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A Framework for Analyzing Bank Lending

Remarks by

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In August 2008 I joined the Board of Governors of the Federal Reserve System, leaving behind a 30-year career as a commercial banker to become a central banker. My time as a commercial banker spanned numerous business cycles. It also encompassed at least one severe financial system crisis, in the late 1980s through the early 1990s, albeit one that was not as severe as the current one. From my time as a commercial banker, I already understood the factors considered by bankers in the initial lending decision as well as those in loss mitigation when collecting those same loans. As a central banker, I have come to appreciate even more fully the role of credit in our economic well-being. So I thought it would be appropriate for me to provide my perspective on credit conditions in our economy and the current crisis.

Today, I would like to discuss a three-dimensional view of the flow of credit to households and businesses and describe the evolving role of banks in the U.S. economy. I will begin by taking a look at recent trends in aggregate borrowing by households and by the nonfinancial business sector. These trends will be placed in a historical context by looking back at previous booms and busts in the credit cycle. One might call this the "macroeconomic view" of credit. When looking at aggregate borrowing, it is important to remember that a change in debt outstanding can be driven by any one of three factors or, more commonly, a combination of all three. In the macroeconomic view of credit, I will discuss indicators related to changes in demand for credit. I will also examine two determinants of the supply of credit. The first determinant relates to lenders' assessment of the creditworthiness of borrowers given future economic conditions. The second relates to credit constraints caused by the financial condition of the lenders. Although fiscal and monetary policies that improve macroeconomic conditions will also boost the

demand for credit and improve the creditworthiness of borrowers, if credit is constrained by the balance sheets of the banks, only programs to relieve such strain will improve credit availability. This condition is the reason for the injections of capital into banks through the Troubled Asset Relief Program, or TARP, and the financing provisions offered through the Public-Private Investment Program, or PPIP, as well as the expansion of Federal Deposit Insurance Corporation (FDIC) deposit and nondeposit guarantee programs.

Next, I will consider the providers of credit. Using the Federal Reserve's flow of funds data, I will look at the evolution from 1950 to 2008 in the market shares of financial intermediation for banks, thrifts, insurance companies, and "other" firms, which range from finance companies to the entities that issue asset-backed securities (ABS). Although these data could suggest that the importance of banks has significantly diminished, I will argue that it matters how we measure what banks have been doing. In particular, it is important to take into account the off-balance-sheet activities of banks when securitization became more pervasive and when it abruptly stopped. This "financial intermediation view" of credit, in my opinion, illustrates the importance of supporting the availability of all forms of lending, whether it be on-balance-sheet lending by banks, credit originated by banks and securitized and sold to investors, or credit supplied by nonbank lenders.

The Federal Reserve has long served as a lender to banks, providing them with liquidity to maintain lending in times of stress. Over the past year and a half, however, the Federal Reserve has greatly expanded its provision of liquidity, establishing facilities under which we auction term funding to banks on a secured basis, provide liquidity to

primary dealers and money market mutual funds, and supply credit to issuers of commercial paper. In addition, through our purchases of agency debt and mortgage-backed securities, the Federal Reserve is lowering the cost of borrowing for mortgages as well as creating an outlet for loans that are originated by banks and nonbanks and securitized by the agencies.[1] Most recently, the Federal Reserve, in conjunction with the Treasury, has established the Term Asset-Backed Securities Loan Facility, or TALF, which uses capital provided by the Treasury in combination with liquidity provided by the Federal Reserve to enhance the availability of credit to households and businesses.

Because banks remain central to financial intermediation, they deserve a closer look, particularly during this time of financial-sector turmoil. In my discussion of the "banking view" of credit, I will summarize the current state of the banking industry. As you know, banks play a special role in just about every economy in the world, and the United States is no exception. Banks' liabilities are generally more liquid than their assets. They are also the main repositories of deposits, which provide immediately available liquidity to households and businesses and are used to undertake transactions for goods and services. In addition, banks provide intermediation between borrowers and savers. Indeed, banks remain the principal source of finance for a large part of the economy. Given these important and distinctive functions, it is, perhaps, obvious that adverse shocks to the financial system and the banking industry can have detrimental effects on economic activity. The current financial turbulence, like several similar events in the past, has placed severe strains on the U.S. banking system with serious repercussions for the economy as a whole.

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[1] Agency debt means debt issued by Fannie Mae, Freddie Mac, and the Federal Home Loan Banks.

The "Macroeconomic View" of Credit

Looking back over the past 50 years or so, credit extended to households and businesses has almost always declined just before, and during, economic downturns. And almost as often, a debate has ensued about whether the nation was in a "credit crunch."[2] According to the White House Council of Economic Advisers, "a credit crunch occurs when the supply of credit is restricted below the range usually identified with prevailing market interest rates and the profitability of investment projects."[3] Judging whether a credit crunch is happening in real time is not easy. It is extremely difficult to sort out the relative importance on the flow of credit of reduced demand due to weaker economic activity, reduced supply because borrowers appear less creditworthy, or reduced supply because lenders face pressures, such as a shortage of capital, that restrain them from extending credit. In other words, while demand considerations could certainly result in a decline in credit flows, a reduction in the supply of credit--caused either by bank balance sheet pressures or by banks reluctant to lend to less-creditworthy borrowers--could produce the same result.

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[2] Kaufman (1991) cites credit crunches that occurred in 1959, 1969-70, the mid-1970s, 1981-82, and 1990-91. See Henry Kaufman (1991), "Credit Crunches: The Deregulators Were Wrong," *Wall Street Journal*, October 9. See also Albert Wojnilower (1980), "The Central Role of Credit Crunches in Recent Financial History," *Brookings Papers on Economic Activity*, vol. 2, pp. 277-326.

[3] Council of Economic Advisers (1992), *Economic Report of the President* (Washington: Government Printing Office), p. 46.

Figure 1
Growth of Home Mortgages

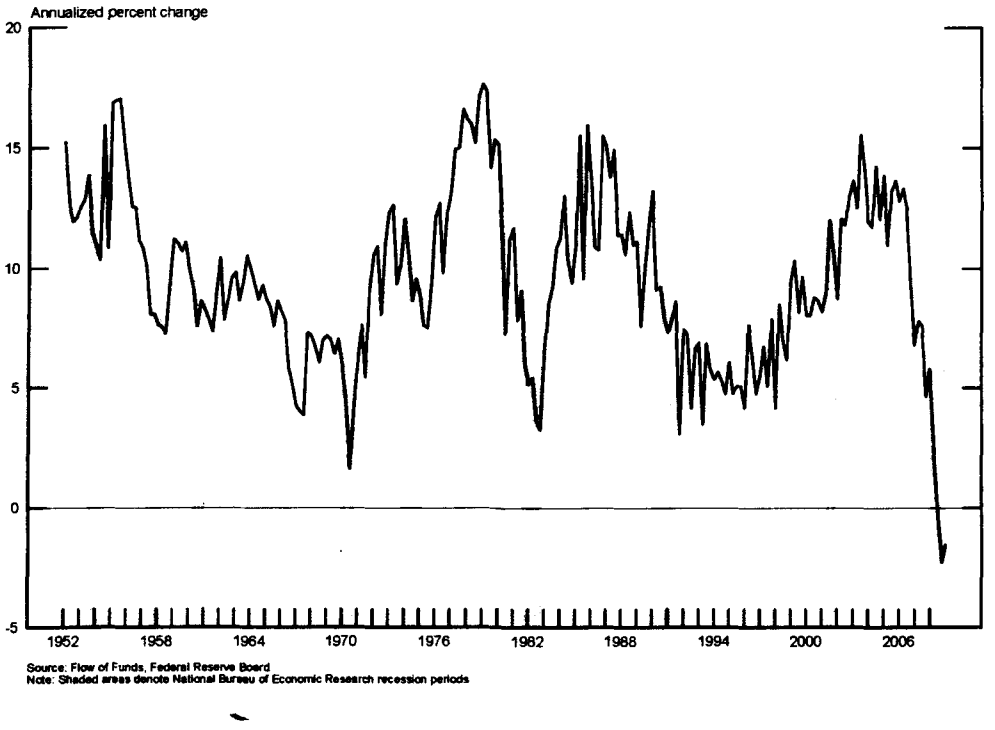
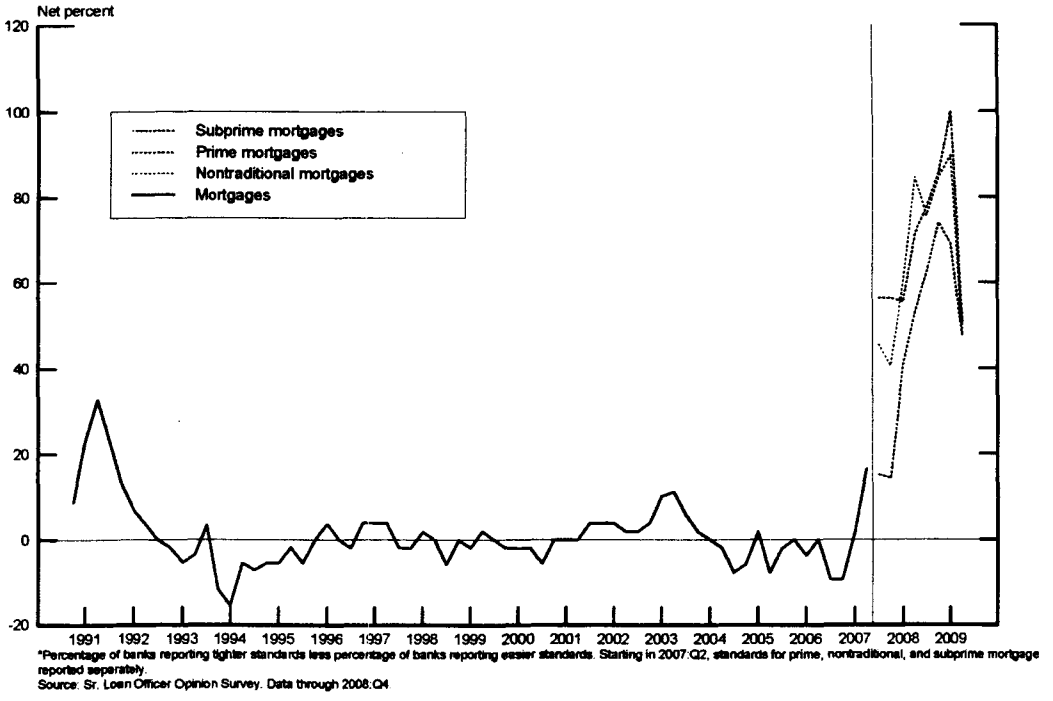


Figure 1 presents annualized quarterly percent changes in debt growth for home mortgages in the United States from 1952 to 2008, with shaded areas denoting National Bureau of Economic Research recession periods. Strikingly, the quarterly rate of growth for home mortgage debt, which includes mortgages and drawn-upon home equity lines, has typically declined before and during each recession and then picked up when economic conditions improved. What is different this time around is the runoff in home mortgage debt: It declined in the fourth quarter for the first time in more than 50 years. The recent decline in mortgage debt was likely partly driven by weaker demand for housing amid rising unemployment and rapidly falling home prices.

Figure 2
Bank Lending Standards for Mortgage Loans to Households*



*Percentage of banks reporting tighter standards less percentage of banks reporting easier standards. Starting in 2007:Q2, standards for prime, nontraditional, and subprime mortgage reported separately.
Source: Sr. Loan Officer Opinion Survey. Data through 2008:Q4

It is equally likely that supply-side considerations have played a role. First, the run-up in mortgage delinquency rates and the higher loss rates associated with reductions in collateral values indicate that the creditworthiness of borrowers has declined. The unprecedented increase in mortgage defaults has resulted in more foreclosures and tighter mortgage lending terms, which are shown from 1990 onward in figure 2. Although the net fraction of banks tightening lending standards on mortgage loans was about 50 percent in our most recent Senior Loan Officer Opinion Survey on Bank Lending Practices, it should be noted that most banks had already tightened their lending standards substantially in 2008. Second, the shutdown of the private mortgage-backed securities market has placed greater pressures on bank balance sheets not only to provide credit to borrowers with damaged credit histories, but also to provide so-called jumbo mortgages

that are originated in amounts that are over the conforming loan limits applicable to loans sold to or guaranteed by the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac and by Ginnie Mae. Of course, credit provision to some borrowers was helped through mortgage insurance programs offered by the Federal Housing Administration, which were recently expanded by the Congress through increases in coverage levels. Similarly, other borrowers have been able to qualify for mortgages that became eligible for securitizations by the GSEs because of increases in conforming loan limits. Indeed, as the non-agency mortgage-backed security market contracted by roughly 15 percent in 2008, Ginnie Mae increased its outstanding supply of single-family mortgage-backed securities by roughly 33 percent. Even with the growth of such securitizations, banks still needed to expend some balance sheet capacity to warehouse loans on their books prior to securitization.[4]

In response to these supply-side developments, the Treasury, the FDIC, and the Federal Reserve have encouraged banks to work with existing borrowers to avoid preventable foreclosures.[5] The Federal Reserve and the other banking agencies also have encouraged banking organizations to participate in the Treasury's Home Affordable Modification Program.[6] Doing so should help to stem the runoff in mortgage debt and to damp the added downward pressure on house prices that can occur when neighborhoods have clusters of foreclosed properties. In addition, the Treasury's Capital Assistance

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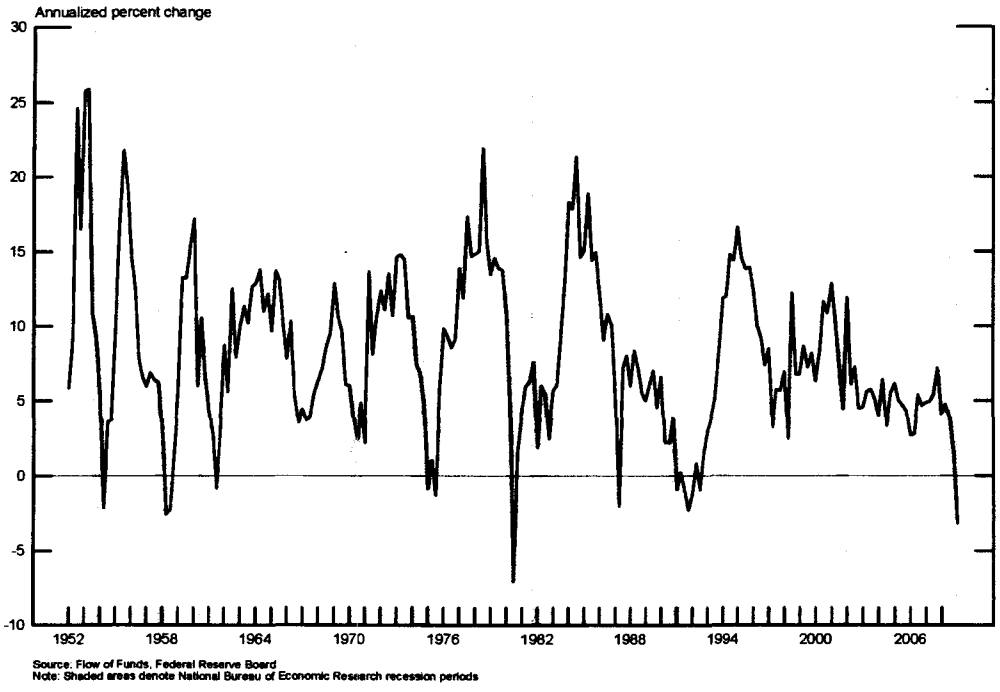
[4] See Inside Mortgage Finance Publications (2009), "Mortgage Securities Market Continued to Shrink in Late 2008 despite Agency Growth," *Inside MBS & ABS*, March 20, p.7.

[5] Board of Governors of the Federal Reserve System, FDIC, Office of the Comptroller of the Currency, and Office of Thrift Supervision (2008), "Interagency Statement on Meeting the Needs of Creditworthy Borrowers," joint press release, November 12, www.federalreserve.gov/newsevents/press/bcreg/20081112a.htm.

[6] Board of Governors of the Federal Reserve System, FDIC, National Credit Union Administration, Office of the Comptroller of the Currency, and Office of Thrift Supervision (2009), "Federal Financial Regulatory Agencies Issue Statement in Support of the Making Home Affordable Loan Modification Program," joint press release, March 4, www.federalreserve.gov/newsevents/press/bcreg/20090304a.htm.

Program, the FDIC's Temporary Liquidity Guarantee Program, and the Federal Reserve's programs to provide liquidity are intended to help ease the funding and balance sheet pressures banking organizations face, thereby allowing them to undertake responsible lending activities, including new mortgage originations.

Figure 3
Growth of Consumer Credit



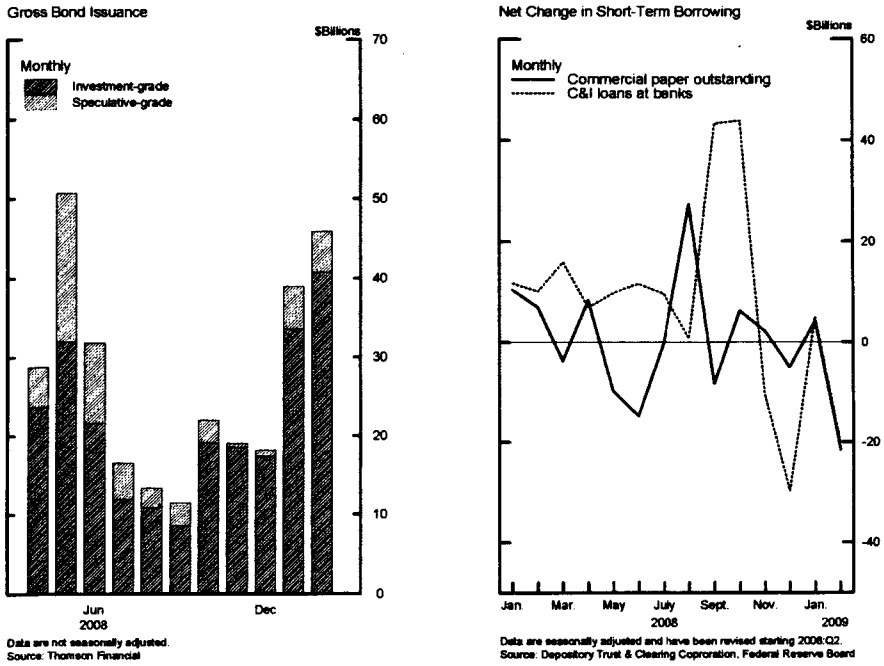
Source: Flow of Funds, Federal Reserve Board
Note: Shaded areas denote National Bureau of Economic Research recession periods

I will now turn to nonmortgage consumer credit, which is shown in figure 3. The growth rate for consumer credit has been trending down, on balance, for years, but it remained quite robust until the latter half of last year. Indeed, consumer credit fell quite sharply in the fourth quarter. Looking back over the past 50 years, nonmortgage consumer credit typically weakens throughout a recession as labor markets deteriorate and often turns down even after the recession ends. Thus, history suggests that consumer

credit growth will likely slow further in the near term; in addition, many banks have tightened terms and standards for nonmortgage consumer loans.

Turning to the business sector, and in particular the corporate sector, the major components of borrowing are bonds, commercial paper, commercial mortgages, and commercial and industrial bank loans. As shown in the left panel of figure 4, gross bond issuance for investment-grade firms increased in the fourth quarter of last year from a very weak third quarter and seems to have increased further in the first quarter of this year as firms appear to have strengthened their balance sheets by shifting toward longer-term debt. In contrast, speculative-grade bond issuance has remained sluggish.

Figure 4
Recent Corporate Sector Financing



In September 2008, nonfinancial corporations' commercial paper outstanding contracted (the black solid line in the right panel of figure 4), as money market mutual

funds--ordinarily major investors in commercial paper--faced significant strains. Losses on Lehman Brothers paper led one prominent fund to "break the buck"--that is, to fail to maintain a net asset value of $1.00 a share--which undermined investor confidence in such funds and triggered significant withdrawals from funds that typically invest in private-sector debt. In response, the Treasury established an insurance program for money market mutual fund investors, and the Federal Reserve introduced new programs to provide liquidity to money market mutual funds. In addition, the Federal Reserve authorized the Commercial Paper Funding Facility to provide a liquidity backstop for U.S. issuers of commercial paper.[7] These programs helped to restore confidence in money market mutual funds and improve the functioning of the commercial paper market. By early this year, the strains in the commercial paper market had eased notably.

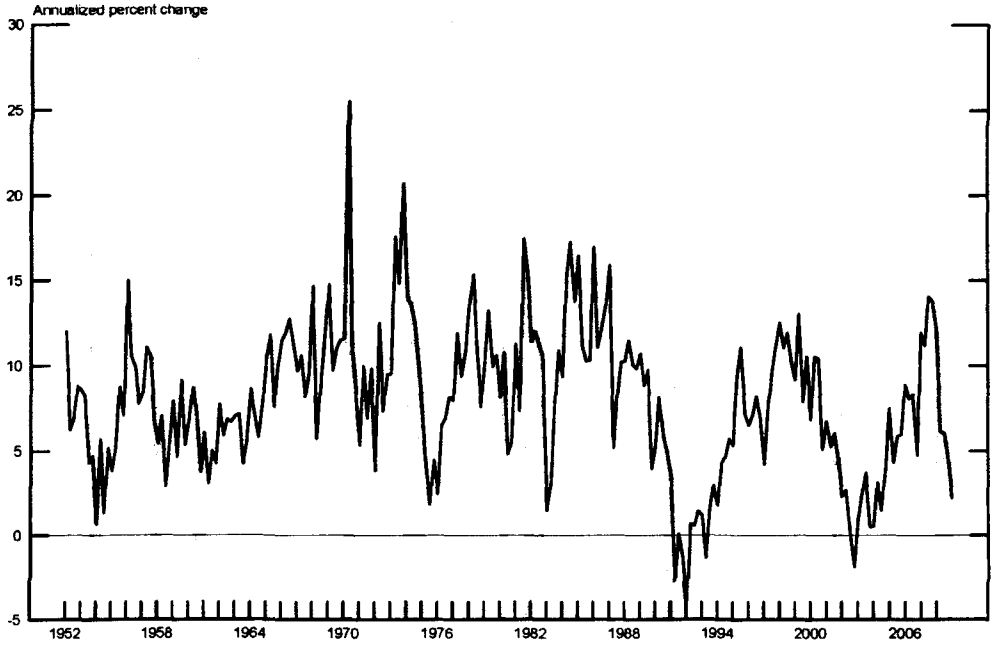
The volume of bank lending in 2008 mirrored developments in the commercial paper market. In the fall, bank commercial and industrial lending surged for a time (the red dotted line in the right panel of figure 4), reportedly reflecting, in part, substantial draws on previously existing long-term lending commitments; then such lending contracted sharply as access to other sources of funding, such as commercial paper, improved. In this manner, bank loans provided at least a partial substitute for market-based funding until market functioning improved. That said, the growth rate for debt of nonfinancial businesses decreased sharply in 2008.

As shown in figure 5, debt growth for nonfinancial corporate businesses reached almost 15 percent at the peak of the business cycle in December 2007, but it was less than

[7] Under the Commercial Paper Funding Facility, authorized on October 7, 2008, the Federal Reserve Bank of New York finances the purchase of unsecured and asset-backed commercial paper from eligible issuers through its primary dealers. Only highly rated, U.S. dollar-denominated, three-month commercial paper is eligible for financing.

3 percent by the end of 2008. Looking back, it is apparent that debt growth for nonfinancial corporate businesses can, and often does, decline sharply as the economy slows. During recessions, which are indicated in the figure by shading, debt growth has typically decreased and sometimes even become negative, such as during 1990-91. In part, such declines in debt growth are derived from declines in demand for the goods and services produced by nonfinancial firms. In addition, such declines reflect the ongoing tightening of lending standards that can result from the deterioration of the fundamentals that support lending.

Figure 5
Growth of Nonfinancial Corporate Business Debt

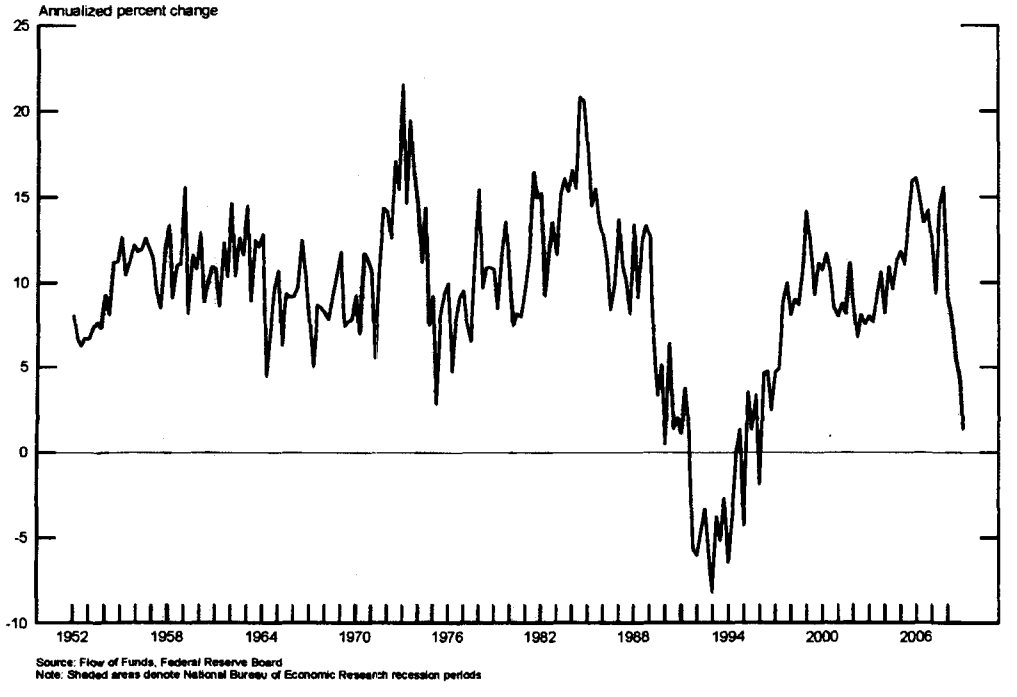


Source: Flow of Funds, Federal Reserve Board
Note: Shaded areas denote National Bureau of Economic Research recession periods

Turning to commercial mortgage growth, figure 6 presents such data from the 1950s through 2008. As with the debt series plotted in previous charts, commercial mortgage growth typically drops off during a recession as retail sales slow and less office

space is needed for workers. Especially striking is the prolonged contraction in commercial mortgages outstanding after the 1990-91 recession. Since the peak of the recent business cycle, commercial mortgage growth has slowed with each passing quarter. By the fourth quarter of 2008, its annualized growth was only about 1 percent.

Figure 6
Growth of Total Commercial Mortgages



Source: Flow of Funds, Federal Reserve Board
Note: Shaded areas denote National Bureau of Economic Research recession periods

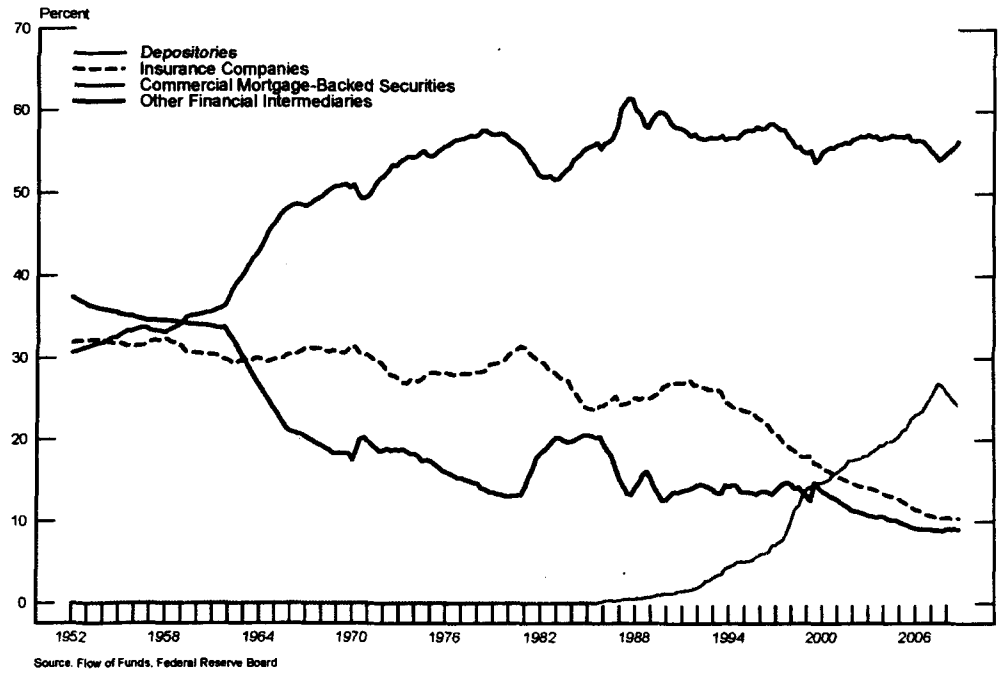
The "Financial Intermediation View" of Credit

The commercial paper market example, which I briefly described earlier, highlights the fact that financial intermediaries can play an important safety-valve role for the financial system. When the commercial paper market suddenly dried up, financial intermediaries were able to fund firms that had unused lines of credit or other

commitments.[8] Moreover, the Federal Reserve, through its lending programs, contributed to improved conditions in the commercial paper market so that issuance of these short-term funding instruments could resume.

In today's economy, much of the flow of credit comes from lending that occurs outside of the banking system. Here again, it is useful to take a historical look at financial intermediation to better understand the potential effect on the availability of credit to households and businesses from the recent shutdowns in the securitization and commercial paper markets and to get a first glimpse at how financial intermediation markets responded.

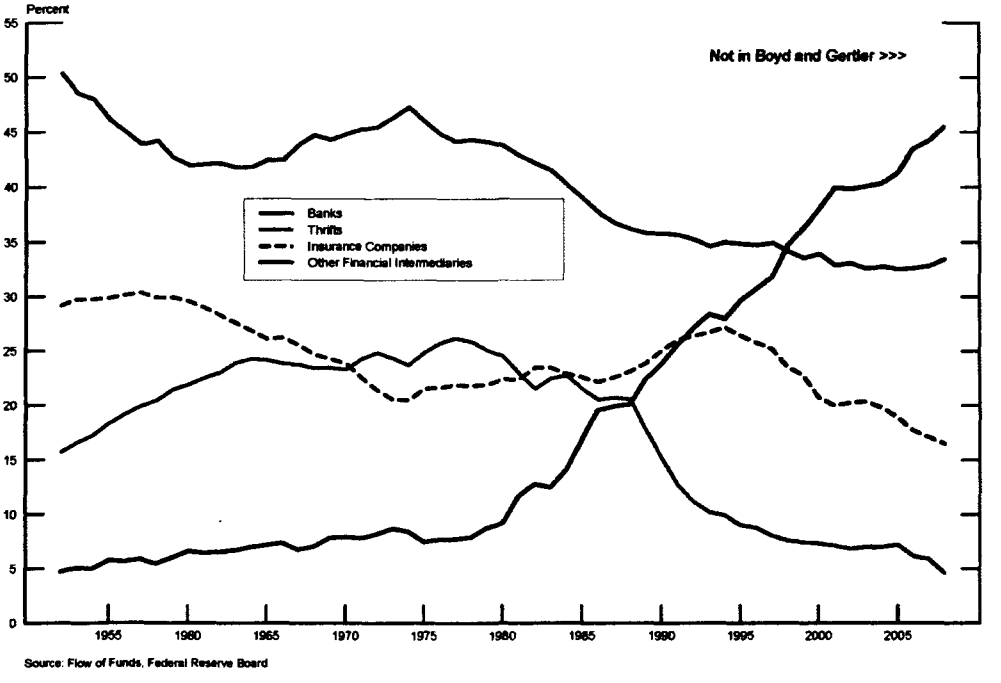
Figure 7
Disposition of
Commercial Mortgages Outstanding



[8] Bank's ability to hedge against marketwide liquidity shocks as they did last fall has been documented in the academic banking literature; see Evan Gatev and Philip E. Strahan (2006), "Banks' Advantage in Hedging Liquidity Risk: Theory and Evidence from the Commercial Paper Market," *Journal of Finance*, vol. 61 (April), pp. 867-892.

Consider, for example, the shares of commercial mortgages outstanding--funded by depositories, insurance companies, other financial institution, and commercial mortgage-backed securities (CMBS)--presented in Figure 7. The share funded by CMBS (the orange line) increased from almost nothing in 1990 to almost 30 percent in 2008. In an accounting sense, most of this increase in funding from the capital markets came at the expense of direct holdings of whole loans by insurance companies (the dashed green line) and other intermediaries (the black line), whose funding shares fell by half between 2000 and 2008. In contrast, depositories' share of commercial mortgages outstanding (the purple line) held steady from 1990 through 2007. In 2008, the decrease in the commercial mortgages funded by CMBS—the downtick of the orange line at the end of the sample—was offset by an increase in commercial mortgages funded by depositories—the uptick of the purple line. These data suggest that depositories increased their share of commercial mortgages as securitization markets stalled in 2008. Again, banks and other depositories served an important safety-valve function for the commercial mortgage market.

Figure 8
Banks' Share of U.S. Financial Intermediation
Annually (as of December), 1952-2008

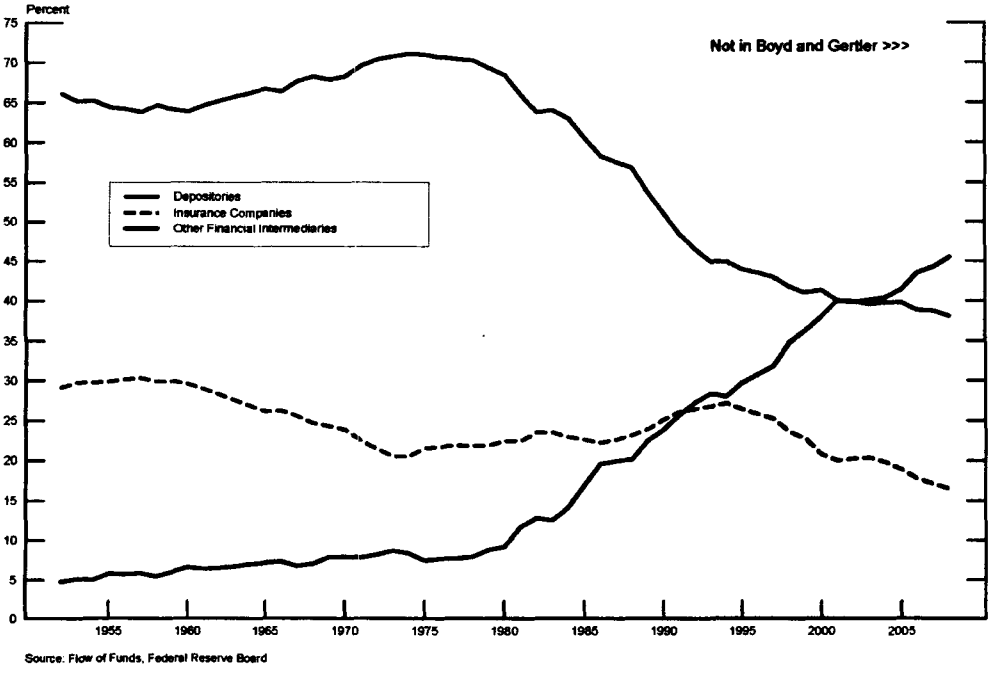


In figure 8, Federal Reserve flow of funds data are used to construct market shares of all financial intermediation provided by four major classes of institutions: banks, thrifts, insurance companies, and "other financial intermediaries," which range from finance companies to the entities that issue ABS.[9] In 1950, banks' share of financial intermediation (the red line) was about 50 percent; it declined and then rose to about 48 percent in the mid-1970s, then it trended down to about 33 percent at the turn of the century. From the fourth quarter of 2007 to the fourth quarter of 2008, this measure of

[9] Figure 8 and figure 10 update those in Ron J. Feldman and Mark Lueck (2007), "Are Banks Really Dying This Time?" Federal Reserve Bank of Minneapolis, *The Region* (September), pp. 6-9 and 42-51, www.minneapolisfed.org/publications_papers/pub_display.cfm?id=1139. These authors kindly updated their analysis for these remarks. See also John H. Boyd and Mark Gertler (1994), "Are Banks Dead? Or Are the Reports Greatly Exaggerated?" Federal Reserve Bank of Minneapolis, *Quarterly Review*, vol. 18 (Summer), pp. 2-14, www.minneapolisfed.org/publications_papers/pub_display.cfm?id=260. In both cases, "other financial intermediaries" include mutual funds; closed-end funds; exchange-traded funds; ABS issuers; finance companies; real estate investment trusts, or REITs; brokers and dealers; and funding corporations; but exclude the GSEs.

total financial intermediation grew by about 5 percent. At the same time, the banking system's share increased from 32.8 percent to 33.4 percent--a 0.6 percentage point increase in market share. Thrifts and insurance companies--represented by the blue solid and green dashed lines, respectively--had declines in their market shares in the fourth quarter of 2008.

Figure 9
Depositories' Share of U.S. Financial Intermediation
Annually (as of December), 1952-2008



In figure 9, the shares for banks and thrifts are combined so that there is a depositories' share of this measure of U.S. financial intermediation (the purple line). Comparing the purple line for the depositories' share with the black line for other financial intermediaries' share, it is apparent that these lines mirror one another. Although both of these shares equaled 40 percent in 2001, by the end of 2008, the other financial intermediaries' share had increased to 45 percent, but the depositories' share

had decreased to 38 percent. Interestingly, the shares for other financial intermediaries and for depositories continued their respective upward and downward trends despite the disruptions in securitization and financial markets during 2008.

Turning back to banks, the standard market shares of financial intermediation reported in figures 8 and 9 neglect their off-balance-sheet activities. Such off-balance-sheet intermediation has generated considerable earnings for banks. For example, banks receive fees for lines of credit regardless of whether borrowers use the lines of credit. In addition, securitization activities have provided many benefits to banks. Even when banks have not securitized the loans, such as when mortgages were securitized by the GSEs, banks often originated and serviced the loans that were pooled and have earned fees in the process. If one adjusts the financial intermediation data for banks to include "credit equivalents" for the off-balance-sheet activities of banks, then the adjusted market share of financial intermediation for banks would remain above 40 percent in recent years.[10] These adjusted financial intermediation data are shown using the red dashed line in figure 10.[11] With the near shutdown in securitization markets, adjusted bank assets declined from almost 45 percent in fourth quarter 2007 to 42 percent in fourth quarter 2008. Even with this decline, however, banks' adjusted share of financial intermediation would be in the higher end of the range observed since the 1980s.

These adjusted financial intermediation data, however, do not tell the full story. Ideally, we also would want to adjust the data for all of the other financial intermediaries

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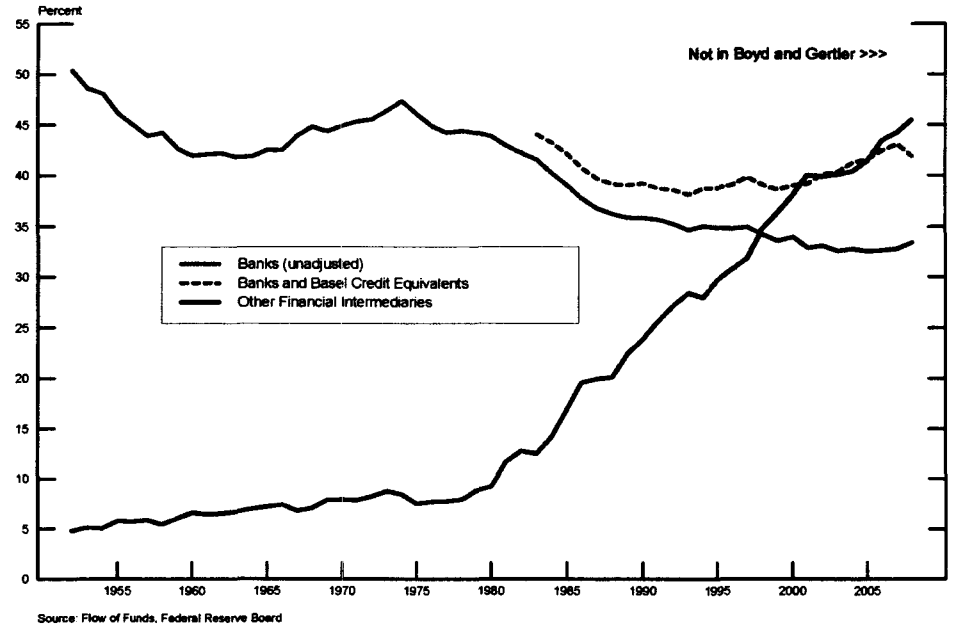
[10] The financial intermediation data were adjusted for banks' off-balance-sheet activities using techniques described in Feldman and Lueck (2007) and Boyd and Gertler (1994) (see note 9).

[11] Exposures include the following types of off-balance-sheet activities: standby letters of credit, participation in bankers' acceptances, retained recourse on assets sold, securities lend, derivatives and unused loan commitments. Bank supervisors weight the volume of these activities by a conversion factor to obtain their credit equivalent. Because of modifications to Call Reports, the off-balance-sheet activities with available credit equivalents have changed over time.

to include credit equivalents for their off-balance-sheet activities. Unfortunately, the data do not exist to make such an adjustment. Nor do the data generally exist to convert the fee income that financial intermediaries generate by off-balance-sheet activities into balance-sheet equivalents. That said, the adjusted flow of funds data suggest that banks have remained important financial intermediaries despite the growth (and disruption) in securitization activities and the arrival of new competitors.

Figure 10
Bank Assets Adjusted for Basel Credit Equivalents
As a Percentage of Financial Intermediary Assets
Annually (as of December), 1952-2008



Source: Flow of Funds, Federal Reserve Board

The "Banking View" of Credit

Even though the total provision of financial intermediation services by banks remained high relative to other financial intermediaries and their on-balance-sheet financial intermediation services increased in the fourth quarter of 2008, it must be recognized that there are many types of banks in the United States with different

specializations, geographic concentrations, and comparative advantages. Consequently, the extraordinary stress in the financial system, the downturn in the U.S. and global economies, and the associated reductions in asset values have affected each bank differently.

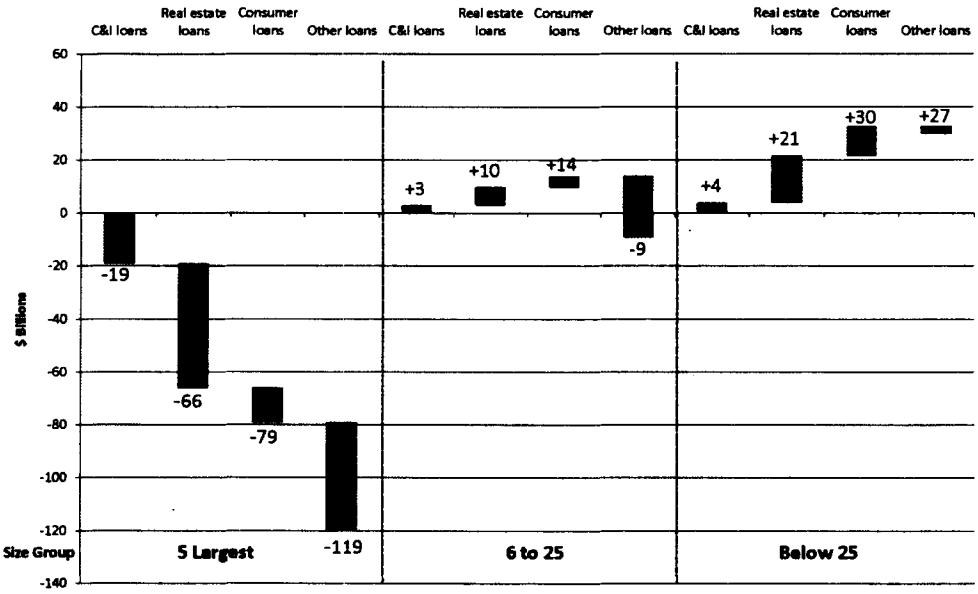
Much attention has been focused on the negative loan growth of the largest five bank holding companies in the fourth quarter of 2008--about negative 16 percent at an annual rate on a merger-adjusted basis. The next 20 largest bank holding companies had a notably smaller decrease in loans over the same period--about a negative 4-1/4 percent rate of decline--and other (smaller) bank holding companies increased their lending at about a 5 percent pace. This loan growth may reflect that smaller banks in strong financial condition are finding that they can gain creditworthy customers--even in the current economic environment--as other banks cut back on lending to conserve capital and liquidity. Smaller banks may also be finding opportunities to reclaim consumer and business customers from nonbank competitors who have pulled back as the securitization markets have dried up.

A decomposition of changes in loans held on bank balance sheets across banking organizations in the three size groups provides a glimpse into how diverse the portfolio changes were across banks in the fourth quarter of 2008.[12] Figure 11 presents balance sheet changes for loans held by the banking organizations in all three size groups. The heights of the red bars indicate declines in loan categories measured in billions of dollars, and the heights of the blue bars indicate increases in loan categories, also measured in billions of dollars. For each bank-size group, the bars within the panel add up as one looks from left to right, so that the total dollar-value change in lending is measured either

[12] Bank subsidiaries were rolled up to the bank holding company level.

by the bottom of the bar (if loan growth, on net, is negative) or by the top of the bar (if loan growth, on net, is positive). The number at the bottom (or top) of each bar provides the net decrease (or increase) in loan amounts as one adds the changes from left to right within a bank-size category.[13]

Figure 11
A Decomposition of Changes in Bank Lending Growth at U.S. Banking Organizations



Source: Consolidated reports of condition and income as of December 31, 2008.

The left panel of figure 11 contains changes in loans (on a merger-adjusted and seasonally adjusted basis) held on the books of the largest bank holding companies, which together ended the quarter with $6.4 trillion of balance sheet assets. These firms reduced their loan holdings by about $119 billion, which is indicated at the bottom of the

[13] The category labeled "other loans" in figure 11 includes loans to finance agricultural production, loans to foreign governments and official institutions, interbank loans, obligations of states and political subdivisions, as well as lease financing receivables. The most important of these subcategories varies across banks of different sizes. For example, over the last five years, the largest category of other loans was interbank loans for the 5 largest banks, lease financing receivables for the 6 to 25 largest banks, and loans to finance agricultural production for the remaining banks.

right-most bar in the left panel. Declines were substantial in commercial and industrial loans ($19 billion), real estate loans ($47 billion), and consumer loans ($13 billion).

The middle panel of figure 11 contains loan changes for the next 20 largest banking organizations, which together ended the quarter with about $5.2 trillion of balance sheet assets. Together, these organizations increased their commercial and industrial loans (by $3 billion), real estate loans (by $7 billion), and consumer loans (by $4 billion) as of year-end 2008. That said, the category of "other loans and leases" fell by more than enough to offset those increases. Total loans held on the balance sheets of banks in this group decreased by about $9 billion over the fourth quarter.

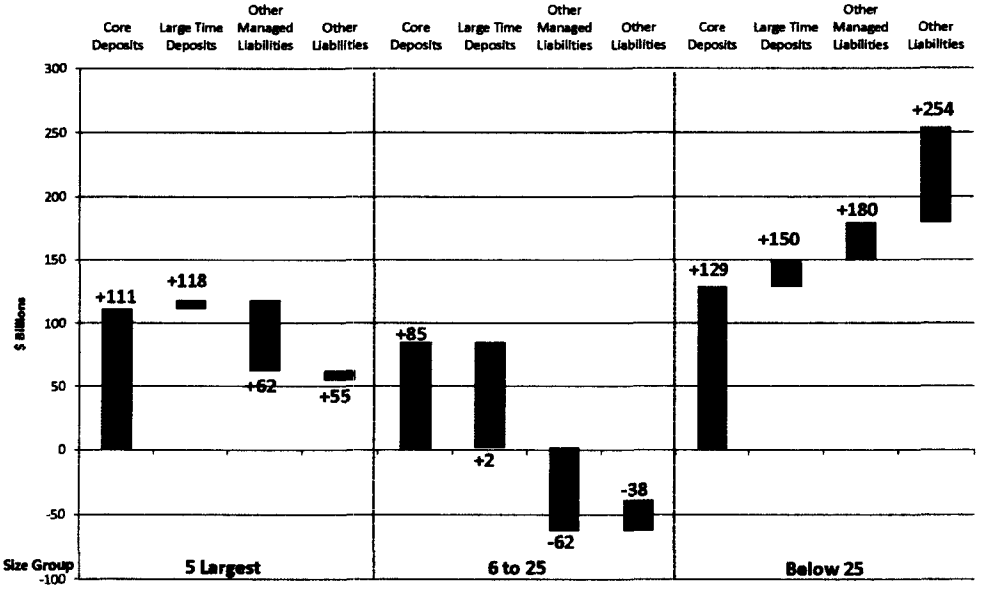
The right panel of figure 11 presents the increases in loans held by banking organizations not included in the largest 25. These organizations ended the quarter with $3.3 trillion of balance sheet assets. These entities increased their holdings of commercial and industrial loans (by $4 billion), real estate loans (by $17 billion), and consumer loans (by $9 billion). On net, bank holding companies and banks in this size class increased their lending by about $27 billion--far less than the reductions in lending at banks in the larger-size groups.

Within real estate loans, residential mortgage holdings by banking organizations declined sharply over the second half of 2008. In part, this decline reflected a slower pace of originations owing to tighter lending standards and weaker demand. But this decline also reflected the fact that banks continued to originate and sell mortgages to the GSEs as this securitization mechanism has continued to function. In contrast, home equity loan growth has recently been brisk as borrowers tapped their existing lines of credit. Unlike mortgage loans, home equity loans tended to remain on bank balance

sheets. Abstracting from a couple of bank restructuring events, growth in consumer loans--the other category of household lending--was weak in the fourth quarter, in line with lackluster retail sales and declines in consumer confidence. Originations may pick up as the TALF gains traction and ABS can be issued that are collateralized with such loans.[14]

Turning to business lending, commercial and industrial lending, which, as previously discussed, had surged during the period of particularly acute financial stress in September and October, was very weak during the fourth quarter, and commercial mortgage holdings remained flat.

Figure 12
A Decomposition of Changes in Bank Liability Growth at U.S. Banking Organizations



Source: Consolidated reports of condition and income as of December 31, 2008.

[14] The TALF will help market participants meet the credit needs of households and businesses by supporting the issuance of ABS. This support is in the form of nonrecourse loans provided by the Federal Reserve Bank of New York and capital support provided by Treasury under the TARP.

Changes in the liabilities of banks were equally diverse across the three banking organization size groups. Figure 12 has the same format as figure 11, with each red bar indicating a decline in a liability type and each blue bar indicating an increase in a liability type. As with figure 11, the data are merger-adjusted and seasonally adjusted. The figure presents changes in core deposits; large time deposits, which are deposits in denominations greater than $100,000; other managed liabilities; and other liabilities. Other managed liabilities mostly consist of foreign-booked deposits, demand notes issued to the Treasury, other borrowed money, and federal funds purchased and securities sold under repurchase agreements. Other liabilities are noninterest earning liabilities such as trading liabilities. Numbers at the top and bottom of each bar within a panel represent the sum of liability changes as one looks from left to right. As with lending growth, the growth in core deposits at U.S. banking organizations was likely influenced by both demand-side and supply-side considerations as well as by government policies implemented to improve financial conditions.

Core deposits, which consist of the sum of transaction deposits, savings deposits (including money market deposit accounts), and small time deposits issued in denominations of less than $100,000, expanded at banking organizations of all sizes in the fourth quarter. In part, this deposit growth reflected lower opportunity costs of holding monetary assets as declines in market rates outpaced those on core deposits. In addition, this growth was likely influenced by the increases in deposit insurance coverage that were announced in October 2008.[15]

[15] The Emergency Economic Stabilization Act of October 3, 2008 temporarily raised the maximum coverage on all deposits at depositories to $250,000 from $100,000. On October 14, the FDIC announced its temporary Transaction Account Guarantee Program that provides depositors with unlimited coverage for

Deposit growth also likely reflected bank-led initiatives to increase their deposit funding in order to reduce their reliance on managed liabilities, such as large time deposits and borrowings from the Federal Home Loan Banks, and also to fund future lending opportunities. This substitution of deposits for managed liabilities was particularly pronounced at the 25 largest banking organizations: These banking organizations reduced the category of "other managed liabilities" by about $120 billion. In contrast, banking organizations not included among the largest 25 increased their other managed liabilities by $30 billion (although managed liabilities are, in general, a smaller fraction of these banks' overall liabilities).

Conclusion

Today, we have taken a three-dimensional view of the flow of credit to households and businesses and described the evolving role of banks in the U.S. economy. The macroeconomic view of credit highlighted the importance for the flow of credit of reduced demand due to weaker economic activity, reduced supply because borrowers appear less creditworthy, and reduced supply because lenders face pressures that restrain them from extending credit. The financial intermediation view of credit highlighted that banks have remained important financial intermediaries long after the originate-to-distribute model for funding credit became the dominant model and can play an important safety-valve role for the financial system. Finally, the banking view of credit emphasized that there are many types of banks in the United States, and the extraordinary stress in the financial system, the downturn in the U.S. and global economies, and the associated reductions in asset values have affected each bank differently. As such, some

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noninterest-bearing transactions accounts if their bank is a participant in the FDIC program. This program is scheduled to end on December 31, 2009.

banks have likely fulfilled the credit needs of consumers and businesses that had been turned away by their peers. For all of these reasons, the Federal Reserve is committed to employing all available tools to promote economic recovery and to preserve price stability.