgan represented that its investment in Herald has helped provide consumers with additional choices for meeting their banking needs. Based on a review of the entire record, including the noncontrolling nature of the investment, the Board concludes that considerations relating to the convenience and needs factor and the CRA performance records of the relevant insured depository institutions are consistent with approval of the transaction.

CONCLUSION

Based on the foregoing and all the facts of record, the Board has determined that the application should be, and hereby is, approved.[25] In reaching its conclusion, the Board has considered all the facts of record in light of the factors

23. The data, for example, do not account for the possibility that an institution's outreach efforts may attract a larger proportion of marginally qualified applicants than other institutions attract and do not provide a basis for an independent assessment of whether an applicant who was denied credit was, in fact, creditworthy. In addition, credit history problems, excessive debt levels relative to income, and high loan amounts relative to the value of the real estate collateral (reasons most frequently cited for a credit denial or higher credit cost) are not available from HMDA data.

24. A commenter expressed concern about Morgan's alleged warehouse financing to subprime lenders and securitization of subprime loans. Morgan represented that it does not provide warehouse lending or custodian services for subprime lenders. To the extent it provides servicing activities for subprime loans, Morgan asserted that it conducts due diligence to promote compliance with fair lending laws. Morgan also has asserted that, to the extent it underwrites securities for or participates in commercial loans to subprime lenders, Morgan has no role in the lending or credit review practices of those lenders. In addition, Morgan has represented that, to the extent it underwrites securities for subprime lenders, its due diligence procedures seek to ensure that mortgage pools supporting securitizations do not include loans subject to the Home Ownership and Equity Protection Act of 1994 or loans with predatory lending features. As noted above, the Board will continue to require all bank holding companies and their affiliates to conduct their lending operations without any abusive lending practices and in compliance with all applicable laws.

25. The Board also has approved the retention of the indirect interest in Herald held by MUFG. MUFG, a financial holding company within the meaning of the BHC Act, currently controls approximately 21 percent of the voting shares of Morgan Stanley. The Board notes that MUFG provided no funding for Morgan's acquisition of the Herald shares, and Morgan's retention of those shares would not alter the current structure of MUFG's investment in Morgan. In addition, MUFG's U.S. subsidiary banks remain well capitalized. The Board previously has determined that the foreign banks controlled by MUFG are subject to comprehensive supervision on a consolidated basis by their home-country supervisor, the Japanese Financial Services Agency ("FSA"). The Board has determined that these banks continue to be subject to comprehensive supervision on a consolidated basis by the

that it is required to consider under the BHC Act and other applicable statutes.[26] The Board's approval is specifically conditioned on compliance by Morgan with the conditions imposed in this order and the commitments made to the Board in connection with the application.[27] For purposes of this action, the conditions and commitments are deemed to be conditions imposed in writing by the Board in connection with its findings and decision herein and, as such, may be enforced in proceedings under applicable law.

By order of the Board of Governors, effective June 26, 2009.

Voting for this action: Chairman Bernanke and Governors Warsh, Duke, and Tarullo. Absent and not voting: Vice Chairman Kohn.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

Appendix

PASSIVITY COMMITMENTS

Morgan Stanley ("Morgan"), New York, New York, and its subsidiaries (collectively, "the Morgan Stanley Group"), will not, without the prior approval of the Board or its staff, directly or indirectly

1. Exercise or attempt to exercise a controlling influence over the management or policies of Herald National Bank ("Herald"), New York, New York, or any of its subsidiaries;
2. Have or seek to have any representative of the Morgan Stanley Group serve on the board of directors of any subsidiary of Herald;
3. Have or seek to have more than one representative of the Morgan Stanley Group serve on the board of directors of Herald or permit any representative of the Morgan Stanley Group who serves on the board of directors of Herald to serve as (i) the chairman of the board of directors of Herald, (ii) the chairman of any committee of the board of directors of Herald, or (iii) a member of any committee of the board of directors of Herald if such representative occupies more than 25 percent of the seats on the committee;
4. Have or seek to have any employee or representative of Morgan Stanley Group serve as an officer, agent, or employee of Herald or any of its subsidiaries;
5. Take any action that would cause Herald or any of its subsidiaries to become a subsidiary of Morgan;
6. Own, control, or hold with power to vote securities that (when aggregated with securities that the officers and directors of the Morgan Stanley Group own, control, or hold with power to vote) represent 25 percent or more of any class of voting securities of Herald or any of its subsidiaries;
7. Own or control equity interests that would cause the combined voting and nonvoting equity interests of the Morgan Stanley Group and its officers and directors to equal or exceed 25 percent of the total equity capital of Herald or any of its subsidiaries;
8. Except in connection with the Morgan Stanley Group's representation on the board of directors of Herald consistent with paragraph 3 above, propose a director or slate of directors in opposition to a nominee or slate of nominees proposed by the management or board of directors of Herald or any of its subsidiaries;
9. Enter into any agreement with Herald or any of its subsidiaries that substantially limits the discretion of Herald's management over major policies and decisions, including, but not limited to, policies or decisions about employing and compensating executive officers; engaging in new business lines; raising additional debt or equity capital; merging or consolidating with another firm; or acquiring, selling, leasing, transferring, or disposing of material assets, subsidiaries, or other entities;
10. Except in connection with the Morgan Stanley Group's representation on the board of directors of Herald consistent with paragraph 3 above, solicit or participate in soliciting proxies with respect to any matter presented to the shareholders of Herald or any of its subsidiaries;
11. Dispose or threaten to dispose (explicitly or implicitly) of equity interests of Herald or any of its subsidiaries in any manner as a condition or inducement of specific action or non-action by Herald or any of its subsidiaries; or
12. Enter into any banking or nonbanking transactions with Herald or any of its subsidiaries, except that
    (a) The Morgan Stanley Group may establish and maintain deposit accounts with Herald; *provided*, that the aggregate balance of all such deposit

---

FSA. All other factors are consistent with approval of MUFG's retention of its indirect interest in Herald.

26. A commenter requested an extension of the comment period on the application. Notice of the application was published in the *Federal Register* on November 7, 2008. Newspaper notices were published on October 31 and November 4 in the appropriate newspapers of record, and the comment period ended on December 4, 2008. Accordingly, interested persons had approximately 34 days to submit views. This period provided sufficient time to the commenter to prepare and submit its comments and, as noted above, the commenter provided a written submission, which the Board considered carefully in acting on the application. The Board also has accumulated a significant record in this case, including reports of examination, confidential supervisory information and public reports and information, in addition to public comments. Moreover, the Board is required under applicable law and its regulations to act on applications submitted under the BHC Act within specified time periods. Based on all the facts of record, the Board has concluded that the record in this case is sufficient to warrant action at this time and that no extension of the comment period is necessary.

27. A commenter requested that the Board hold a public meeting or hearing on the proposal. Section 3 of the BHC Act does not require the Board to hold a public hearing on an application unless the appropriate supervisory authority for the bank to be acquired makes a written recommendation of denial of the application. The Board has not received such a recommendation from the OCC. Under its rules, the Board also may, in its discretion, hold a public meeting or hearing on an application to acquire a bank if necessary or appropriate to clarify material factual issues related to the application and to provide an opportunity for testimony (12 CFR 225.16(e) and 262.25(d)). The Board has considered carefully the commenter's request in light of all the facts of record. As noted, the commenter had ample opportunity to submit its views and, in fact, submitted written comments that the Board has considered carefully in acting on the proposal. The commenter's request fails to demonstrate why written comments do not present its views adequately or why a meeting or hearing otherwise would be necessary or appropriate. For these reasons, and based on all the facts of record, the Board has determined that a public meeting or hearing is not required or warranted in this case. Accordingly, the request for public meeting or hearing on the application is denied.

accounts does not exceed $500,000 and that the accounts are maintained on substantially the same terms as those prevailing for comparable accounts of persons unaffiliated with Herald; and

(b) The Morgan Stanley Group and Herald may sell loan participations to each other, provided that (i) the Morgan Stanley Group and Herald each are free to enter into similar transactions with other parties; (ii) the Morgan Stanley Group and Herald each use its own underwriting criteria to evaluate potential participations; (iii) any and all loan participation transactions between the Morgan Stanley Group and Herald are at market terms and on an arm's-length basis; (iv) the aggregate balance of all such loan participations purchased by Herald from the Morgan Stanley Group does not exceed the dollar amount equal to 5 percent of Herald's total loans and leases, net of unearned income; and (v) the aggregate balance of any such loan participations sold by Herald to the Morgan Stanley Group does not exceed the dollar amount equal to 5 percent of Herald's total loans and leases, net of unearned income.

The terms used in these commitments have the same meanings as those set forth in the Bank Holding Company Act of 1956, as amended, and the Board's Regulation Y.

Morgan understands that these commitments constitute conditions imposed in writing in connection with the Board's findings and decision on Morgan's application to retain up to 9.9 percent of the voting shares of Herald, pursuant to 12 U.S.C. §1842, and, as such, may be enforced in proceedings under applicable law.

ORDER ISSUED UNDER INTERNATIONAL BANKING ACT

Standard Chartered Bank London, England

Order Approving Establishment of a Representative Office

Standard Chartered Bank ("Bank"), London, England, a foreign bank within the meaning of the International Banking Act ("IBA"), has applied under section 10(a) of the IBA[1] to establish a representative office in Houston, Texas. The Foreign Bank Supervision Enhancement Act of 1991, which amended the IBA, provides that a foreign bank must obtain the approval of the Board to establish a representative office in the United States.

Notice of the application, affording interested persons an opportunity to comment, has been published in a newspaper of general circulation in Houston (*Houston Chronicle*, January 16, 2009). The time for filing comments has expired, and all comments received have been considered.

Bank, with total consolidated assets of approximately $435 billion,[2] is the ninth largest bank in the United Kingdom by asset size.[3] Bank engages in a broad range of consumer banking and wholesale banking activities through numerous offices and subsidiaries located throughout the world. In the United States, Bank operates state-licensed branches in Pasadena, California, and New York, New York, and representative offices in San Diego and San Francisco, California; Miami, Florida; Atlanta, Georgia; and Jersey City and Newark, New Jersey. Bank also owns two Edge corporation subsidiaries (Standard Chartered Overseas Investment Inc. and Standard Chartered Bank International (Americas) Limited ("SCBI")) and an agreement corporation subsidiary, Standard Chartered International (USA) Ltd. Bank is wholly owned by Standard Chartered Holdings Limited,[4] which is wholly owned by Standard Chartered PLC ("Standard Chartered"), both of London, England. Standard Chartered and its subsidiaries offer international banking and financial services in over 50 countries and territories worldwide.[5]

The proposed representative office would serve as a liaison between Bank and its customers.[6] The office would also solicit new business for Bank's wholesale banking products and services from potential customers in the United States and serve as a point of contact for clients and prospective clients of such business in Texas and Latin America, with an initial focus on clients in the energy sector.[7]

In acting on an application under the IBA and Regulation K by a foreign bank to establish a representative office, the Board shall take into account whether the foreign bank directly engages in the business of banking outside of the United States and whether the foreign bank has furnished to the Board the information it needs to assess the application adequately.[8] The Board shall also take into account whether the foreign bank is subject to comprehensive supervision on a consolidated basis by its home-country supervisor.[9]

1. 12 U.S.C. §3107(a).

2. Unless otherwise indicated, data are as of December 31, 2008.

3. Ranking data are as of December 31, 2007.

4. Standard Chartered Holdings Limited's only activity is holding 100 percent of the shares of Bank.

5. As of March 2, 2009, Temasek Holdings (Private) Limited ("Temasek"), Singapore, held 18.81 percent of the voting rights of Standard Chartered. Temasek does not have representation on the board of directors of Standard Chartered.

6. A representative office may engage in representational and administrative functions in connection with the banking activities of the foreign bank, including soliciting new business for the foreign bank, conducting research, acting as a liaison between the foreign bank's head office and customers in the United States, performing preliminary and servicing steps in connection with lending, and performing back-office functions. A representative office may not contract for any deposit or deposit-like liability, lend money, or engage in any other banking activity (12 CFR 211.24(d)(1)).

7. Any transactions resulting from the activities of the representative office will be conducted with Bank's branch in New York.

8. 12 U.S.C. §3107(a)(2).

9. *Id.*; 12 CFR 211.24(d)(2). In assessing the supervision standard, the Board considers, among other indicia of comprehensive, consolidated supervision, the extent to which the home-country supervisors (i) ensure that the bank has adequate procedures for monitoring and

The Board also considers additional standards set forth in the IBA and Regulation K.[10]

As noted above, Bank engages directly in the business of banking outside the United States. Bank also has provided the Board with information necessary to assess the application through submissions that address the relevant issues.

With respect to supervision by home-country authorities, the Board previously has determined, in connection with applications involving other banks in the United Kingdom, that those banks were subject to home-country supervision on a consolidated basis by the Financial Services Authority ("FSA"), the primary regulator of commercial banks in the United Kingdom.[11] Bank is supervised by the FSA on substantially the same terms and conditions as those other banks. Based on all the factors of record, including the above information, it has been determined that Bank is subject to comprehensive supervision on a consolidated basis by its home-country supervisor.

The additional standards set forth in section 7 of the IBA and Regulation K have also been taken into account.[12] The FSA has no objection to the proposed representative office.

With respect to the financial and managerial resources of Bank, taking into consideration its record of operation in its home country, its overall financial resources, and its standing with its home-country supervisor, financial and managerial factors are consistent with approval. Bank appears to have the experience and capacity to support the proposed representative office and has established controls and procedures for the proposed representative office to ensure compliance with U.S. law, as well as controls and procedures for its worldwide operations generally.[13]

The United Kingdom is a member of the Financial Action Task Force and subscribes to its recommendations on measures to combat money laundering. In accordance with these recommendations, the United Kingdom has enacted laws and created legislative and regulatory standards to deter money laundering, terrorist financing, and other illicit activities. Money laundering is a criminal offense in the United Kingdom, and credit institutions are required to establish internal policies, procedures, and systems for the detection and prevention of money laundering throughout their worldwide operations. Bank has policies and procedures to comply with these laws and regulations that are monitored by governmental entities responsible for anti-money-laundering compliance.

With respect to access to information on Bank's operations, the restrictions on disclosure in relevant jurisdictions in which Bank operates have been reviewed and relevant governmental authorities have been communicated with regarding access to information. Bank and Standard Chartered have committed to make available to the Board such information on the operations of Bank and any of its affiliates that the Board deems necessary to determine and enforce compliance with the IBA, the Bank Holding Company Act of 1956, as amended, and other applicable federal law. To the extent that the provision of such information to the Board may be prohibited by law or otherwise, Bank and Standard Chartered have committed to cooperate with the Board to obtain any necessary consents or waivers that might be required from third parties for disclosure of such information. In addition, subject to certain conditions, FSA may share information on Bank's operations with other supervisors, including the Board. In light of these commitments and other facts of record, and subject to the conditions described below, it has been determined that Bank and Standard Chartered provided adequate assurances of access to any necessary information that the Board may request.

On the basis of the foregoing and all the facts of record, and subject to commitments made by Bank and Standard Chartered to the Board, as well as the terms and conditions set forth in this order, Bank's application to establish the representative office is hereby approved.[14] Should any restrictions on access to information regarding the operations or activities of Bank and its affiliates subsequently interfere with the Board's ability to obtain information to determine and enforce compliance by Bank or its affiliates with applicable federal statutes, the Board may require termination of any of Bank's direct or indirect activities in the United States. Approval of this application also is specifically conditioned on compliance by Bank and Standard Chartered with the conditions imposed in this order

---

controlling its activities worldwide; (ii) obtain information on the condition of the bank and its subsidiaries and offices through regular examination reports, audit reports, or otherwise; (iii) obtain information on the dealings with and the relationship between the bank and its affiliates, both foreign and domestic; (iv) receive from the bank financial reports that are consolidated on a worldwide basis or comparable information that permits analysis of the bank's financial condition on a worldwide consolidated basis; and (v) evaluate prudential standards, such as capital adequacy and risk asset exposure, on a worldwide basis. No single factor is essential, and other elements may inform the Board's determination.

10. *See* 12 U.S.C. §3105(d)(3)–(4); 12 CFR 211.24(c)(2). These standards include (1) whether the bank's home-country supervisor has consented to the establishment of the office; the financial and managerial resources of the bank; (2) whether the bank has procedures to combat money laundering, whether there is a legal regime in place in the home country to address money laundering, and whether the home country is participating in multilateral efforts to combat money laundering; (3) whether the appropriate supervisors in the home country may share information on the bank's operations with the Board; and (4) whether the bank and its U.S. affiliates are in compliance with U.S. law; the needs of the community; and the bank's record of operation.

11. *See, e.g., Barclays plc*, 91 *Federal Reserve Bulletin* 48 (2005); *HBOS Treasury Services plc*, 90 *Federal Reserve Bulletin* 103 (2004); *The Royal Bank of Scotland Group*, 89 *Federal Reserve Bulletin* 386 (2003).

12. *See supra* note 9.

13. On August 3, 2007, American Express Bank International, now SCBI, came under a Cease and Desist Order from the Board and entered into a Deferred Prosecution Agreement with the U.S. Department of Justice for persistent deficiencies in its anti-money-laundering program. Separately, AEBL, now Standard Chartered International (USA) Ltd., and the New York State Banking Department entered into a Written Agreement for the same matters. SCBI and Standard Chartered International (USA) Ltd. are providing periodic reports required in their respective enforcement actions and are making satisfactory progress in addressing the deficiencies.

14. Approved by the Director of Banking Supervision and Regulation, with the concurrence of the General Counsel, pursuant to authority delegated by the Board. *See* 12 CFR 265.7(d)(12).

and the commitments made to the Board in connection with this application.[15] For purposes of this action, the commitments and conditions are deemed to be conditions imposed in writing by the Board in connection with its finding and decision and may be enforced in proceedings under 12 U.S.C. § 1818 against Bank and its affiliates.

By order, approved pursuant to authority delegated by the Board, effective May 7, 2009.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

FINAL ENFORCEMENT DECISION ISSUED BY THE BOARD

IN THE MATTER OF

Francesco Rusciano, Former Institution-Affiliated Party of

UBS AG, Zurich, Switzerland

Docket Nos. 09-007-I-E, 09-007-I-CMP

Determination on Request for Private Hearing

BACKGROUND

This is an enforcement proceeding brought by the Board of Governors of the Federal Reserve System (the "Board") against Francesco Rusciano pursuant to the Federal Deposit Insurance Act (the "FDI Act"). Rusciano traded foreign exchange and debt instruments for the account of UBS AG. In a Notice of Intent to Prohibit and Notice of Assessment of a Civil Money Penalty (the "Notice") issued on January 23, 2009, the Board alleged that Rusciano manipulated UBS's trade recordation systems by falsifying information about actual transactions and entering fictitious trades in order to conceal mounting losses in his trading book. The Notice seeks civil money penalties and an order of prohibition against the Respondent.

In accordance with section 8(u)(2) of the FDI Act, 12 U.S.C. § 1818(u)(2), the Notice advised the Respondent that any hearing held in this matter would be public, unless the Board determines that an open hearing would be contrary to the public interest. The Notice informed Respondent that he could submit a statement detailing any reasons why the hearing should not be public. Respondent duly filed a motion with the Board seeking a private hearing in this matter. Board Enforcement Counsel opposed the motion.

15. The Board's authority to approve the establishment of the proposed representative office parallels the continuing authority of the state of Texas to license offices of a foreign bank. The Board's approval of this application does not supplant the authority of the state of Texas or its agent, the Texas Department of Banking, to license the proposed representative office of Bank in accordance with any terms or conditions that it may impose.

In a brief and conclusory pleading, Respondent asserted that disclosure of the allegations in the Notice would "damage [Respondent's] reputation and good name" and that it would "not be possible to undo the damage" if Respondent is vindicated. Respondent also noted that he has not been affiliated with a Board-supervised institution since 2006, so that public disclosure "is unnecessary to protect the public interest."

DISCUSSION

The enforcement provisions of the Federal Deposit Insurance Act provide that all administrative hearings must be public unless the Board, in its discretion, determines that a public hearing would be "contrary to the public interest." The Board's regulations echo this requirement (12 CFR 263.33(a)). In two cases in 1999, the Board set forth the standard by which requests for private hearings would be determined. Specifically, the Board ruled that

> Before the Board exercises its discretion to close a hearing, there should be a substantial basis for concluding that the case reflects unusual circumstances that overcome the presumption in favor of open hearings. In general, in light of the congressional requirement that the proceeding be open unless "contrary to the public interest," those circumstances should involve serious safety and soundness concerns flowing from a public hearing. . . . [A] party seeking a closed hearing should be required to demonstrate how the effects of this proceeding differ so significantly from those involving other banks in terms of the *public* interest as to warrant special treatment.

In the Matter of Incus Co., Ltd., 85 *Federal Reserve Bulletin* 284, 285 (1999); *In the Matter of Fonkenell*, 85 *Federal Reserve Bulletin* 353 (1999) (same).

The reasons given by Respondent here for closing the hearing to the public do not establish that an open hearing would be contrary to the public interest. The Board has previously rejected the argument that reputational concerns of the respondent or third parties justify closing a hearing to the public. *See In the Matter of Zbinden*, 80 *Federal Reserve Bulletin* 360 (1994); *Fonkenell*, 85 *Federal Reserve Bulletin* at 354; *Incus*, 85 *Federal Reserve Bulletin* at 285. Similarly, the fact that Respondent is not currently employed by a Federal Reserve-regulated institution does not mean that a public hearing is "*contrary* to the public interest." (12 U.S.C. § 1818(u)(2) (emphasis added)). Accordingly, these arguments fail to meet the standard required by the Board to close a hearing to the public.

Accordingly, Respondent's request for a private hearing is denied.

By order of the Board of Governors, this 1st day of April, 2009.

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

November 2009

Legal Developments: Third Quarter, 2009

ORDER ISSUED UNDER INTERNATIONAL BANKING ACT

Canadian Imperial Bank of Commerce Toronto, Canada

Order Approving Retention of an Agency

Canadian Imperial Bank of Commerce ("Bank"), Toronto, Canada, a foreign bank within the meaning of the International Banking Act ("IBA"), has applied under section 7(d) of the IBA[1] to retain an agency in New York, New York. The Foreign Bank Supervision Enhancement Act of 1991, which amended the IBA, provides that a foreign bank must obtain the approval of the Board to establish an agency in the United States.

Notice of the application, affording interested persons an opportunity to comment, has been published in a newspaper of general circulation in New York (*New York Post*, May 11, 2009). The time for filing comments has expired, and all comments received have been considered.

Bank, with total consolidated assets of approximately $309 billion,[2] is the fifth largest bank in Canada by asset size. Bank's shares are widely held, with no shareholder or group of shareholders controlling more than 10 percent of its outstanding shares.[3] Bank engages in a broad range of retail banking, commercial banking, private banking, asset management, and investment banking activities through numerous offices and subsidiaries located throughout the world. Outside Canada, Bank has operations in the United States, the Caribbean, the United Kingdom, Ireland, Australia, Japan, and Singapore.

In the United States, Bank operates a branch in Chicago, Illinois;[4] two agencies in New York, New York; and representative offices in Houston, Texas; and Los Angeles, California.[5] Bank is a qualifying foreign banking organization under Regulation K.[6]

Bank operates a New York agency at 300 Madison Avenue. The 300 Madison Avenue agency engages in trading activities, such as securities investments and other treasury activities, and extends a small volume of credit products. Some agency activities were recently moved to 425 Lexington Avenue, including real estate financing and commercial lending, necessitating this application under section 7(d) of the IBA to retain this location as an agency.

Under the IBA and Regulation K, in acting on an application by a foreign bank to establish an agency, the Board must consider whether the foreign bank (1) engages directly in the business of banking outside of the United States; (2) has furnished to the Board the information it needs to assess the application adequately; and (3) is subject to comprehensive supervision on a consolidated basis by its home-country supervisor.[7]

As noted above, Bank engages directly in the business of banking outside the United States. Bank also has provided the Board with information necessary to assess the application through submissions that address the relevant issues.

With respect to supervision by home-country authorities, the Board previously has determined that Bank is subject to comprehensive supervision on a consolidated basis.[8] There has been no material change in the manner in which Bank is supervised by Canada's Office of the Superintendent of Financial Institutions ("OSFI"). Based on all the facts of record, it has been determined that Bank is subject to

1. 12 U.S.C. §3105(d).
2. Unless otherwise indicated, data are as of July 31, 2009.
3. As of July 31, 2009, Royal Bank of Canada, Montreal, Canada, holds, directly and indirectly in a fiduciary capacity, 10 percent of Bank's total shares outstanding. Harris Financial Corp., Wilmington, Delaware, a subsidiary of Bank of Montreal, Montreal, holds indirectly 5.6 percent of Bank's total shares outstanding, of which 5.1 percent are held in a fiduciary capacity. No other shareholder or group of shareholders controls more than 5 percent of Bank's outstanding shares.
4. The Chicago branch conducts limited activities and reports no assets.
5. Bank downgraded its Los Angeles agency to a representative office in May 2009.
6. 12 CFR 211.23(a).
7. 12 U.S.C. §3105(d)(2); 12 CFR 211.24(c)(1). In assessing this standard, the Board considers, among other factors, the extent to which the home-country supervisors (i) ensure the bank has adequate procedures for monitoring and controlling its activities worldwide; (ii) obtain information on the condition of the bank and its subsidiaries and offices through regular examination reports, audit reports, or otherwise; (iii) obtain information on the dealings with and relationship between the bank and its affiliates, both foreign and domestic; (iv) receive from the bank financial reports that are consolidated on a worldwide basis or comparable information that permits analysis of the bank's financial condition on a worldwide, consolidated basis; and (v) evaluate prudential standards, such as capital adequacy and risk asset exposure, on a worldwide basis. These are indicia of comprehensive, consolidated supervision. No single factor is essential, and other elements may inform the Board's determination.
8. *Canadian Imperial Bank of Commerce*, 87 *Federal Reserve Bulletin* 678 (2001); *Canadian Imperial Bank of Commerce*, 85 *Federal Reserve Bulletin* 733 (1999).

comprehensive supervision on a consolidated basis by its home-country supervisor.

The additional standards set forth in section 7 of the IBA and Regulation K have also been taken into account.[9] The OSFI has no objection to the proposed agency.

Canada's risk-based capital standards are consistent with those established by the Basel Capital Accord. Bank's capital is in excess of minimum levels that would be required of a U.S. banking organization. Managerial and other financial resources of Bank also are considered consistent with approval, and Bank appears to have the experience and capacity to support the proposed agency. Bank has established controls and procedures for the proposed agency to ensure compliance with U.S. law and for its operations in general.

Canada is a member of the Financial Action Task Force and subscribes to its recommendations on measures to combat money laundering and terrorist financing. In accordance with those recommendations, Canada has enacted laws and adopted regulations to deter money laundering and terrorist financing. Money laundering is a criminal offense in Canada, and financial institutions are required to establish internal policies, procedures, and systems for the detection and prevention of money laundering and terrorist financing throughout their worldwide operations. Bank has policies and procedures to comply with these laws and regulations, and its compliance with applicable laws and regulations is monitored by Bank's auditors and the OSFI.

With respect to access to information about Bank's operations, the restrictions on disclosure in relevant jurisdictions in which Bank operates have been reviewed and relevant government authorities have been communicated with regarding access to information. Bank has committed to make available to the Board such information on the operations of Bank and any of its affiliates that the Board deems necessary to determine and enforce compliance with the IBA, the Bank Holding Company Act, and other applicable federal law. To the extent that the provision of such information to the Board may be prohibited by law or otherwise, Bank has committed to cooperate with the Board to obtain any necessary consents or waivers that might be required from third parties for disclosure of such information. In addition, subject to certain conditions, the OSFI may share information on Bank's operations with other supervisors, including the Board. In light of these commitments and other facts of record, and subject to the conditions described below, it has been determined that Bank has provided adequate assurances of access to any necessary information that the Board may request.

On the basis of the foregoing and all the facts of record, Bank's application to retain an agency is hereby approved.[10] Should any restrictions on access to information on the operations or activities of Bank and its affiliates subsequently interfere with the Board's ability to obtain information to determine and enforce compliance by Bank or its affiliates with applicable federal statutes, the Board may require termination of any of Bank's direct or indirect activities in the United States. Approval of this application also is specifically conditioned on compliance by Bank with the conditions imposed in this order and the commitments made to the Board in connection with this application.[11]

By order, approved pursuant to authority delegated by the Board, effective September 17, 2009.

ROBERT DEV. FRIERSON
Deputy Secretary of the Board

9. *See* 12 U.S.C. §3105(d)(3)–(4); 12 CFR 211.24(c)(2). These standards include (i) whether the bank's home-country supervisor has consented to the establishment of the office; (ii) the financial and managerial resources of the bank; (iii) whether the bank has procedures to combat money laundering, whether there is a legal regime in place in the home country to address money laundering, and whether the home country is participating in multilateral efforts to combat money laundering; (iv) whether the appropriate supervisors in the home country may share information on the bank's operations with the Board; (v) whether the bank and its U.S. affiliates are in compliance with U.S. law; (vi) the needs of the community; and (vii) the bank's record of operation.

10. Approved by the Director of the Division of Banking Supervision and Regulation, with the concurrence of the General Counsel, pursuant to authority delegated by the Board.

11. The Board's authority to approve the agency parallels the continuing authority of the state of New York to license offices of a foreign bank. The Board's approval of this application does not supplant the authority of the state of New York to license Bank's New York offices in accordance with any terms or conditions that it may impose.

Index

Index

Inspector General Hotline

(800) 827-3340

You may use this number to report suspected instances of impropriety, wrongdoing, fraud, waste, and abuse in programs and operations administered or financed by the Federal Reserve Board.