

A photograph of a narrow, dimly lit staircase leading up to a doorway. Through the doorway, the head and crown of the Statue of Liberty are visible against a bright blue sky. The walls of the staircase are made of rough, textured concrete.

Land of Opportunity?

Economic Mobility in the United States

2012 ANNUAL REPORT

FEDERAL RESERVE BANK OF RICHMOND

Mission

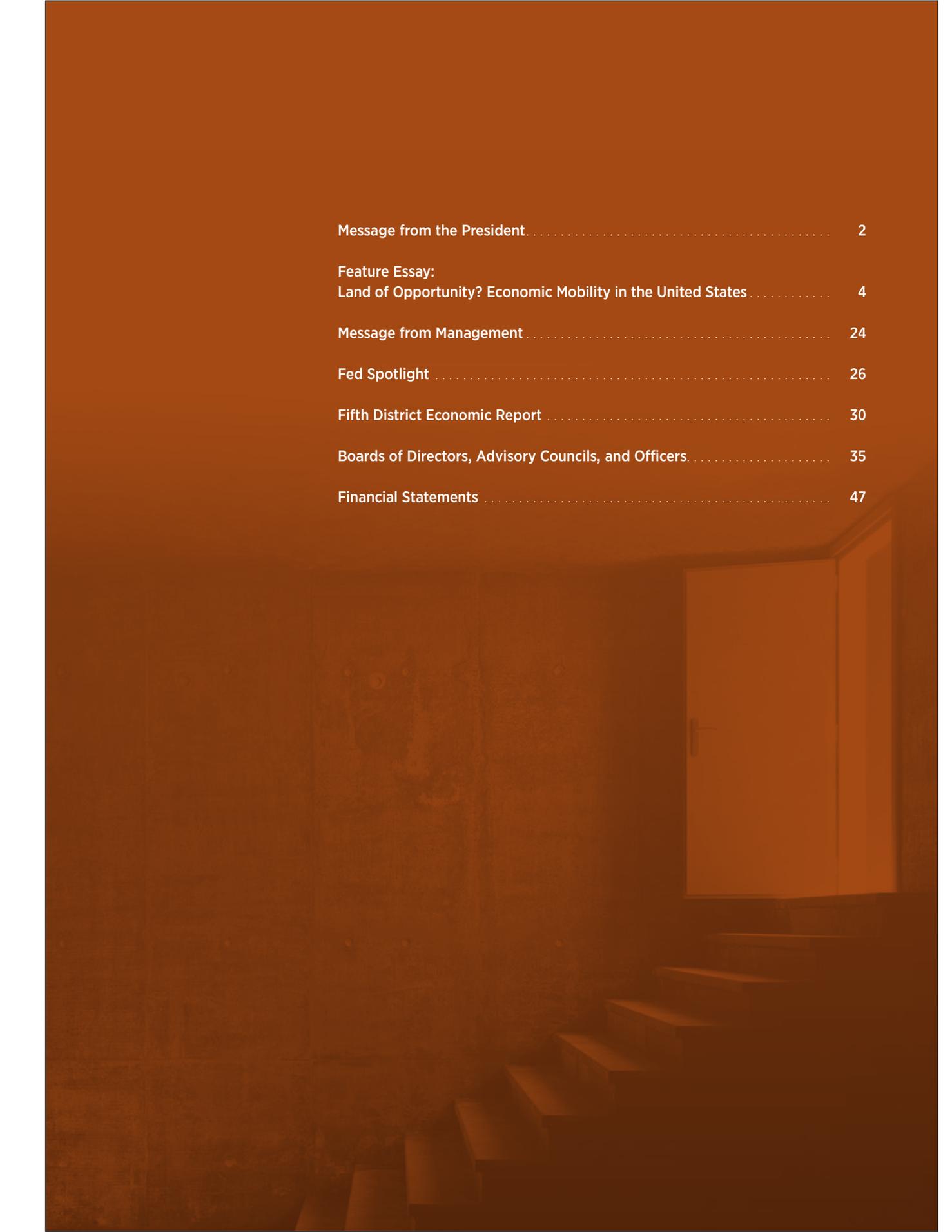
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MESSAGE FROM THE PRESIDENT

Human Capital and the American Dream



Jeffrey M. Lacker
President

A 2006 documentary titled *The One Percent* chronicled the growing gap in wealth in the United States. Since that time, concerns about economic inequality have taken a prominent spot in public discourse. While rising inequality surely demands attention, perhaps an even more important issue is economic mobility.

Most measures of inequality compare income distributions from one point in time to another. In contrast, economic mobility, by definition, concerns the likelihood of moving up (or down) the income ladder. It is, in short, a more dynamic way to look at economic outcomes. It is also one that strikes a chord when we consider issues of social justice.

The widely shared ideal associated with the phrase “the American dream” is not, I would argue, the promise of prosperity, but the promise of opportunities to attain it. To the extent that such opportunities have disappeared or become vastly more difficult to seize, we fall short on this fundamental dimension of fairness.

Economists consider two distinct types of economic mobility: intragenerational and intergenerational. Intragenerational mobility refers to how a person’s economic status changes over the course of his lifetime. Intergenerational mobility is the degree to which a person’s economic status as an adult differs from his ancestors’ economic status.

As Kartik Athreya and Jessie Romero note in the feature essay of this year's *Annual Report*, both types of mobility seemed to decline in recent decades—particularly for people at the top and bottom of the income ladder. People in the middle remained more likely to experience significant changes in their fortunes, but people who were born to relatively rich or poor families tended to stay in those segments of the income distribution.

Why do we see such persistence at the extremes? There are a number of reasons—most notably the relative advantages and disadvantages that rich and poor parents convey to their children. But, as Athreya and Romero discuss, there can be little doubt that the returns to skill acquisition have risen over time. New technologies that have been developed and implemented over the past several decades have done more for the productivity of skilled workers than for less-skilled workers. As a result, the value of developing human capital has increased sharply. This is evident in the widening gap between the earnings of workers with and without college degrees.

The compensation gap seems to suggest continuing the various public policies that promote higher education. But research indicates that differences in educational attainment alone do not fully account for gaps in economic mobility, suggesting that human capital embodies other important factors as well. In fact, non-cognitive skills, such as work ethic, the ability to follow instructions, motivation, and patience may be just as important as cognitive skills in determining future success in the job market. And there is considerable evidence that the foundation for skill acquisition is laid very early in life. Long-term research projects have shown that high-quality early childhood education programs can deliver quantitatively significant social returns,

including higher lifetime earnings. Early mastery of some basic skills can make it easier to learn more complex skills throughout life, and children who fall behind early have difficulty catching up. This indicates that greater investment in early childhood education might be a more cost-effective way to increase equality of opportunity, in the long run, than increased subsidies for higher education.

Athreya and Romero are cautious, though, about the policy implications of the research they survey. That's appropriate, in my view, because more research is needed, and intuition alone is an insufficient and at times misleading guide to policy choice. Changes in economic opportunity are the result of a complex array of fundamental forces, and ideas about how to enhance opportunity have shifted over time. In decades past, we poured resources into traditional education—both K-12 and higher education—and yet improvements in fundamental measures of mobility have not been evident. This suggests to me that returns to such strategies are diminishing and that consideration of less-traditional strategies, such as greater investment in early childhood education, is warranted. New strategies should be grounded in well-vetted research, however, and implementation should be guided by careful evaluation of the effects on outcomes. Policy directions based on such research have the best chance to achieve sustained improvements in economic mobility. Such an outcome would be truly consistent with the American dream.



Jeffrey M. Lacker
President



Land of Opportunity?

Economic Mobility in the United States

By Kartik Athreya and Jessie Romero

The gap between people in the highest percentiles of earnings and wealth distributions and the rest of society has grown significantly during the past several decades, a fact that has led to considerable public discussion about the nature of opportunities available in the United States. Often overlooked in this debate, however, is the importance of economic mobility—the extent to which

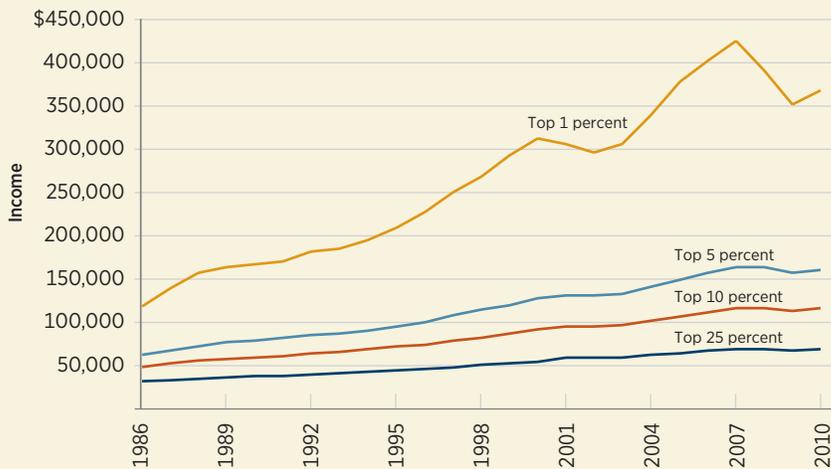
people are able to move up and down the income ladder—in determining what inequality implies for opportunity. If mobility is high, for example, the level of inequality at any point in time is not necessarily cause for concern, since it's possible that today's poor will be tomorrow's rich. The potential for such upward mobility is the foundation of the American dream that has lured generations of immigrants to the United States.

The dream endures today. Nearly half of Americans aged 18–29 believe they will become rich at some point in their lifetimes, according to a 2012 Gallup Poll. But the odds are against them: In 2010 (the most recent year for which the Internal Revenue Service has published data), only about 5 percent of U.S. households earned more than \$150,000 per year, and about 1 percent earned more than \$350,000 per year. (See Figure 1). Most of those people, moreover, were not born to poor parents—especially not in recent years.

Understanding economic mobility is essential to understanding how observed levels and patterns of economic inequality relate to the implicit promise of American life. But this is complicated. Mobility and inequality are determined jointly by random chance, by policy, and—most confounding of all for social scientists—by the deliberate actions of individuals or their parents. Regarding the latter determinant, it is clear that people differ according to their aptitude for various tasks, their appetite for risk, and their preferences for work versus leisure, among other characteristics. Both mobility and inequality thus will arise at least in part because different people make different choices. (See sidebar on page 15.)

This reality creates a challenge for economists seeking to understand the sources of observed levels of mobility and inequality, and for policymakers who hope to influence those levels. If everyone has the

FIGURE 1: Thresholds for Selected Income Percentiles



Source: Internal Revenue Service

Note: An "income percentile threshold" is the lowest amount earned by a household in that percentile. Income is "adjusted gross income," which is income minus certain deductions. Amounts are in current dollars.

The gap between the top 1 percent and all other percentiles has increased substantially.

same opportunities for movement, then differences in income, wealth, or education must at least partially reflect deliberate choices and not market structure. This is not a setting in which many people would find efforts to alter outcomes via policy compelling. In contrast, to the extent that inequality continues across generations because people do not have the same chances, then inequality and immobility can be partially chalked up to market structure. From a normative standpoint, there thus might be support for policy interventions that seek to equalize opportunities, rather than those that would equalize outcomes.

One such intervention is greater investment in early education. High-quality early-childhood education equips children with the skills they need to succeed at each subsequent stage of life, yet in the United States, access to such education appears to strongly depend on parents' income. Children of poor parents are thus at a disadvantage from the very beginning—a disadvantage

from which it is very difficult to recover. But these children are not the only ones who are affected; all else equal, a more skilled workforce increases the productivity of society as a whole. Enhancing early education opportunities for the initially disadvantaged could therefore lead to better economic outcomes for everyone.

This essay will review both recent and longer-run features of U.S. economic mobility, with a focus on how those trends affect the interpretation of data on income inequality. It then will discuss some of the challenges and choices facing policymakers seeking to alter observed outcomes.

Inequality in the United States

By nearly any measure, income inequality in the United States is increasing.¹ In particular, today's rich are both richer than their counterparts in the past and richer relative to those around them. In 1979, the



Research suggests that early childhood education is the most cost-effective way to reduce the opportunity gap.

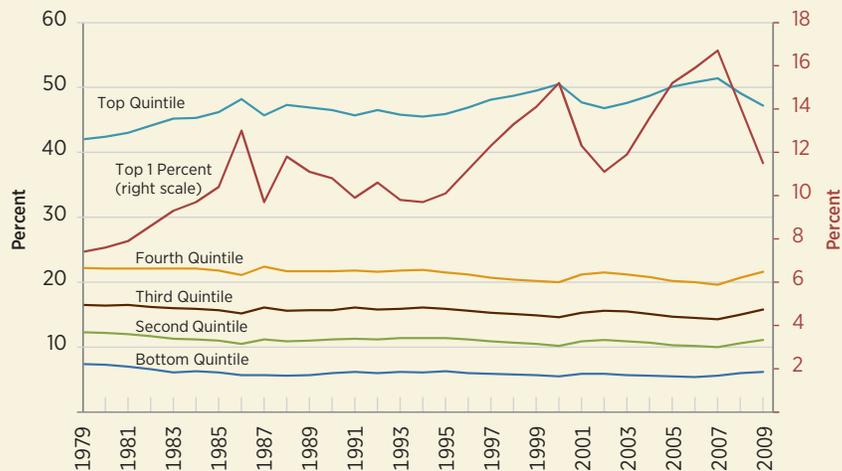
top 1 percent of households took home 7.4 percent of total after-tax income in the United States. By 2007, the share had more than doubled to 16.7 percent (Congressional Budget Office 2011).² At the same time, the share of income earned by households at all levels of the remaining distribution stayed flat or declined. Those in the middle three quintiles (fifths), for example, saw their share decrease from 51 percent to 43.9 percent. The picture looks the same for pretax income; the share accruing to the top 1 percent rose from 8.9 percent to 18.7 percent (Congressional Budget Office 2011).³ These changes are a result both of increasing concentration of all types of income at the top of the distribution and a shift in the composition of income toward business income and capital gains (Congressional Budget Office 2011). This compositional change also makes incomes at the top of the distribution more volatile, but the trend is clearly one of growing inequality. (See Figure 2.)

Other research shows similar trends. Thomas Piketty and Emmanuel Saez (2003) find that after remaining flat throughout the 1950s and 1960s, the share of pretax income earned by the top 10 percent of households increased from 31.5 percent in 1970 to 41.4 percent in 1998.⁴ As in the CBO's analysis, this increase was largely driven by those at the very top of the distribution. While the income share for those in the 90th through 99th percentiles increased from 23.7 percent to 26.9 percent, the share for those in the very top percentile nearly doubled, from 7.8 percent to 14.6 percent.⁵

The trend continued after the 2007–09 recession. Although average real income for the top 1 percent fell about three times more than for the remaining 99 percent, the decline was almost entirely due to the stock market crash. As markets recovered in 2010, incomes for the top 1 percent increased 11.6 percent, compared to only 0.2 percent for all other households (Saez 2013).

FIGURE 2: Income Distribution by Quintiles

The top quintile (fifth) of households account for about half of after-tax income



The top 1 percent of households account for much of the gap between the fourth and top quintiles.

Source: Congressional Budget Office

Note: Quintiles are displayed on the left scale; the top 1 percent is displayed on the right scale. After-tax income is defined as market income (labor income, business income, capital gains, capital income, and other income) net of transfer payments and taxes.

Income shares for the 90th–99th percentiles and the top 1 percent continued to increase, to 29.1 percent and 17.4 percent, respectively, in 2011 (Piketty and Saez 2003, updated data).

These data have garnered a great deal of attention from economists, policymakers, and the public, but do they shed light on what is actually happening to individuals or households?

Mobility: A Central Force Behind Inequality

An observation of inequality at any point in time is only a snapshot; it does not shed light on how that snapshot developed. For example, imagine three different worlds: In the first world, the first inhabitants flip coins to determine not only their income, but also the income of all future generations; each descendant earns either \$1,000 or \$100,000 per year, depending on his

ancestor’s original coin toss. In the second world, the members of each new generation flip coins, but they do so just once at birth to determine whether they will earn \$1,000 or \$100,000 per year during their lifetimes. In the third world, individuals get to flip a coin each year to determine their income for that year.

The people in these worlds face very different lifetime risks. The first world, which is akin to a caste system, is very risky from the perspective of the first ancestor, who is determining outcomes for an entire dynasty. The second world also is risky since the die is cast for one person’s entire life, but each of her descendants gets a chance to flip the coin, making it unlikely that bad luck will persist across many generations. The third environment is the least risky since it is very unlikely that an individual’s average annual income over his lifetime would be significantly different than \$50,500, the average annual income he can expect over many years.



Despite these differences, snapshots of these economies in any given year look the same. In each, about half the population earns \$1,000 per year, while the other half earns \$100,000. Clearly, then, inequality data alone do not reveal the underlying prospects of individuals. For this, one must study economic mobility.

Trends in Economic Mobility

Economists and policymakers generally are interested in two types of mobility: intragenerational and intergenerational. Intragenerational mobility describes how a given person's economic status changes over the course of his lifetime. Intergenerational mobility reflects the degree to which a person's economic status as an adult differs from that of her parents or ancestors. Status is usually measured by earnings (wage income), income (all sources of income, including wages), or less frequently wealth (the value of assets minus liabilities). Most research focuses on relative intra- and intergenerational mobility, or how a person's status changes in comparison to others. But it is also important to recognize that a person might experience absolute mobility even in the absence of relative mobility. She might occupy the same place in the earnings distribution as her parents, remaining in the same position relative to the rest of society, but still have a higher standard of living than her parents did, depending on the rate of economic growth.⁶

Intragenerational Earnings Mobility

Does the top of the income distribution comprise the same people year in and year out, or do individuals flow in and out of the highest percentiles over their lifetimes? If intragenerational mobility is high, then any snapshot of inequality will overstate the actual long-term inequality among individuals. For example, it is possible that the large gap in recent years between those in the top percentile and the rest of the distribution reflects an increase in the variation of annual earnings due to stock options and large bonuses. If

that were the case, short-term inequality might be high, but long-term inequality could be much lower, reflecting high mobility.

In addition, in most modern societies, there is a clear life-cycle pattern to earnings and income. Imagine an extreme case where half the population earns \$1,000 during the first half of their lives and \$100,000 during the second half, while the other half of the population earns \$100,000 early in life and \$1,000 later. Income inequality would be high at a point in time, but everybody has the same lifetime income. Assuming that individuals could save and borrow to smooth their consumption over time, the snapshot of income inequality might not accurately reflect people's well-being since consumption inequality—a truer, and harder to measure, barometer—would be relatively low.

Anthony Shorrocks (1978) formalized these ideas by developing an index in which mobility is defined as the extent to which income inequality decreases over a given timeframe. Wojciech Kopczuk, Emmanuel Saez, and Jae Song (2010) calculate Shorrocks indices comparing inequality in annual earnings and in earnings averaged over five years for workers between 1937 and 2004. They find that short-term (five-year) mobility has not changed over the period, which implies that greater volatility of short-term earnings is not the source of observed higher inequality. Instead, higher inequality is likely the result of increased variation in lifetime earnings, including higher earnings at the top of the distribution. The authors conclude that mobility has not been sufficient to offset the rise in inequality, and thus that short-term inequality likely reflects lifetime inequality.

Kopczuk, Saez, and Song (2010) also find that long-term income mobility, from the beginning to the end of working life, actually increased significantly for all workers between 1942 and 1999. There is significant



heterogeneity among groups of workers, however. Although on average men are more upwardly mobile than women, men's mobility was stable or declining during the sample period. Women's mobility, however, has increased greatly since the 1960s, as more women have moved into higher-paying professions. Thus, the increase in mobility for all workers has been driven by the labor market experiences of women.

Heterogeneity in intragenerational mobility also is apparent across the income distribution. Gerald Auten, Geoffrey Gee, and Nicholas Turner (2013) find that about 75 percent of taxpayers aged 35–40 who were in the second, third, or fourth quintile in 1987 were in a different quintile in 2007. (About 60 percent of those who changed position moved up or down a single quintile.) But they find greater persistence at the top and bottom of the distribution: 43 percent of taxpayers in the bottom quintile were still there 20 years later, and 46 percent of taxpayers in the top quintile maintained their positions. The authors also find that the very top earners tended to remain top earners: From 1992 through 2006, between 60 percent and 70 percent of the top 1 percent in a given year were in the top 1 percent in the following year.

Intergenerational Mobility

A commonly used measure of intergenerational mobility is the intergenerational elasticity of earnings (IGE). The IGE describes in percentage terms how much of the difference between the earnings of families in one generation persists into the next generation, typically by comparing the correlation of the earnings of fathers and sons. For example, an IGE of 0.5 means that a 10 percent difference between the income of two fathers translates into a 5 percent difference in the income of their sons. The smaller the IGE, the greater the amount of mobility.

Important early studies of the United States and other developed countries found a high degree of mobility,

with an IGE of 0.2 or less (Becker and Tomes 1986). Later research, however, found that data used in this work featured biases that would lead to artificially low measurements of the true level of earnings persistence. (See Stokey [1996] for a review of this research.)

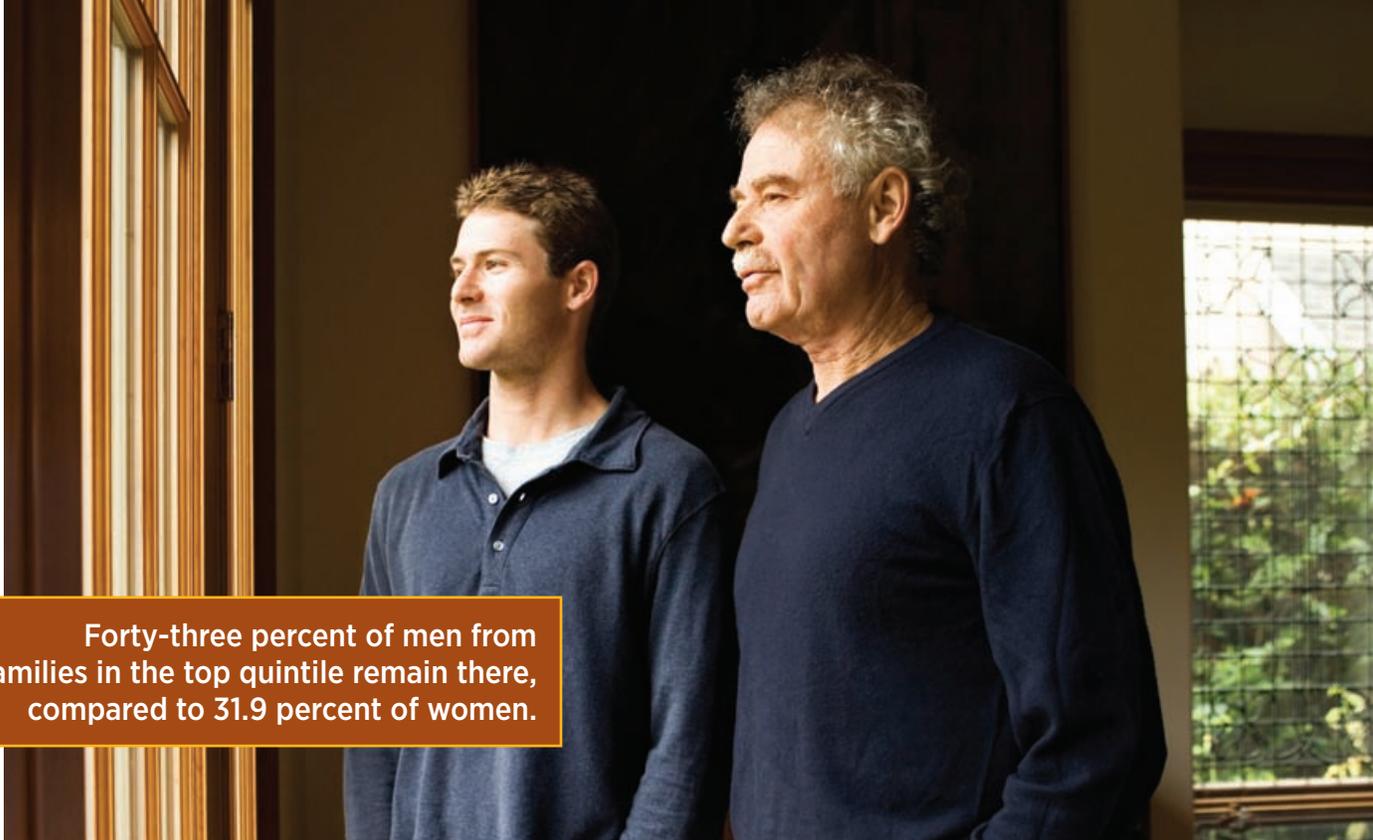
New and better data suggest that mobility in the United States has been historically lower than initial estimates implied, and that it has declined even further in recent decades. Daniel Aaronson and Bhashkar Mazumder (2008) construct a time series of intergenerational elasticity from 1950 to 2000. They find that mobility increased between 1950 and 1980—the IGE decreased from 0.40 to 0.32—but decreased significantly during the 1980s and 1990s, with the IGE reaching 0.58 by 2000.

Although exact international comparisons are not possible, most research suggests that people in the United States are somewhat less mobile than people in Canada, Denmark, Finland, and Norway, where the IGE is about 0.15 to 0.2. In Germany and Switzerland, the IGE is about 0.3, and people in the United Kingdom and France also are relatively immobile, with IGEs of about 0.4 to 0.5 (Corak 2006).

While the IGE is a widely used statistic in work on intergenerational mobility, it only reflects average mobility across the entire distribution of individuals; it does not reveal anything about the direction of mobility or how it varies across different groups. To learn more about such mobility, Mazumder (2008) calculates transition rates, the likelihood of moving from one point in the distribution to another, across generations. He finds that, as with intragenerational measures, the amount of mobility varies significantly according to income. For example, there is a great deal of “stickiness” at the top and bottom of the distribution; people whose parents are in the bottom quintile of income are more likely to be in the bottom quintile themselves, and those whose parents are in the top quintile are likely to

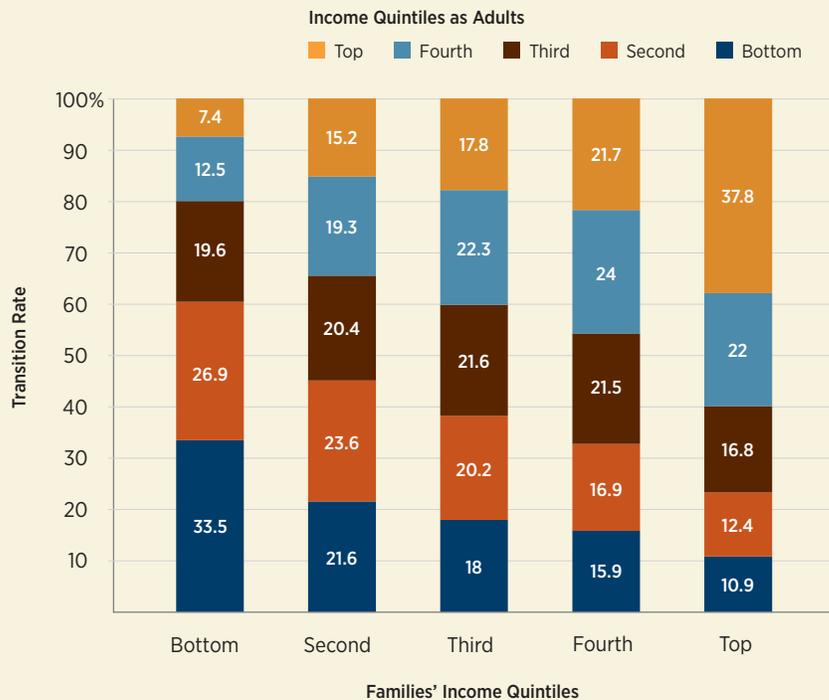
remain there. More than 60 percent of children whose parents are in the bottom quintile will end up in the bottom or second quintile, compared to 23.3 percent of those whose parents are in the top quintile. Only 7.4 percent of people who reach the top quintile are from families in the bottom quintile. (See Figure 3.) There also are stark differences between black people and white people and between men and women. Whites appear to be more upwardly mobile and less downwardly mobile than blacks. Mazumder (2008) finds that about 24.9 percent of whites remain in the bottom quintile, compared to 43.7 percent of blacks. And 38.9 percent of whites remain in the top quintile,

compared to 21.3 percent of blacks. In addition, more than twice as many whites as blacks experience the “rags-to-riches” scenario of moving from the bottom quintile to the top quintile, 10.6 percent compared to 4.1 percent. Mazumder also finds a large gender gap. While 40.5 percent of women from families in the lowest quintile remain there, only 27.2 percent of men do. Conversely, 43.0 percent of men from families in the top quintile remain in that quintile, compared to 31.9 percent of women. Men are thus more upwardly mobile and less downwardly mobile than women. The gender gap is trumped by the race gap, however: Both black men and black women tend to be the most likely



Forty-three percent of men from families in the top quintile remain there, compared to 31.9 percent of women.

FIGURE 3: Intergenerational Income Quintile Transition Rates



The majority of adolescents from the top or bottom quintiles remained in the same quintile or adjacent quintile as adults.

Source: Mazumder (2008)

Note: The figure shows what percentages of adolescents from families in a given income quintile remained in that quintile or transitioned to a different quintile as adults. For example, 33.5 percent of adolescents from families in the bottom quintile remained in the bottom quintile, while 26.9 percent moved to the second quintile. Income data were gathered from 1979 through 1980 and again from 1997 through 2003.

to remain in the bottom quintile and the most likely to fall out of the top quintile.⁷

Mobility of Immigrants

For centuries, the American dream has drawn immigrants to the United States, from the waves of German and Irish immigrants in the late 1800s to the nearly 12 million Mexican immigrants who arrived during the past four decades.⁸ But how likely is it that the dream becomes a reality?

Decennial census data indicate that immigrants' earnings increase rapidly after they arrive in the United States; the earnings gap between them and their native-born peers appears to shrink substantially over

time. Comparing natives and immigrants with similar work experience, Darren Lubotsky (2007) finds that the positive earnings gap between natives and the cohort of immigrants who came to the United States between 1965 and 1969 fell from 38 percent in the 1970 Census to 16 percent in the 1980 Census, and vanished by the 1990 Census. The gap between natives and immigrants who arrived in the late 1980s fell from 55 percent to 36 percent between the 1990 and 2000 censuses. This mobility might be spurious, however. Up to one-third of immigrants eventually return to their home countries; if these immigrants tend to be those with lower earnings, then the apparent earnings growth actually reflects fewer low earners in the data pool. Lubotsky (2007) corrects for this "selective out-migration" by



studying longitudinal rather than cross-sectional data, and finds that earnings growth is significantly lower. In the cross-sectional data, immigrants' relative earnings increase 20 percent during their first decade in the United States and an additional 10 percent to 20 percent in each following decade. In the longitudinal data, however, immigrants' earnings grow between 12 percent and 15 percent during their first 15 years in the country and then stagnate.

The mobility of the second generation also appears to be decreasing. Throughout the 20th century, the children of immigrants not only earned more than their parents, but they also earned more on average than the rest of the non-immigrant population, perhaps reflecting some of the selection effects Lubotsky (2007) observed. But that advantage is shrinking. In 1940, the second generation earned 17.8 percent more than non-immigrants on average. In 1970, the difference was 14.6 percent, and by 2000, the difference had fallen to 6.3 percent (Borjas 2006). The reason might be a shift in the composition of immigrants. There has long been significant heterogeneity in earnings among immigrant groups, and in recent times, immigrants from developed countries tend to earn more than those from developing countries. Immigrants from Germany earned 24.9 percent more than non-immigrants in 1970 and their children earned 19.5 percent more in 2000, for example, while those from Mexico earned 31.6 percent less in 1970 and their children earned 14.6 percent less in 2000 (Borjas 2006).⁹ While wages in the second generation tend to regress toward the mean, overall earnings show significant persistence into the second generation. Borjas (2006) finds that across all immigrant groups, the intergenerational elasticity over the period 1970 to 2000 is 0.43. As the composition of immigrants increasingly shifts toward people from less-developed countries, who tend to have lower skills and levels of education, the wage gap is likely to persist through successive generations of immigrants (Haskins 2008).¹⁰

Irrespective of how quickly immigrants' earnings approach the earnings of natives, many immigrants still improve their economic status significantly by immigrating to the United States. In this sense, the move to the United States is a powerful form of economic mobility, and the United States' absorption of both legal and illegal immigrants makes it an engine of global mobility.

This last point must be part of any meaningful assessment of the mobility offered by a society. Even a calcified society, in which intergenerational or intra-generational mobility of natives is low, may be a source of mobility for the world's residents via its openness to immigrants. Conversely, societies that promote intergenerational mobility of natives through intensive early intervention and generous social safety nets but limit entry of immigrants—perhaps out of fear that they will exploit the generous safety nets—might hinder equality of opportunity in a global sense.¹¹

What Generates Persistence?

The preceding discussion has highlighted empirical findings on the persistence of economic outcomes both within and across generations. But these findings do not explain why persistence across generations exists in the first place or why it might have increased. As Aaronson and Mazumder (2008) note, intergenerational elasticities do not reflect causality. Instead, measures like the IGE are simply omnibus measures of everything correlated with parents' income and children's future earnings—factors ranging from the neighborhood where a child grew up to the availability of health care, among many others.

Intuitively, parents' decisions to invest in developing their children's skills, or "human capital," are important. Their willingness to make such investments stems in large part from altruistic concern for their children.¹² One model that incorporates this dynamic was created by Gary Solon (2004). He relates this investment decision



In the 20th century, the children of immigrants earned more on average than their parents and more than the rest of the non-immigrant population.

to the rate of return to human capital and to the progressivity of public investment in children's human capital, such as government provision of education and health care. Solon's model suggests several things: that higher-income parents invest more in their children's human capital, that more progressive public investment in children's human capital partially crowds out parents' investment, and that parents are likely to invest more when the returns to human capital increase. The model predicts that intergenerational mobility will decrease during a period of increasing returns to human capital because rich parents are able to invest more than poor parents, and that mobility will increase during a period of more progressive public investment.

Recent trends in intergenerational mobility do correspond to Solon's predictions (Mazumder 2012). The returns to college education dropped during the 1940s, remained steady for several decades, and then began rising around 1980. These turning points in the

returns to college education match the turning points in intergenerational elasticity observed in Aaronson and Mazumder (2008), as well as in other studies of mobility trends.

In Solon's (2004) model, the degree of progressivity of public education is exogenous—that is, determined outside the model. Andrea Ichino, Loukas Karabarbounis, and Enrico Moretti (2011) develop a model in which the degree of progressivity is the outcome of socio-political forces. In their model, public education is an insurance system that increases the future income of children without much innate talent at the expense of the future income of children with high innate talent. Public education thus increases mobility. But currently rich dynasties prefer low mobility for their descendants (as will be discussed in more detail in the following section), so in countries where rich dynasties are more politically active, spending on public education will be lower.

THE ROLE OF CHOICE

Inequality and immobility partially reflect deliberate choices related to the fact that people differ in their tolerance for risk or in their willingness to defer gratification (what economists call “time discounting”). But these differences cannot be directly observed. Instead, economists must make inferences based on actual outcomes, such as occupational choice, savings, and consumption.

Risk tolerance has a large impact on occupational choice, and thus on income and wealth. Beginning with Frank Knight’s *Risk, Uncertainty, and Profit* (1921) and continuing in modern work since Richard Kihlstrom and Jean-Jacques Laffont (1979), economists have modeled entrepreneurs as less risk averse than other people and therefore more likely to undertake high-risk/high-return enterprises. To the extent that people genuinely vary in risk aversion, this model suggests that the rich and the poor disproportionately will be those with high risk tolerance, while those in the middle will be more risk averse. This is consistent with data that show a disproportionate number of self-employed people at both ends of the earnings and wealth spectrums. They also figure more prominently among households in financial distress (Sullivan, Warren, and Westbrook 2000).

Additional evidence for the role of risk tolerance in personal economic outcomes comes from Sam Schulhofer-Wohl (2011), who finds that risk-tolerant workers tend to have jobs more exposed to economy-wide or “aggregate” risk. Movements in these workers’ incomes thus tend to be more volatile even when they have insured themselves against individual-level, or “idiosyncratic,” risks, such as job loss or illness. As a result, volatility in their consumption of goods and services is not necessarily evidence of poor insurance possibilities in the marketplace. Indeed, Schulhofer-Wohl (2012) finds that after correcting for this bias, U.S. households do not appear to be bearing any significant uninsurable risk. (A variety of other research, however, has found that certain types of shocks, such as a long-term disability, are clearly not fully insured.)

Observed inequality also might reflect different preferences for consumption in the present versus the future. Per Krusell and Anthony Smith (1998) show, for example, that a model that includes variation in “impatience,” or the willingness of households to borrow against future earnings, successfully matches observed wealth inequality in the U.S. population. Emily Lawrance (1991) and Marco Cagetti (2003) also find that data on consumption and wealth suggest the presence of significant differences in preferences, especially in risk-aversion and time discounting. They find that less-skilled and less-wealthy individuals generally are less patient—meaning they place a higher value on current versus future consumption—than their more-skilled and wealthier counterparts. More recently, Lutz Hendricks (2007) has measured the extent of differences in households’ discount factor by noticing that households vary a great deal in their wealth even though they have and can expect to have very similar lifetime incomes.

Taken as a whole, economists’ work suggests that many of the observed differences in the way households make decisions can be understood as arising from differences in risk tolerance or time discounting. A caveat, however, is that a variety of difficult-to-model environmental forces might play a large role in generating these differences. In a society with low life expectancy or a high violent crime rate, for example, individuals might not be “choosing” to be impatient so much as making a rational decision to value current over future consumption. Likewise, not attending college might indicate an individual with a high discount factor who chose not to invest in K-12 education—or it might indicate a person facing strong institutional barriers to attending college. It is important to keep such environmental factors in mind when interpreting any model that includes heterogeneity in preferences.



In the United States, spending on public education mostly begins with kindergarten. But children face differences even before they begin school that may determine their future success. Mazumder (2008) finds that educational attainment alone is not enough to explain different mobility rates among black and white children. Black and white people who have completed the same number of years of school still have different intergenerational mobility rates, particularly at the level of high school completion and below. Other research also has found that educational attainment can explain less than half of the intergenerational transmission of earnings (Bowles, Gintis, and Groves 2008).

What this research implies is that human capital embodies more than the number of years spent in school. For example, adolescents who score higher on the Armed Forces Qualifying Test (AFQT) are more likely to move out of the bottom income quintile, and differences in AFQT scores can explain nearly all of the black/white mobility gap (Mazumder 2008).¹³ These test scores, however, capture much more than innate intelligence or academic achievement; non-cognitive skills such as work ethic, the ability to follow instructions, motivation, and patience also are essential to success on such standardized tests (Bowles, Gintis, and Groves 2008; Heckman 2008). In fact, these non-cognitive skills may be just as important as cognitive skills in determining future success in the labor market. For example, the General Educational Development (GED) credential is supposed to demonstrate cognitive equivalence between people who have graduated from high school and people who have dropped out and taken the GED exam instead. But GED holders have much poorer labor market outcomes than high school graduates despite obtaining equivalent knowledge. The reason, James Heckman and other economists have concluded, is that many students who earn a GED lack the non-cognitive skills that would have enabled them to complete high school—the same skills that would help them succeed in the labor market (Heckman, Humphries, and Mader 2010).

Recognizing the importance of non-cognitive skills begs an important question: How do children acquire these skills? A consensus now exists that the foundation is laid very early in life, even from infancy. Skill development is hierarchical; the early mastery of basic emotional, social, and other non-cognitive skills makes it easier to learn more complex cognitive skills throughout life. And children who fall behind early have difficulty catching up. Gaps in cognitive skills that are important for adult outcomes are present as early as age 5 and tend to persist into adulthood (Heckman 2008).

The data suggest that poor and minority children are much more likely to fall behind. A recent report from the Brookings Institution (Sawhill, Winship, and Grannis 2012) examines the likelihood of achieving certain social and economic milestones on the path to the middle class, defined in the report as having a family income at least 300 percent of the poverty level, or about \$70,000 for a married couple with two children. Only 48 percent of children from families in the bottom income quintile are ready for school at age 5, compared to 78 percent of children from families in the top quintile.¹⁴ There also is a large disparity in early childhood outcomes according to race. Sixty-eight percent of white children are ready for school at age 5, versus only 56 percent of black children and 61 percent of Hispanic children. The gap between white and black widens throughout the lifespan. By age 11, 73 percent of white children versus 52 percent of black children have basic reading and math skills. By age 29, only 33 percent of black people have successfully transitioned to adulthood (defined by the authors as living independently and having either a college degree or a family income at least 250 percent of the poverty level), while 68 percent of white people reach this milestone. Hispanic people fare somewhat better; 66 percent achieve the age-11 milestone, and 47 percent reach the age-29 milestone.



Educational attainment alone is not enough to explain different mobility rates for black people and white people.

Challenges for Policymakers

What is the role for public policy, if any, in addressing economic inequality and mobility? Answering this question requires asking several others: What would policy try to achieve, and in particular, whose well-being would it attempt to enhance? Would the goal be to improve opportunities for current cohorts or for future generations? Would policy treat individuals at different moments in time as discrete units, irrespective of their ancestors, or would it emphasize dynasties by taking into account how family members invest in descendants?

From a policymaker's point of view, mobility might be inadequate as a measure of what a good society should provide its members. First of all, there is a tradeoff between mobility and predictability. Recall the imaginary world resembling a caste system described earlier. This setting is utterly immobile and risky for each dynasty's first member. But it is

perfectly safe for the members of each successive generation since income is completely stable. In fact, for a person whose ancestor flipped the \$100,000 coin, this world is not only safe, but also quite comfortable. On the macro level, it is possible that the costs of large fluctuations and risky income patterns outweigh the benefits of high mobility and reduced inequality. Peter Gottschalk and Enrico Spolaore (2002) study a model in which there are large welfare gains from greater mobility if aversion to inequality is the only consideration. But if aversion to income fluctuations is considered, those gains disappear. Of course, this might not be of great consolation to a person whose ancestor flipped the \$1,000 coin.

In addition, a world in which mobility is high is one where parents are of little consequence, despite their desire or ability to position their children and grandchildren for future success. Few parents would want to live in a world where their investments in their



Shocks to earnings, such as job losses, are essential to explaining earnings dispersion in the economy.

children have no influence beyond their lifetimes. The flip side is that descendants of people who were not altruistic or who made poor decisions would not be as constrained by their ancestors' actions.

Viewed in this light, what most people might agree on is trying to promote individual productivity while limiting downward mobility. Broadly speaking, the former goal involves ensuring preparedness at labor market entry, while the latter involves insuring households against low innate abilities, poor health, or job loss. Knowing the extent to which these forces matter is crucial for policy interventions to be effective. For example, if workers were similarly prepared at the time of entry into the labor market, and shocks in working life were important, the question would be how, if at all, to better insure workers, and not how to alter educational investment decisions. Conversely, if preparedness differed and shocks during working life were unimportant, further insuring workers would

yield little benefit. Instead, changes to the educational system would be more effective.

Both factors are important, according to a recent line of work exemplified by Mark Huggett, Gustavo Ventura, and Amir Yaron (2011). They find that about 60 percent of the observed disparity in lifetime earnings is due to individual differences that exist before people enter the labor market, and the remainder is due to shocks that buffet them as they work, such as job losses. Their research stresses that the observed evolution of earnings inequality over lifetimes is consistent with a simple setting in which all workers accumulate skills through experience and effort, but do so at substantially different rates that reflect their initial "learning" ability. At the same time, their estimates clearly indicate that a substantial portion of inequality is generated during working life. This suggests that shocks to earnings are essential to a successful theory of earnings dispersion in the economy.



A critical point here is that the disparity in learning ability likely arises not only from differences in innate ability, but also from forces such as the quality of K-12 education and parental and cultural influences. These forces are very different for children from poor versus rich families—a dynamic that is magnified by a labor market that demands increasing levels of skill.

Investing in Human Capital

For most people—all but a lucky few—labor is what they can sell to generate income. They can increase the value of their labor by acquiring greater skills, but the value of their labor is only partially under their control. It also depends on the supply and demand for their skills in the marketplace.

The industrial revolution, for example, created factories that made workers more productive and more valuable without substantially increasing their skills. But the information revolution has created a marketplace that rewards personally acquired skills, such as computer programming or mathematical analysis. In this new environment, an individual's innate ability and early life education become critical because they largely determine the levels of skills each person can develop to “rent” to the marketplace.

Given the large earnings gap between workers with and without college degrees, many policies aim to increase college access, for example by increasing federal subsidies for student loans. But it's not clear that college is the best focus for policymakers. The observed disparity between high school and college graduates applies to students who have graduated from college already; those students who have not yet enrolled might not necessarily receive the same benefit, perhaps because they are not as well prepared. For example, Lutz Hendricks and Oksana Leukhina (2012) find in preliminary work that about 70 percent of the lifetime earnings gap between high school and

college graduates results from ability selection rather than from attaining the college degree per se. In other words, the college graduates were likely to be better earners even before entering college.

Intervening well before college could yield much higher returns. As noted above, the skills learned early in life prepare children to obtain more complex skills later in life. Heckman and many other researchers have found that the return on a dollar invested in human capital is highest when the investment occurs at age 3, and that children who receive high quality early education fare much better on a variety of socioeconomic measures (Heckman 2008).

The most cost-effective policy for increasing equality of opportunity is thus likely to be one that shifts funding away from universal college subsidies and toward early childhood interventions. Elizabeth Caucutt and Krishna Kumar (2003) find that a large increase in college subsidies with the goal of reducing the “enrollment gap” leads to very inefficient use of education resources, with little or no welfare gain, because more poorly prepared students enroll and the dropout rate increases. In a model of human capital transmission in which parents invest in their children, Diego Restuccia and Carlos Urrutia (2004) find that subsidies for investment in early education are much more effective at mitigating persistence in earnings than subsidies for college.

Investments in early childhood education can be viewed as a form of insurance against the risk of being born to poor parents, among other things. And while the public provision of such insurance could yield a big “bang for the buck” by enabling current generations to invest more in the education of future generations, one must also acknowledge the potential for moral hazard. A public system that equalizes the educational opportunities (or far more ambitiously, the home environments) of poor and rich children could reduce the incentives of all parents to invest in children.¹⁵



Greater public investment in early childhood education cannot replace the advantages that some parents are able to bestow upon their children, nor can it guarantee that all children will grow up to be prosperous. But such investments could give more children the necessary foundation for future acquisition of skills, and ensure that large amounts of human capital are not foregone simply because many children are born to poor families. This foregone human capital is a loss not only for the child, but also for society as a whole. According to an influential line of research, long-run economic growth depends on the amount of human capital in a society.¹⁶ Unlike physical capital, which exhibits decreasing returns to scale, human capital might well exhibit increasing returns. Knowledge leads to new ideas and new technologies, which lead to higher productivity, thus raising per capita income and living standards for society as a whole.

As this essay has discussed, economic inequality has increased significantly in the United States in recent years. At the same time, data suggest that economic mobility also has decreased, particularly for those born at the top and the bottom of the income distribution. Many factors contribute to the attainment and persistence of economic status, including innate ability, preferences for present versus future rewards, aversion

to risk, and quite a bit of luck. But for nearly all people, advancement depends critically on opportunities to obtain human capital—and those opportunities are not the same for children born to poor versus rich families. Policies that aim to equalize these opportunities, particularly very early in life, appear to yield a very high return on investment, although much remains to be learned about the feasibility of implementing such interventions on a large scale. Nonetheless, such efforts have the potential to help the United States achieve a more inclusive prosperity. ■

Kartik Athreya is the group vice president for microeconomics and research communications, and Jessie Romero is an economics writer in the Research Department at the Federal Reserve Bank of Richmond. The authors would like to thank Huberto Ennis, Arantxa Jarque, Marianna Kudlyak, Karl Rhodes, and Aaron Steelman for valuable discussions and insights.

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ENDNOTES

1. Economists also study consumption inequality, or differences in the amounts of goods and services that households purchase. Consumption inequality might differ from income inequality because of savings, taxes, or in-kind benefits such as food stamps. Some recent research suggests consumption inequality is much less pronounced than income inequality (e.g., Meyer and Sullivan [2013]), although other research finds that the trends in income and consumption inequality are very similar (e.g., Aguiar and Bils [2011]).
2. The CBO defines after-tax income as market income (labor income, business income, capital gains, capital income, and other income) plus government transfers (such as Social Security payments, unemployment benefits, or in-kind transfers such as food stamps) minus taxes paid.
3. Data are from the supplemental data tables posted at www.cbo.gov/publication/43373.
4. In Piketty and Saez (2003), the unit of analysis is a tax unit, defined as two married people living together (with or without dependents) or a single adult (with or without dependents). Their income measure excludes capital gains.
5. Updated data are available at elsa.berkeley.edu/~saez/TabFig2011prel.xls.
6. For example, see Easterlin (2000).
7. Isaacs (2008) finds similar differences in black and white mobility.
8. The number includes undocumented immigrants. Since the 2007–09 recession, net migration from Mexico has fallen to virtually zero. Between 2007 and 2011, the number of undocumented Mexican immigrants in the United States declined by about 1 million (Passel, Cohn, and Gonzalez-Barrera 2012).
9. Because the flow of immigrants from Mexico has been substantially greater than the flow from developed countries, the average wage of first-generation immigrants is still lower than the average wage of their native-born peers.
10. Immigrant mobility matters not only for the prospects of the immigrants themselves, but also for measured inequality in society as a whole. Imagine a room in which everyone is six feet tall. If a group of shorter people enter the room, measured inequality in height will increase. In the context of immigration, the arrival of a group with wealth, skills, or education significantly different from those of natives can mechanically increase inequality at a point in time.
11. See, for example, Pritchett (2006).
12. For a thorough treatment, see Mulligan (1997).
13. The AFQT is administered by the military to determine qualification for enlistment. AFQT scores have been widely used by economists as a measure of pre-labor market skills.
14. The authors define “school-ready” as having acceptable pre-reading and math skills and behavior that is generally school-appropriate.
15. See Chang and Kim (2012) and Seshadri and Yuki (2004) for more on the “price of egalitarianism.”
16. Influential papers on “endogenous growth theory” include Romer (1986) and Lucas (1988).

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MESSAGE FROM MANAGEMENT

Striking a Balance



Sarah G. Green
First Vice President and
Chief Operating Officer

The federal government deficit is a complex topic that has received a tremendous amount of public discussion in the past year. Generally, the cost of operating government organizations adds to the size of the deficit. In contrast, the Federal Reserve System funded its own operations and provided net payments of approximately \$88.4 billion to the United States Treasury in 2012. The Fed's income derives largely from interest on securities held as assets on its balance sheet. Regardless of the amount of income earned, the System's officers and staff understand the importance of accomplishing our mission in the most effective *and* efficient manner so we can return the maximum amount of earnings to the Treasury each year.

As a regional Reserve Bank, the Richmond Fed's mission is to serve the public by fostering the stability, integrity, and efficiency of our nation's monetary, financial, and payments systems. We accomplish this mission by conducting monetary policy, by supervising and regulating financial institutions, and by providing payments services to financial institutions and serving as fiscal agent for the Treasury. Effective performance of these roles supports economic growth in the United States, and economic growth also helps reduce the deficit.

In 2012, our economists contributed research related to issues such as why the unemployment rate has not fallen as quickly as in some previous economic recoveries. This research helps us understand the extent to which persistently high unemployment reflects a mismatch between skills available in the labor force and skills needed by employers. This informs both monetary policy discussions and workforce development initiatives—efforts that are important to local, regional, and national growth.

Another area of policy focus is "Too Big to Fail." The Bank's economists have estimated the so-called "financial safety net," which is the extent to which there is implicit or explicit government willingness to intervene when an institution is near failure. These estimates suggest that the federal financial safety net covered 45 percent of the entire financial sector at the end of 1999. By 2011, it had grown to as much as 57 percent. A large safety net creates potential

incentives for financial institutions to take imprudent risks. The Bank has been actively involved in research and discussions about ways to resolve large institutions when they are near failure, along with implementing supervisory policies to mitigate the risk of failure. Stress tests of the largest financial institutions performed in 2012 show that they are now much better prepared than in 2007 to withstand a shock to the financial system. Also, each of the largest institutions has drafted a “living will,” or a strategy for winding down its operations in the event of financial failure without government assistance.

The Fifth District still has a number of community and regional financial institutions that are in weak condition, but during 2012, that number stabilized and began to improve. To ensure the most effective and efficient supervision of these institutions, we undertook a rigorous review of this function. As a result of that review, we are restructuring to add field staff and to improve the quality of the exams and the feedback to the community banks while maintaining level costs.

Reserve Banks are responsible for providing currency to financial institutions that in turn provide currency to consumers and businesses. The Richmond Fed operates the national Currency Technology Office, which develops the currency-processing equipment used at the 28 cash-processing sites throughout the Federal Reserve System. Over the past several years, this office rolled out an equipment upgrade that resulted in productivity gains of 20 percent, with estimated savings of \$26.8 million from 2009 through 2012. To keep ahead of counterfeiters, we worked with outside vendors to develop new sensors that enable our machines to process 40 notes per second while making approximately 50 decisions about the authenticity and fitness of each note.

As fiscal agent for the Treasury in 2012, the Richmond Fed transferred \$590 billion in grant payments, another \$123 trillion in intergovernmental payments, and more than \$75 billion in food stamp and related payments. We are constantly seeking quality improvements and cost savings in these operations.

On an average day, the Federal Reserve System processes more than \$4 trillion in Fedwire funds and securities, Automated Clearinghouse (e.g., direct deposit) payments, and check payments. The 12 Reserve Banks have worked together to build contingency processes that ensure the integrity and resiliency of these services. During Hurricane Sandy, for example, the Richmond Fed performed critical back-up services for Fedwire funds transfers and several other key payments functions. The Bank also processed \$92 million in emergency benefits on smart cards to individuals in New York and New Jersey who were affected by the storm.

Our quest to strike the best possible balance between providing high-quality and cost-effective services to financial institutions, the public, and the Treasury is embraced on a daily basis by our officers and staff. In 2012, we lived by our values to serve with integrity, to lead with courage, and to perform with excellence. Serving the public is both a responsibility and a privilege, and we thank you for trusting us to perform this service on your behalf.



Sarah G. Green
First Vice President and Chief Operating Officer

Regional Information and Analysis Inform Monetary Policy

The Federal Reserve Bank of Richmond gathers economic information from all corners of the Fifth District, which includes Maryland, Virginia, North Carolina, South Carolina, Washington, D.C., and most of West Virginia. The Bank is based in Richmond with branch offices in Charlotte and Baltimore.

The Richmond Fed collects statistical and anecdotal information through surveys and telephone interviews as well as face-to-face discussions with people in board meetings, industry roundtables, regional forums, formal presentations, and community events. Anecdotal information sometimes confirms trends that the Bank's economists already have identified in economic data. Other times, anecdotal information indicates trends that have not been captured statistically. Either way, successful monetary policy depends on analyzing hard data and interpreting soft signals.

The best way to collect anecdotal information is to go to the source—people throughout the District's economy—from industry representatives and small-business owners to bankers, community leaders, and workers. Eight times a year, in preparation for meetings of the Federal Open Market Committee (FOMC), Richmond Fed President Jeffrey Lacker and his policy advisors review this qualitative information along with the quantitative data. The qualitative information then flows, directly and indirectly, into policy discussions at the FOMC, where committee members determine the best course of action regarding the availability and cost of money and credit—monetary policy—to promote long-term economic growth and price stability. Lacker was a voting member of the FOMC in 2012, and he continues to participate fully in the committee's deliberations.

How's Business?

Wherever he goes, Lacker frequently asks this question. In October 2008, for example, he was attending the Richmond Folk Festival when he saw an acquaintance who owns a furniture store.

"How's business?" Lacker asked.

"Awful!" the store owner replied.

It was the week after Lehman Brothers failed. Customers had vanished, even though store traffic had been strong the previous weekend.

"We had seen a little data," Lacker recalls, "but that was the first serious inkling I had of the astounding shock to consumer outlook that was caused by the financial turmoil."

This type of conversation helps clarify cause and effect. "Otherwise, you see the data and you're not sure why consumers are cutting back," Lacker says.

More recently, in April and May of 2012, the economy slowed, but economists were not sure why. A member of the Bank's Charlotte Board reported that, although he had ideas for new projects, he could not make the math work. The director was particularly worried about future tax rates and wage rates. At the time, the notion that widespread uncertainty was restricting economic growth was controversial. Since then, that idea has become generally accepted. The board member helped shape Lacker's reasoning about how monetary policy might—or might not—stimulate growth.

"You just don't get the sense that reducing the rate he (the board member) would have to pay on a bank

PHOTO: JIM STRADER



From the left: President Jeffrey Lacker, First Vice President Sally Green, and Assistant Vice President Steve Malone learn about bucket truck assembly from Brian Price, facilities manager at Altec Industries' plant in Daleville, Va.

loan would make a lot of difference,” Lacker says. “That tells me there’s a good chance that the cure is beyond monetary policy.”

The Bank’s oversight boards and advisory councils are excellent sources of economic intelligence. Nine directors oversee the management of the Richmond Fed, six elected by member banks and three appointed by the Federal Reserve Board of Governors. The Bank’s branch offices each have boards with seven members, four appointed by the Richmond Board and three appointed by the Board of Governors. The composition of the boards reflects the District’s economic diversity. Members come from banking, housing, finance, manufacturing, and health care, among other sectors. Geographic diversity is important, as well, because members bring economic news from their regions.

The Richmond Fed also listens carefully to its three advisory councils. The Community Investment Council brings to light emerging issues affecting low- and moderate-income people in urban and rural areas. The Community Depository Institutions Advisory Council (CDIAC) provides information about lending and other concerns. The CDIAC is mandated by the Board of Governors to gather information about depository institutions with less than \$10 billion in assets. Representatives from each Reserve Bank’s CDIAC form a council at the Board of Governors, which means the group has the ear of Federal Reserve Chairman Ben Bernanke. A third board, the Payments Advisory Council, helps the Bank understand and respond to the needs of its banking constituency.

The boards and councils often identify major economic trends. For instance, Lacker notes that he first heard about subprime lending problems years ago through the Community Investment Council. The boards and councils also helped confirm a geographic mismatch in the workforce.

“We hear about this puzzle: that people who have a hard time finding jobs don’t seem to be willing to move,” Lacker says. “It’s striking. It gives you a vivid sense of what’s behind the huge disparity in unemployment rates across our District.”

In addition to input from board members, the Bank’s regional economists regularly canvass business people in all parts of the District, sometimes by telephone or email. Individual responses are confidential, but the Bank synthesizes this anecdotal information for publication eight times a year—before each FOMC meeting—in the Federal Reserve’s *Beige Book*.

Been There. Heard That.

Large quantities of economic information flow into the Richmond Fed, but to really take the Fifth District’s economic pulse, the Bank’s leaders and economists must travel extensively.

Twice a year, for example, Lacker and First Vice President Sally Green lead groups to regions within the District to gain first-hand knowledge of local economies. In 2012, these delegations visited the Roanoke, Va., metropolitan area, and the Triad Region of North Carolina, which includes Greensboro, Winston-Salem, and High Point.



“We pick a particular region and learn as much as we can about it before we go,” says Steve Malone, assistant vice president for external affairs. The delegations gain even deeper insights, however, by meeting with different people in the region, including business executives, education officials, community leaders, students, workers, and government representatives.

The delegations also visit factories, schools, and other organizations to see what drives each local economy. The three-day trip to the Triad Region, for example, included a tour of furniture showrooms and a roundtable discussion about the furniture industry. Panelists discussed how the recession had affected their companies and how business had begun to improve. The delegation also met with students in several Guilford County Technical Center programs and at the Joint School of Nanoscience and Nanoengineering, a collaborative venture between North Carolina A&T State University and the University of North Carolina at Greensboro. During a similar trip to Roanoke, Va., the group convened a small-business roundtable and toured Altec Industries, a company that provides products and services to utilities and telecommunication companies.

In addition to these regional events, the Richmond Fed held bankers’ forums in Maryland, West Virginia, and Virginia, plus one for credit unions in Maryland. Malone and his team also visited 73 banks and credit unions and 10 trade associations. His group summarized what they learned from these visits in reports that are part of the pre-FOMC information that goes to Lacker and his policy advisors. These reports include information on loan demand. Currently, demand is tepid, but if loan demand quickly gathered steam, given the high level of reserves in the banking system, lending could expand quickly. “That would be a red flag,” Lacker says. “It would indicate we need to pay attention and think about whether we need to contract the reserve supply to make sure we don’t get inflation pressures. So far, we haven’t seen that, but we keep our eyes on it.”

The Bank also reaches out to communities by working with public and private partners on issues affecting low- and moderate-income people. The Bank’s Community Development Division supports and organizes workshops and forums with community partners to address important community and economic development issues. The meetings also expose Bank officials to diverse points of view on local economic conditions throughout the Fifth District.

The Bank’s community development specialists also work with colleagues across the Federal Reserve System on significant economic development issues. In 2012, for example, the Richmond Fed led a systemwide initiative, with the Atlanta and Kansas City Feds, to study the problem of persistent unemployment. The Richmond Fed held several roundtables on the topic throughout the Fifth District, bringing together workforce representatives and employers from different industries. These roundtables were replicated by other Reserve Banks in their districts, and the effort culminated this year in a national conference at the Kansas City Fed and a policy briefing at the Federal Reserve Board of Governors. The initiative revealed anecdotal evidence of a broken labor-supply chain. In other words, what people were studying in school and their desire to go to college versus pursuing more technical training did not match up well with existing jobs in some areas. Roundtable participants also discussed other barriers to employment, such as transportation, drug testing, and felony convictions.

The Regional View

The Regional Economics Division of the Bank’s Research Department compiles a wide variety of data. The division’s surveys of manufacturing activity, service sector activity, and agricultural credit conditions cover these topics for the entire Fifth District. The regional group also produces state-specific reports of overall business activity in Maryland and the Carolinas.



PHOTO: TAMZIN B. SMITH

Vice President Ann Macheras regularly shares her division's regional information and analysis at pre-FOMC meetings and other gatherings of the Bank's monetary policy advisors.

These surveys provide real-time information about economic conditions and business expectations for the next six months. Results are included in the regional memo that informs Lacker and his policy advisors as they discuss Fifth District conditions prior to FOMC meetings. Survey results also are available to the public at richmondfed.org/research/regional_economy/.

In addition to conducting surveys, regional economists frequently visit communities throughout the District. They absorb information at industry roundtables, the Bank's regional forums, workshops on special topics, and economists' presentations.

In 2012, the Regional Economics Division hosted regular industry roundtables in Richmond, Charlotte, Baltimore, Charleston W.Va., and Charleston, S.C., a total of 15 events. Three of these roundtables focused exclusively on retailing, but the others included representatives from sectors such as manufacturing, trade, real estate, tourism, information technology, and health care. These gatherings gave the Richmond Fed a closer look at medium-run trends by providing a confidential forum where participants can freely discuss the state of their industries. At an industry roundtable in Baltimore, several members noted that their federal contracts had shrunk. "This was at least a full year before people were really focusing on it," says Ann Macheras, vice president of the Regional Economics Division. Roundtable participants also discussed input price

spikes and clogged supply lines after the tsunami in Japan. One textile company was unable to get a unique blue dye that is made only in Japan. "We bring back early signs of how these events affect our industries. And since we meet with our contacts regularly, we can monitor these developments over time and ask follow-up questions," Macheras says.

In 2012, the Regional Economics Division invited all the Bank's industry roundtable participants and all the Bank's advisory council members to a one-day conference on the District's economy. At other events, the division focuses attention on special topics. In 2012, for example, the division highlighted energy by bringing representatives and suppliers of coal and natural gas companies together with executives of electric utilities and university professors who study energy-related issues.

The regional economists also make presentations to a wide array of groups throughout the District. At first glance, these events may appear to be more about disseminating information than gathering information, but the economists gain insight from audience participation and the informal discussions that follow. In 2012, the regional economists participated in roughly 196 events including presentations, workshops, conferences, and summits. "Almost anytime we are out of the Bank, we are soaking up information," Macheras says. The regional economists aggregate this anecdotal information into a "sentiment matrix" that accompanies the report they produce for pre-FOMC discussions.

Informally gathered comments don't provide definitive evidence of trends, but observations from a diverse array of sources add important perspective to monetary policy deliberations. "We find out stuff that's not going to show in the data," Lacker says. "The data don't tell you what people are expecting. Do they think things are going to be great? Or do they think things are going to continue to be flat?" ■

Labor Markets and Residential Real Estate Began Slow Recoveries in 2012

Once again in 2012, the Fifth District economy grew slowly and inconsistently. The year started out well, but conditions slumped in the summer months before picking up again toward the end of the year. The most promising news came in residential real estate, which began a slow but steady recovery in the District and the nation. In addition, although activity among area businesses was volatile, by the end of the year most industries had strengthened overall.

Labor Markets

Fifth District labor markets expanded in 2012, growing 1.5 percent with the addition of 209,600 net new jobs. Employment growth exceeded that of 2011 (1.2 percent) and 2010 (1.3 percent). Net hiring activity was promising at the beginning of the year, but then flattened in the spring and declined some during the summer before picking up again in the fall. In fact, the overall job expansion fluctuated over months, across states, and among industries. The summer slump in the District contrasted somewhat with U.S. employment activity, which improved more steadily over the year. Employment in the United States grew 1.7 percent during 2012.

Among Fifth District jurisdictions, employment trends in Maryland and South Carolina most closely resembled the District's overall employment performance. North Carolina posted the strongest growth in 2012, with employment increasing 2.3 percent. The Tarheel State's steady employment growth enabled it to contribute more than 40 percent of net jobs gained in the District. Virginia also experienced relatively steady job growth throughout 2012. The worst performance in the District was in West Virginia. Economic indicators are often more volatile in West Virginia than in other District

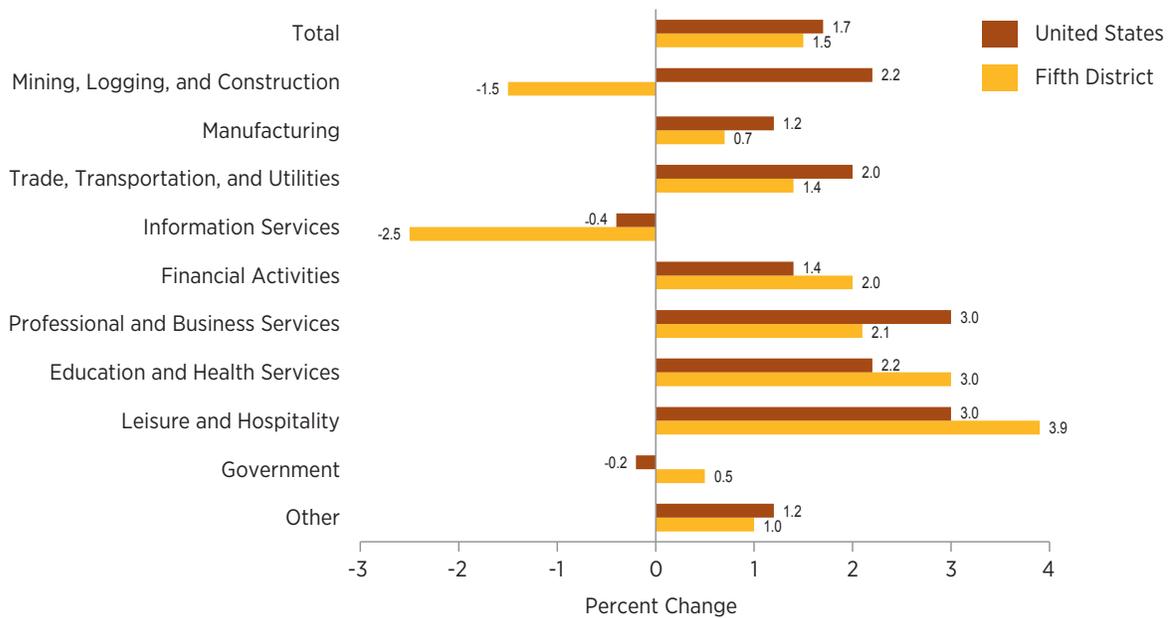
states, but 2012 was a troubling year for labor markets in the Mountaineer State, which in previous years seemed to weather the economic downturn better than other states. Firms in West Virginia added only 1,400 jobs in 2012, with the worst performances in mining and logging (a loss of 2,700 jobs) and manufacturing (a loss of 1,200 jobs). There were reports throughout the year of challenges in the coal mining industry due, at least in part, to low natural gas prices and federal regulatory policy.

The government sector struggled in the Fifth District during 2012, adding only 13,700 jobs (0.5 percent), while the private sector added more than 220,000 jobs. In fact, only two private sector industries performed worse than the government sector—mining, logging, and construction lost more than 10,500 jobs, and information services shed 6,000 jobs. Of the 10,500 jobs lost in mining, logging, and construction, West Virginia mining layoffs accounted for 2,700 lost jobs, but that was not the whole story. Construction companies in North Carolina and Virginia together lost (on net) more than 10,000 jobs in 2012. These losses ran counter to national trends—U.S. construction employment increased 1.8 percent, while mining and logging employment expanded 3.2 percent. In fact, the national construction industry posted consistent year-over-year growth every month since May 2011, and the mining and logging industry posted consistently positive year-over-year growth since April 2010.

In the Fifth District, almost 75 percent of the net job gain in 2012 was in professional and business services, education and health services, and leisure and hospitality. More broadly, service-providing industries

FIGURE 1: Employment Growth by Sector

December 2011–December 2012



Sources: Bureau of Labor Statistics, Haver Analytics

accounted for almost all of the gain in 2012, with many employment agencies reporting particularly strong demand for skilled information technology professionals throughout the year. There were also numerous reports in the District of manufacturers being unable to fill vacancies for skilled positions.

News from the household employment survey was also encouraging, but not overwhelmingly so. The unemployment rate in the District dropped from 8.1 percent to 7.6 percent in 2012, while the labor force increased 1.0 percent. This performance was similar to the U.S. unemployment rate, which decreased from 8.5 percent to 7.8 percent while the national labor force expanded 1.0 percent.

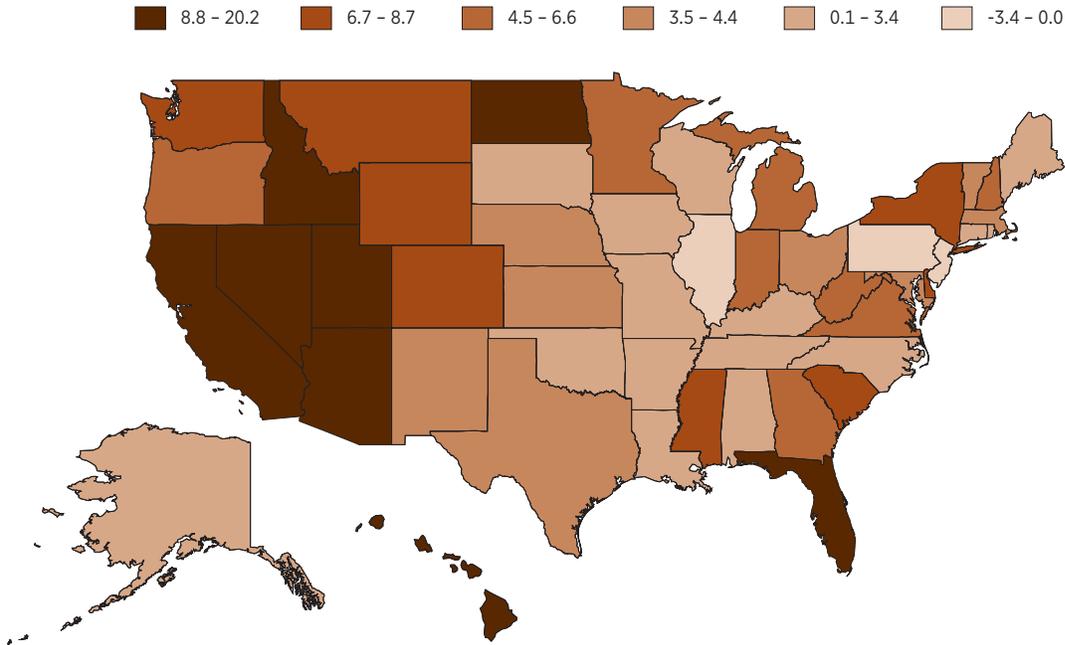
Real Estate

A bright spot in the Fifth District economy came from the slow but steady housing market recovery that started in 2012.

According to the CoreLogic Information Solutions house price index, home values in the District appreciated 4.7 percent in 2012, with year-over-year prices rising for 10 straight months—the first time that has happened since 2007. This trend was true throughout the District; by May, every state and the District of Columbia had begun to experience year-over-year appreciation in house prices that lasted through the year. In December, every state and D.C. posted the strongest year-over-year house price growth since 2006.

FIGURE 2: Change in U.S. House Prices by State

Percent Change from December 2011 to December 2012



Sources: CoreLogic Information Solutions, Federal Reserve Bank of Richmond

The inventory of distressed home loans in the District also shrank in 2012. The inventory of loans in foreclosure fell from 3.2 percent in the second quarter to 2.7 percent in the fourth quarter, even with documented increases in the length of time that a mortgage spends in foreclosure in most District states. It is also promising that only 0.65 percent of mortgages in the District entered foreclosure in the fourth quarter, which was the lowest foreclosure start rate in the District since the fourth quarter of 2007. The share of mortgages with payments more than 90 days past due declined from 3.2 percent in the fourth quarter of 2011 to 2.8 percent in the third quarter of 2012. Unfortunately, the metric edged up to 3.0 percent in the fourth quarter, which was one of only two increases in that rate since the end of 2009. These trends in delinquent mortgages

were generally consistent, with most District states posting drops in foreclosure starts, particularly in the last two quarters of the year, and all states posting declines in the 90-day delinquency rate until the fourth quarter.

Throughout the year, there were increasing numbers of anecdotes about lower inventory of new and existing homes, reduced days on market, increased traffic and sales, and fewer foreclosures and short sales. The reports were not consistent across every locality, and every report was prefaced with observations that housing activity was still sluggish from a historical perspective, but the positive feeling emanating from residential real estate professionals was widespread, particularly toward the middle and end of 2012. The



PHOTO: VIRGINIA PORT AUTHORITY

Boosted by automotive imports and exports, port activity in the Fifth District was generally strong throughout the year.

one exception was in construction, where positive reports were slightly less prevalent. However, even in residential construction, there were reports of activity in areas that had not seen home building for several years, and there were few, if any, reports of further declines in residential construction.

Commercial real estate trends were not as clearly upbeat as residential activity. By the end of the year, the number of reports indicating improved conditions had increased, but reports continued to vary by locality and by type of real estate. Absorption and vacancy rates seemed to improve generally, although vacancy rates remained elevated in many areas. Government-related projects slowed throughout the year, but private sector projects edged forward. Retail leasing activity also seemed to be relatively weak throughout the year.

Business Conditions

On the whole, business activity generally improved in 2012, but progress varied over months and across industries. Manufacturing output, like the rest of the economy, expanded moderately in the early months of

the year, weakened a bit in the summer months, and picked up again toward the end of the year. Compared to other goods, auto parts manufacturing generated the strongest reports, with conditions either improving beyond expectations or at least remaining flat when demand for other products was declining. Many manufacturers that reported weakening conditions cited decreased government spending—including defense spending—and economic problems in Europe as reasons for the softening.

The Federal Reserve Bank of Richmond maintains a composite manufacturing index based on the Bank's Fifth District Survey of Manufacturing Activity—available at richmondfed.org/research/regional_economy/. The index is a diffusion index in which a positive reading indicates that the number of firms reporting expansion exceeds the number reporting contraction. The index hovered close to zero for much of the year, but it was positive for more months than it was negative.

Despite the troubles in Europe, Fifth District port activity was generally strong, with exports outperforming imports throughout the year. Autos and automotive



parts boosted both imports and exports. Although rising fuel prices often were cited as a challenge, most port contacts maintained positive outlooks throughout the year.

Overall, service sector firms in the District reported generally improving conditions throughout 2012, although the Federal Reserve Bank of Richmond service sector indexes—particularly the retail revenues index—continued to be volatile. To view these indexes, visit richmondfed.org/research/regional_economy/.

Banking Markets

In 2012, banks in the nation and the Fifth District continued to face a challenging environment that included distressed international markets, slow economic recovery, a low-rate environment, and elevated reputational and operational risks. Despite these challenges, banking conditions showed signs of stabilization with improved credit quality that allowed for reduced loan-loss provisioning and increased earnings.

Balance sheets expanded modestly, driven by loan growth, which moved into positive territory for the first time since 2010. The median commercial bank in the District posted annual loan growth of 0.48 percent compared to a post-recession low of -3.07 percent during 2011. Meanwhile, loan losses improved by 42 basis points, warranting continued declines in provisioning. This, in turn, helped generate a modest increase in earnings, with a median return on average assets of 0.57 percent for commercial banks in the District. In fact, the share of unprofitable institutions in the District fell from 25 percent to 16 percent during the year. Despite this improvement, however, earnings performance still remained depressed relative to historical trends, down 50 percent from prerecession levels in large part due to low interest rates compressing net interest margins.

Prolonged low interest rates put pressure on earnings, but they had a positive effect on liquidity positions at commercial banks. These higher liquidity ratios could decrease when interest rates eventually rise. Aggregate deposits at commercial banks in the District grew almost \$196 million (or 12.3 percent) from the beginning of the recession, with the bulk of the growth centered on non-maturity deposits. This flow of non-maturity deposits into the banking system led to elevated core funding ratios and reduced non-core funding dependency.

As in previous years since the recession, capital recovery in 2012 was mainly reliant on deleveraging the asset side of the balance sheet. Overall capital levels improved despite a slight downturn in the fourth quarter. Commercial banks ended the year with tier-one leverage ratios at prerecession levels and risk-based capital at levels not seen since the late 1990s.

The Bottom Line

Once again, economic growth in the Fifth District was positive but somewhat disappointing. Given the heavy federal government presence in the District—especially the high concentrations of military spending—concerns about the effects of sequestration and government budget cuts loomed large in 2012 and continued to create concern in 2013. Even so, Fifth District labor markets expanded for the second consecutive year, and residential real estate recorded its best and most consistent performance since 2006. In general, the outlook for most District industries improved during 2012. ■

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BOARDS OF DIRECTORS, ADVISORY COUNCILS, AND OFFICERS

Federal Reserve Bank of Richmond Board of Directors

The Bank's board of directors oversees the management of the Bank and its Fifth District offices, provides timely business and economic information, participates in the formulation of national monetary and credit policies, and serves as a link between the Federal Reserve System and the private sector. Six directors are elected by banks in the Fifth District that are members of the Federal Reserve System, and three are appointed by the Board of Governors. Directors who are not bankers appoint the Bank's president and first vice president with approval from the Board of Governors.

The Bank's board of directors annually appoints the Fifth District's representative to the Federal Advisory Council, which consists of one member from each of the 12 Federal Reserve Districts. The council meets four times a year with the Board of Governors to consult on business conditions and issues related to the banking industry.

Baltimore and Charlotte Branches Boards of Directors

The Bank's Baltimore and Charlotte branches have separate boards that oversee operations at their respective locations and, like the Richmond Board, contribute to policymaking and provide timely business and economic information about the District. Four directors on each of these boards are appointed by the Richmond directors, and three are appointed by the Board of Governors.

Community Depository Institutions Advisory Council

Created in 2011, the Bank's Community Depository Institutions Advisory Council advises the Bank's management and the Board of Governors on the economy, lending conditions, and other issues from the perspective of banks, thrifts, and credit unions with total assets under \$10 billion. The council's members are appointed by the Bank's president.

Community Investment Council

Established in 2011, the Community Investment Council advises the Bank's management about emerging issues and trends in communities across the Fifth District, including low- and moderate-income neighborhoods in urban and rural areas. The council's members are appointed by the Bank's president.

Payments Advisory Council

Created in 1978, the Payments Advisory Council serves as a forum for communication with financial institutions about financial services provided by the Federal Reserve. The council helps the Bank respond to the evolving needs of its banking constituency. Council members are appointed by the Bank's first vice president.

Listings of boards and councils include all members who served during 2012.

THANK YOU

Thank you to those directors who have completed their service on our boards: Margaret E. McDermid, who served as chairman of the Richmond Board, and Richard J. Morgan of the Richmond Board; and Claude C. Lilly, who served as chairman of the Charlotte Board.

We also welcome our new directors: Brad E. Schwartz of the Richmond Board; and Elizabeth A. Fleming, John S. Kreighbaum, and Paul E. Szurek of the Charlotte Board

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Head of Payment Operations
TD Bank
Mount Laurel, New Jersey*

Note: The council's membership year runs from June 1 to May 31, but this listing includes all members who served during 2012.

MANAGEMENT COMMITTEE



From the left, **front row:** Roland Costa, Jeffrey M. Lacker, Sarah G. Green; **second row:** Tammy H. Cummings, Janice E. Clatterbuck; **third row:** Victor M. Brugh, II, Michael D. Stough, John A. Weinberg, David E. Beck, Michelle H. Gluck; **back row:** Claudia N. MacSwain, Matthew A. Martin, Jennifer J. Burns

Jeffrey M. Lacker
President

Sarah G. Green
First Vice President and
Chief Operating Officer

David E. Beck
Senior Vice President and
Baltimore Regional Executive,
Treasury and Payments Services

Victor M. Brugh, II
Medical Director

Jennifer J. Burns
Senior Vice President,
Supervision, Regulation and Credit

Janice E. Clatterbuck
Senior Vice President and
Chief Information Officer,
Corporate Support Services

Roland Costa
Senior Vice President,
Currency Technology Office

Tammy H. Cummings
Senior Vice President, Human Resources,
and Director of Diversity and Inclusion

Michelle H. Gluck
Senior Vice President and General Counsel,
Legal, Civic Engagement, Corporate
Communications, and Government Affairs

Claudia N. MacSwain
Senior Vice President and
Chief Financial Officer,
Corporate Planning

Matthew A. Martin
Senior Vice President and
Charlotte Regional Executive,
Community Development and Outreach

Michael D. Stough
Senior Vice President and General Auditor

John A. Weinberg
Senior Vice President and
Director of Research

OFFICERS

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Group Vice President

Thomas A. Lubik
Group Vice President

Becky C. Bareford
Vice President

William S. Cooper, Jr.
Vice President and
Deputy Director of
Diversity and Inclusion

Kevin W. Fergusson
Vice President and
Medical Director

Constance B. Frudden
Vice President

Joan T. Garton
Vice President

Richard B. Gilbert
Vice President

A. Linwood Gill, III
Vice President

Howard S. Goldfine
Vice President

Anne C. Gossweiler
Vice President

Bruce E. Grinnell
Vice President

Mattison W. Harris
Vice President

Wendi Homza Hickman
Vice President

Andreas L. Hornstein
Vice President

Eugene W. Johnson, Jr.
Vice President

Gregory A. Johnson
Vice President

Mary S. Johnson
Vice President

Malissa M. Ladd
Vice President

Ann B. Macheras
Vice President

Andrew S. McAllister
Vice President

Dennis G. McDonald
Vice President

James T. Nowlin
Vice President

P.A.L. Nunley
Deputy General Counsel

Dennis P. Smith
Vice President and Deputy
General Counsel

Lisa T. Oliva
Vice President

Edward S. Prescott
Vice President

Arlene S. Saunders
Vice President

Michael L. Wilder
Vice President and Controller

Alexander L. Wolman
Vice President

Kimberly Zeuli
Vice President

Hattie R.C. Barley
Assistant Vice President

Granville Burruss
Assistant Vice President

John B. Carter, Jr.
Assistant Vice President

Christy R. Cleare
Assistant Vice President

Cary B. Crabtree
Assistant Vice President

Jeffrey B. Deibel
Assistant Vice President

Todd E. Dixon
Assistant Vice President

Adam M. Drimer
Assistant Vice President

Ann S. Harrison
Assistant Vice President

James K. Hayes
Assistant Vice President

Samuel Hayes, III
Assistant Vice President

Kathleen R. Houghtaling
Assistant Vice President

Cathy I. Howdysell
Assistant Vice President

John S. Insley, Jr.
Assistant Vice President

Diane R. Knapp
Assistant Vice President

D. Keith Larkin
Assistant Vice President

James W. Lucas
Assistant Vice President

Steve V. Malone
Assistant Vice President

Randal C. Manspile
Assistant Vice President

Page W. Marchetti
Assistant Vice President and
Corporate Secretary

Jonathan P. Martin
Assistant Vice President

William R. McCorvey, Jr.
Assistant General Counsel

Diane H. McDorman
Assistant Vice President

Robert J. Minter
Assistant Vice President

Bennie R. Moore
Assistant Vice President

Johnnie E. Moore
Assistant Vice President

Barbara J. Moss
Assistant Vice President

C. Kim Nguyen
Assistant Vice President

Edward B. Norfleet
Assistant Vice President

Dennis H. Ott
Assistant Vice President

Pamela S. Rabaino
Assistant Vice President

Markus A. Summers
Assistant Vice President

Alexander T. Swartz
Assistant Vice President

Jeffrey K. Thomas
Assistant Vice President

Sandra L. Tormoen
Assistant Vice President

Lauren E. Ware
Assistant Vice President

Karen J. Williams
Assistant Vice President

H. Julie Yoo
Assistant Vice President

BALTIMORE BRANCH

Steven T. Bareford
Assistant Vice President

Amy L. Eschman
Assistant Vice President

Evangelos Sekeris
Assistant Vice President

CHARLOTTE BRANCH

Lisa A. White
Group Vice President

Marshal S. Auron
Vice President

Richard F. Westerkamp, Jr.
Vice President

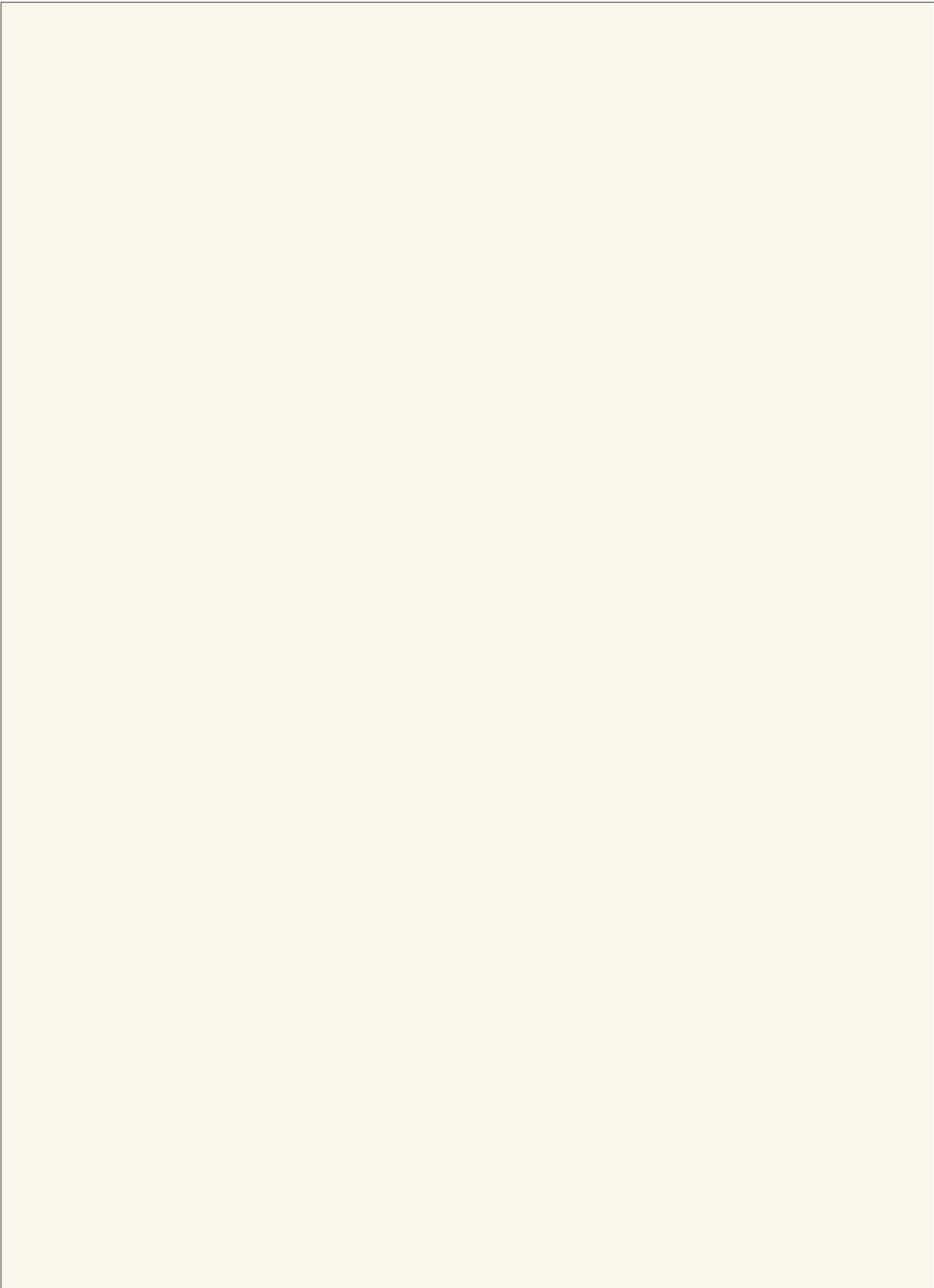
Terry J. Wright
Vice President and Charlotte
Deputy Regional Executive

John A. Beebe
Vice President

Melissa M. Gill
Assistant Vice President

Kelly J. Stewart
Assistant Vice President

Listings include former
officers who served during
2012. We thank them for their
contributions to the Bank.



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STATEMENT OF AUDITOR INDEPENDENCE

The Board of Governors engaged Deloitte & Touche LLP (D&T) to audit the 2012 combined and individual financial statements of the Reserve Banks and those of the consolidated LLC entities.¹ In 2012, D&T also conducted audits of internal controls over financial reporting for each of the Reserve Banks, Maiden Lane LLC, Maiden Lane III LLC, and TALF LLC. Fees for D&T's services totaled \$7 million, of which \$1 million was for the audits of the consolidated LLC entities. To ensure auditor independence, the Board requires that D&T be independent in all matters relating to the audits. Specifically, D&T may not perform services for the Reserve Banks or others that would place it in a position of auditing its own work, making management decisions on behalf of the Reserve Banks, or in any other way impairing its audit independence. In 2012, the Bank did not engage D&T for any non-audit services.

¹ In addition, D&T audited the Office of Employee Benefits of the Federal Reserve System (OEB), the Retirement Plan for Employees of the Federal Reserve System (System Plan), and the Thrift Plan for Employees of the Federal Reserve System (Thrift Plan). The System Plan and the Thrift Plan provide retirement benefits to employees of the Board, the Federal Reserve Banks, and the OEB.

MANAGEMENT'S REPORT

Management's Report on Internal Control Over Financial Reporting
March 14, 2013

To the Board of Directors:

The management of the Federal Reserve Bank of Richmond (Bank) is responsible for the preparation and fair presentation of the Statements of Condition as of December 31, 2012 and 2011, and the Statements of Income and Comprehensive Income, and Statements of Changes in Capital for the years then ended (the financial statements). The financial statements have been prepared in conformity with the accounting principles, policies, and practices established by the Board of Governors of the Federal Reserve System as set forth in the *Financial Accounting Manual for Federal Reserve Banks* (FAM), and, as such, include some amounts that are based on management judgments and estimates. To our knowledge, the financial statements are, in all material respects, fairly presented in conformity with the accounting principles, policies and practices documented in the FAM and include all disclosures necessary for such fair presentation.

The management of the Bank is responsible for establishing and maintaining effective internal control over financial reporting as it relates to the financial statements. The Bank's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with the FAM. The Bank's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the Bank's assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with FAM, and that the Bank's receipts and expenditures are being made only in accordance with authorizations of its management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Bank's assets that could have a material effect on its financial statements.

Even effective internal control, no matter how well designed, has inherent limitations, including the possibility of human error, and therefore can provide only reasonable assurance with respect to the preparation of reliable financial statements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

The management of the Bank assessed its internal control over financial reporting based upon the criteria established in the "*Internal Control – Integrated Framework*" issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, we believe that the Bank maintained effective internal control over financial reporting.

Federal Reserve Bank of Richmond



Jeffrey M. Lacker
President



Sarah G. Green
First Vice President and
Chief Operating Officer



Michael L. Wilder
Vice President and Controller

INDEPENDENT AUDITORS' REPORT

To the Board of Governors of the Federal Reserve System and the Board of Directors of the Federal Reserve Bank of Richmond:

We have audited the accompanying financial statements of the Federal Reserve Bank of Richmond ("FRB Richmond"), which are comprised of the statements of condition as of December 31, 2012 and 2011, and the related statements of income and comprehensive income, and of changes in capital for the years then ended, and the related notes to the financial statements. We also have audited the FRB Richmond's internal control over financial reporting as of December 31, 2012, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Management's Responsibility

The FRB Richmond's management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles established by the Board of Governors of the Federal Reserve System (the "Board") as described in Note 3 to the financial statements. The Board has determined that this basis of accounting is an acceptable basis for the preparation of the FRB Richmond's financial statements in the circumstances. The FRB Richmond's management is also responsible for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error. The FRB Richmond's management is also responsible for its assertion of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements and an opinion on the FRB Richmond's internal control over financial reporting based on our audits. We conducted our audits of the financial statements in accordance with auditing standards generally accepted in the United States of America and in accordance with the auditing standards of the Public Company Accounting Oversight Board (United States) ("PCAOB") and we conducted our audit of internal control over financial reporting in accordance with attestation standards established by the American Institute of Certified Public Accountants and in accordance with the auditing standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement and whether effective internal control over financial reporting was maintained in all material respects.

An audit of the financial statements involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the FRB Richmond's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances. An audit of the financial statements also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. An audit of internal control over financial reporting involves obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Definition of Internal Control Over Financial Reporting

The FRB Richmond's internal control over financial reporting is a process designed by, or under the supervision of, the FRB Richmond's principal executive and principal financial officers, or persons performing similar functions, and effected by the FRB Richmond's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the accounting principles established by the Board. The FRB Richmond's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the FRB Richmond; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with the accounting principles established by the Board, and that receipts and expenditures of the FRB Richmond are being made only in accordance with authorizations of management and directors of the FRB Richmond; and (3) provide reasonable assurance regarding prevention or timely detection and correction of unauthorized acquisition, use, or disposition of the FRB Richmond's assets that could have a material effect on the financial statements.

Inherent Limitations of Internal Control Over Financial Reporting

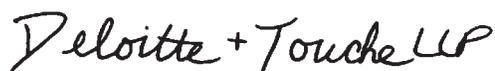
Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected and corrected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the FRB Richmond as of December 31, 2012 and 2011, and the results of its operations for the years then ended in accordance with the basis of accounting described in Note 3 to the financial statements. Also, in our opinion, the FRB Richmond maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on the criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Basis of Accounting

We draw attention to Note 3 to the financial statements, which describes the basis of accounting. The FRB Richmond has prepared these financial statements in conformity with accounting principles established by the Board, as set forth in the *Financial Accounting Manual for Federal Reserve Banks*, which is a basis of accounting other than accounting principles generally accepted in the United States of America. The effects on such financial statements of the differences between the accounting principles established by the Board and accounting principles generally accepted in the United States of America are also described in Note 3 to the financial statements. Our opinion is not modified with respect to this matter.

The logo for Deloitte + Touche LLP, featuring the company name in a stylized, handwritten-style script.

Deloitte & Touche LLP
March 14, 2013
Richmond, Virginia

STATEMENTS OF CONDITION

(in millions)

As of December 31,	2012	2011
Assets		
Gold certificates	\$ 890	\$ 872
Special drawing rights certificates	412	412
Coin	373	409
Loans to depository institutions	—	5
System Open Market Account:		
Treasury securities, net (of which \$650 and \$1,746 is lent as of December 31, 2012 and 2011, respectively)	128,762	202,139
Government-sponsored enterprise debt securities, net (of which \$50 and \$147 is lent as of December 31, 2012 and 2011, respectively)	5,657	12,453
Federal agency and government-sponsored enterprise mortgage-backed securities, net	67,636	97,965
Foreign currency denominated assets, net	5,166	5,321
Central bank liquidity swaps	1,839	20,469
Other investments	2	—
Accrued interest receivable	1,348	2,279
Bank premises and equipment, net	346	333
Items in process of collection	—	5
Other assets	108	91
Total assets	\$ 212,539	\$ 342,753
Liabilities and Capital		
Federal Reserve notes outstanding, net	\$ 91,659	\$ 83,711
System Open Market Account:		
Securities sold under agreements to repurchase	7,629	11,537
Other liabilities	226	158
Deposits:		
Depository institutions	72,657	111,914
Other deposits	76	89
Interest payable to depository institutions	10	13
Accrued benefit costs	296	249
Deferred credit items	—	20
Accrued interest on Federal Reserve notes	51	240
Interdistrict settlement account	28,388	123,650
Other liabilities	55	44
Total liabilities	201,047	331,625
Capital paid-in	5,746	5,564
Surplus (including accumulated other comprehensive loss of \$77 and \$49 at December 31, 2012 and 2011, respectively)	5,746	5,564
Total capital	11,492	11,128
Total liabilities and capital	\$ 212,539	\$ 342,753

The accompanying notes are an integral part of these financial statements.

STATEMENTS OF INCOME AND COMPREHENSIVE INCOME

(in millions)

For the years ended December 31,	2012	2011
Interest income		
System Open Market Account:		
Treasury securities, net	\$ 3,883	\$ 4,864
Government-sponsored enterprise debt securities, net	223	351
Federal agency and government-sponsored enterprise mortgage-backed securities, net	2,677	4,403
Foreign currency denominated assets, net	29	52
Central bank liquidity swaps	50	7
Total interest income	6,862	9,677
Interest expense		
System Open Market Account:		
Securities sold under agreements to repurchase	11	5
Deposits:		
Depository institutions	227	268
Term Deposit Facility	—	1
Total interest expense	238	274
Net interest income	6,624	9,403
Non-interest income		
System Open Market Account:		
Treasury securities gains, net	1,073	261
Federal agency and government-sponsored enterprise mortgage-backed securities gains, net	23	1
Foreign currency translation (losses) gains, net	(231)	34
Compensation received for service costs provided	19	19
Reimbursable services to government agencies	49	46
Other	4	5
Total non-interest income	937	366
Operating expenses		
Salaries and benefits	367	335
Occupancy	50	48
Equipment	76	63
Assessments:		
Board of Governors operating expenses and currency costs	167	152
Bureau of Consumer Financial Protection	78	51
Office of Financial Research	—	8
Other	(133)	(110)
Total operating expenses	605	547
Net income before interest on Federal Reserve notes expense remitted to Treasury	6,956	9,222
Interest on Federal Reserve notes expense remitted to Treasury	6,414	8,749
Net income	542	473
Change in prior service costs related to benefit plans	(4)	(4)
Change in actuarial losses related to benefit plans	(24)	(14)
Total other comprehensive loss	(28)	(18)
Comprehensive income	\$ 514	\$ 455

The accompanying notes are an integral part of these financial statements.

STATEMENTS OF CHANGES IN CAPITAL

(in millions, except share data)

For the years ended December 31, 2012 and December 31, 2011	Capital paid-in	Surplus		Total surplus	Total capital
		Net income retained	Accumulated other comprehensive loss		
Balance at December 31, 2010 (108,777,133 shares)	\$ 5,439	\$ 5,470	\$ (31)	\$ 5,439	\$ 10,878
Net change in capital stock issued (2,507,360 shares)	125	—	—	—	125
Comprehensive income:					
Net income	—	473	—	473	473
Other comprehensive loss	—	—	(18)	(18)	(18)
Dividends on capital stock	—	(330)	—	(330)	(330)
Net change in capital	125	143	(18)	125	250
Balance at December 31, 2011 (111,284,473 shares)	\$ 5,564	\$ 5,613	\$ (49)	\$ 5,564	\$ 11,128
Net change in capital stock issued (3,634,516 shares)	182	—	—	—	182
Comprehensive income:					
Net income	—	542	—	542	542
Other comprehensive loss	—	—	(28)	(28)	(28)
Dividends on capital stock	—	(332)	—	(332)	(332)
Net change in capital	182	210	(28)	182	364
Balance at December 31, 2012 (114,918,989 shares)	\$ 5,746	\$ 5,823	\$ (77)	\$ 5,746	\$ 11,492

The accompanying notes are an integral part of these financial statements.

1 STRUCTURE

The Federal Reserve Bank of Richmond (Bank) is part of the Federal Reserve System (System) and is one of the 12 Federal Reserve Banks (Reserve Banks) created by Congress under the Federal Reserve Act of 1913 (Federal Reserve Act), which established the central bank of the United States. The Reserve Banks are chartered by the federal government and possess a unique set of governmental, corporate, and central bank characteristics. The Bank serves the Fifth Federal Reserve District, which includes Maryland, North Carolina, South Carolina, Virginia, District of Columbia, and portions of West Virginia.

In accordance with the Federal Reserve Act, supervision and control of the Bank is exercised by a board of directors. The Federal Reserve Act specifies the composition of the board of directors for each of the Reserve Banks. Each board is composed of nine members serving three-year terms: three directors, including those designated as chairman and deputy chairman, are appointed by the Board of Governors of the Federal Reserve System (Board of Governors) to represent the public, and six directors are elected by member banks. Banks that are members of the System include all national banks and any state-chartered banks that apply and are approved for membership. Member banks are divided into three classes according to size. Member banks in each class elect one director representing member banks and one representing the public. In any election of directors, each member bank receives one vote, regardless of the number of shares of Reserve Bank stock it holds.

In addition to the 12 Reserve Banks, the System also consists, in part, of the Board of Governors and the Federal Open Market Committee (FOMC). The Board of Governors, an independent federal agency, is charged by the Federal Reserve Act with a number of specific duties, including general supervision over the Reserve Banks. The FOMC is composed of members of the Board of Governors, the president of the Federal Reserve Bank of New York (FRBNY), and, on a rotating basis, four other Reserve Bank presidents.

2 OPERATIONS AND SERVICES

The Reserve Banks perform a variety of services and operations. These functions include participating in formulating and conducting monetary policy; participating in the payment system, including large-dollar transfers of funds, automated clearinghouse (ACH) operations, and check collection; distributing coin and currency; performing fiscal agency functions for the U.S. Department of the Treasury (Treasury), certain federal agencies, and other entities; serving as the federal government's bank; providing short-term loans to depository institutions; providing loans to participants in programs or facilities with broad-based eligibility in unusual and exigent circumstances; serving consumers and communities by providing educational materials and information regarding financial consumer protection rights and laws and information on community development programs and activities; and supervising bank holding companies, state member banks, savings and loan holding companies, U.S. offices of foreign banking organizations, and designated financial market utilities pursuant to authority delegated by the Board of Governors. Certain services are provided to foreign and international monetary authorities, primarily by the FRBNY.

The FOMC, in conducting monetary policy, establishes policy regarding domestic open market operations, oversees these operations, and issues authorizations and directives to the FRBNY to execute transactions. The FOMC authorizes and directs the FRBNY to conduct operations in domestic markets, including the direct purchase and sale of Treasury securities, government-sponsored enterprise (GSE) debt securities, federal agency and GSE mortgage-backed securities (MBS), the purchase of these securities under agreements to resell, and the sale of these securities under agreements to repurchase. The FRBNY holds the resulting securities and agreements in a portfolio known as the System Open Market Account (SOMA). The FRBNY is authorized and directed to lend the Treasury securities and federal agency and GSE debt securities that are held in the SOMA.

To counter disorderly conditions in foreign exchange markets or to meet other needs specified by the FOMC to carry out the System's central bank responsibilities, the FOMC has authorized and directed the FRBNY to execute spot and forward foreign exchange transactions in 14 foreign currencies, to hold balances in those currencies, and to invest such foreign currency holdings, while maintaining adequate liquidity. The FOMC has also authorized the FRBNY to maintain

reciprocal currency arrangements with the Bank of Canada and the Bank of Mexico in the maximum amounts of \$2 billion and \$3 billion, respectively, and to warehouse foreign currencies for the Treasury and the Exchange Stabilization Fund.

Because of the global character of funding markets, the System has at times coordinated with other central banks to provide temporary liquidity. In May 2010, the FOMC authorized and directed the FRBNY to establish temporary U.S. dollar liquidity swap arrangements with the Bank of Canada, the Bank of England, the European Central Bank, the Bank of Japan, and the Swiss National Bank through January 2011. Subsequently, the FOMC authorized and directed the FRBNY to extend these arrangements through February 1, 2013. In December 2012, the FOMC authorized and directed the FRBNY to extend these arrangements through February 1, 2014. In addition, in November 2011, as a contingency measure, the FOMC authorized the FRBNY to establish temporary bilateral foreign currency liquidity swap arrangements with the Bank of Canada, the Bank of England, the European Central Bank, the Bank of Japan, and the Swiss National Bank so that liquidity can be provided to U.S. institutions in any of their currencies if necessary. In December 2012, the FOMC authorized the FRBNY to extend these temporary bilateral foreign currency liquidity swap arrangements through February 1, 2014.

Although the Reserve Banks are separate legal entities, they collaborate on the delivery of certain services to achieve greater efficiency and effectiveness. This collaboration takes the form of centralized operations and product or function offices that have responsibility for the delivery of certain services on behalf of the Reserve Banks. Various operational and management models are used and are supported by service agreements between the Reserve Banks. In some cases, costs incurred by a Reserve Bank for services provided to other Reserve Banks are not shared; in other cases, the Reserve Banks are reimbursed for costs incurred in providing services to other Reserve Banks. Major services provided by the Bank on behalf of the System and for which the costs were not reimbursed by the other Reserve Banks include Standard Cash Automation, Currency Technology Office, IT Transformation Initiatives, Enterprise-wide Security Projects, Enterprise Security Operations Coordination, the Payroll Central Business Administration Function, Daylight Overdraft Reporting and Pricing, and the National Procurement Office. Costs are, however, redistributed to the other Reserve Banks for computing and support services the Bank provides for the System. The Bank's total reimbursement for these services was \$295 million and \$258 million for the years ended December 31, 2012 and 2011, respectively, and is included in "Operating expenses: Other" on the Statements of Income and Comprehensive Income.

3 SIGNIFICANT ACCOUNTING POLICIES

Accounting principles for entities with the unique powers and responsibilities of the nation's central bank have not been formulated by accounting standard-setting bodies. The Board of Governors has developed specialized accounting principles and practices that it considers to be appropriate for the nature and function of a central bank. These accounting principles and practices are documented in the *Financial Accounting Manual for Federal Reserve Banks* (FAM), which is issued by the Board of Governors. The Reserve Banks are required to adopt and apply accounting policies and practices that are consistent with the FAM and the financial statements have been prepared in accordance with the FAM.

Limited differences exist between the accounting principles and practices in the FAM and accounting principles generally accepted in the United States of America (GAAP), due to the unique nature of the Bank's powers and responsibilities as part of the nation's central bank and given the System's unique responsibility to conduct monetary policy. The primary differences are the presentation of all SOMA securities holdings at amortized cost and the recording of all SOMA securities on a settlement-date basis. Amortized cost, rather than the fair value presentation, more appropriately reflects the Bank's securities holdings given the System's unique responsibility to conduct monetary policy. Although the application of fair value measurements to the securities holdings may result in values substantially greater or less than their carrying values, these unrealized changes in value have no direct effect on the quantity of reserves available to the banking system or on the ability of the Reserve Banks, as the central bank, to meet their financial obligations and responsibilities. Both the domestic and foreign components of the SOMA portfolio may involve transactions that result in gains or losses when holdings are sold before maturity. Decisions regarding securities and foreign currency transactions, including their purchase and sale, are motivated by monetary policy objectives rather than profit. Accordingly, fair values, earnings, and gains or losses resulting from the sale of such securities and currencies are incidental to open market operations and do not motivate decisions related to policy or open market activities. Accounting for these secu-

rities on a settlement-date basis, rather than the trade-date basis required by GAAP, better reflects the timing of the transaction's effect on the quantity of reserves in the banking system. The cost bases of Treasury securities, GSE debt securities, and foreign government debt instruments are adjusted for amortization of premiums or accretion of discounts on a straight-line basis, rather than using the interest method required by GAAP. SOMA securities holdings are evaluated for credit impairment periodically.

In addition, the Bank does not present a Statement of Cash Flows as required by GAAP because the liquidity and cash position of the Bank are not a primary concern given the Reserve Banks' unique powers and responsibilities as a central bank. Other information regarding the Bank's activities is provided in, or may be derived from, the Statements of Condition, Income and Comprehensive Income, and Changes in Capital, and the accompanying notes to the financial statements. Other than those described above, there are no significant differences between the policies outlined in the FAM and GAAP.

Preparing the financial statements in conformity with the FAM requires management to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of income and expenses during the reporting period. Actual results could differ from those estimates.

Certain amounts relating to the prior year have been reclassified to conform to the current-year presentation. The presentation of "Dividends on capital stock" and "Interest on Federal Reserve notes expense remitted to Treasury" in the Statements of Income and Comprehensive Income for the year ended December 31, 2011 has been revised to conform to the current-year presentation format. In addition, the presentation of "Comprehensive income" and "Dividends on capital stock" in the Statements of Changes in Capital for the year ended December 31, 2011 have been revised to conform to the current-year presentation format. The revised presentation of "Dividends on capital stock" and "Interest on Federal Reserve notes expense remitted to Treasury" better reflects the nature of these items and results in a more consistent treatment of the amounts presented in the Statements of Income and Comprehensive Income and the related balances presented in the Statements of Condition. As a result of the change to report "Interest on Federal Reserve Notes expense remitted to Treasury" as an expense, the amount reported as "Comprehensive income" for the year ended December 31, 2011 has been revised. Significant accounts and accounting policies are explained below.

a. Consolidation

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act) established the Bureau of Consumer Financial Protection (Bureau) as an independent bureau within the System that has supervisory authority over some institutions previously supervised by the Reserve Banks in connection with those institutions' compliance with consumer protection statutes. Section 1017 of the Dodd-Frank Act provides that the financial statements of the Bureau are not to be consolidated with those of the Board of Governors or the System. Section 152 of the Dodd-Frank Act established the Office of Financial Research (OFR) within the Treasury. The Board of Governors funds the Bureau and OFR through assessments on the Reserve Banks as required by the Dodd-Frank Act. The Reserve Banks reviewed the law and evaluated the design of and their relationships to the Bureau and the OFR and determined that neither should be consolidated in the Bank's financial statements.

b. Gold and Special Drawing Rights Certificates

The Secretary of the Treasury is authorized to issue gold and special drawing rights (SDR) certificates to the Reserve Banks. Upon authorization, the Reserve Banks acquire gold certificates by crediting equivalent amounts in dollars to the account established for the Treasury. The gold certificates held by the Reserve Banks are required to be backed by the gold owned by the Treasury. The Treasury may reacquire the gold certificates at any time, and the Reserve Banks must deliver them to the Treasury. At such time, the Treasury's account is charged, and the Reserve Banks' gold certificate accounts are reduced. The value of gold for purposes of backing the gold certificates is set by law at \$42 2/9 per fine troy ounce. Gold certificates are recorded by the Banks at original cost. The Board of Governors allocates the gold certificates among the Reserve Banks once a year based on each Reserve Bank's average Federal Reserve notes outstanding during the preceding calendar year.

SDRs are issued by the International Monetary Fund (IMF) to its members in proportion to each member's quota in the IMF at the time of issuance. SDRs serve as a supplement to international monetary reserves and may be transferred from one national monetary authority to another. Under the law providing for U.S. participation in the SDR system, the

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Secretary of the Treasury is authorized to issue SDR certificates to the Reserve Banks. When SDR certificates are issued to the Reserve Banks, equivalent amounts in U.S. dollars are credited to the account established for the Treasury and the Reserve Banks' SDR certificate accounts are increased. The Reserve Banks are required to purchase SDR certificates, at the direction of the Treasury, for the purpose of financing SDR acquisitions or for financing exchange stabilization operations. At the time SDR certificate transactions occur, the Board of Governors allocates the SDR certificates among the Reserve Banks based upon each Reserve Bank's Federal Reserve notes outstanding at the end of the preceding calendar year. SDR certificates are recorded by the Banks at original cost. There were no SDR certificate transactions during the years ended December 31, 2012 and 2011.

c. Coin

The amount reported as coin in the Statements of Condition represents the face value of all United States coin held by the Bank. The Bank buys coin at face value from the U.S. Mint in order to fill depository institution orders.

d. Loans

Loans to depository institutions are reported at their outstanding principal balances, and interest income is recognized on an accrual basis.

Loans are impaired when current information and events indicate that it is probable that the Bank will not receive the principal and interest that are due in accordance with the contractual terms of the loan agreement. Impaired loans are evaluated to determine whether an allowance for loan loss is required. The Bank has developed procedures for assessing the adequacy of any allowance for loan losses using all available information to identify incurred losses. This assessment includes monitoring information obtained from banking supervisors, borrowers, and other sources to assess the credit condition of the borrowers and, as appropriate, evaluating collateral values. Generally, the Bank would discontinue recognizing interest income on impaired loans until the borrower's repayment performance demonstrates principal and interest would be received in accordance with the terms of the loan agreement. If the Bank discontinues recording interest on an impaired loan, cash payments are first applied to principal until the loan balance is reduced to zero; subsequent payments are applied as recoveries of amounts previously deemed uncollectible, if any, and then as interest income.

e. Securities Purchased Under Agreements to Resell, Securities Sold Under Agreements to Repurchase, and Securities Lending

The FRBNY may engage in purchases of securities with primary dealers under agreements to resell (repurchase transactions). These repurchase transactions are settled through a triparty arrangement. In a triparty arrangement, two commercial custodial banks manage the collateral clearing, settlement, pricing, and pledging, and provide cash and securities custodial services for and on behalf of the FRBNY and counterparty. The collateral pledged must exceed the principal amount of the transaction by a margin determined by the FRBNY for each class and maturity of acceptable collateral. Collateral designated by the FRBNY as acceptable under repurchase transactions primarily includes Treasury securities (including Treasury Inflation-Protected Securities and Separate Trading of Registered Interest and Principal of Securities Treasury securities); direct obligations of several federal and GSE-related agencies, including Federal National Mortgage Association (Fannie Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac); and pass-through MBS of Fannie Mae, Freddie Mac, and Government National Mortgage Association. The repurchase transactions are accounted for as financing transactions with the associated interest income recognized over the life of the transaction. These transactions are reported at their contractual amounts as "System Open Market Account: Securities purchased under agreements to resell" and the related accrued interest receivable is reported as a component of "Other assets" in the Statements of Condition.

The FRBNY may engage in sales of securities under agreements to repurchase (reverse repurchase transactions) with primary dealers and selected money market funds. The list of eligible counterparties was expanded to include GSEs, effective in July 2011, and bank and savings institutions, effective in December 2011. These reverse repurchase transactions may be executed through a triparty arrangement as an open market operation, similar to repurchase transactions. Reverse repurchase transactions may also be executed with foreign official and international account holders as part of a service offering. Reverse repurchase agreements are collateralized by a pledge of an amount of Treasury securities,

GSE debt securities, and federal agency and GSE MBS that are held in the SOMA. Reverse repurchase transactions are accounted for as financing transactions, and the associated interest expense is recognized over the life of the transaction. These transactions are reported at their contractual amounts as “System Open Market Account: Securities sold under agreements to repurchase” and the related accrued interest payable is reported as a component of “Other liabilities” in the Statements of Condition.

Treasury securities and GSE debt securities held in the SOMA may be lent to primary dealers to facilitate the effective functioning of the domestic securities markets. The amortized cost basis of securities lent continues to be reported as “Treasury securities, net” and “Government-sponsored enterprise debt securities, net,” as appropriate, in the Statements of Condition. Overnight securities lending transactions are fully collateralized by Treasury securities that have fair values in excess of the securities lent. The FRBNY charges the primary dealer a fee for borrowing securities, and these fees are reported as a component of “Non-interest income: Other” in the Statements of Income and Comprehensive Income.

Activity related to securities purchased under agreements to resell, securities sold under agreements to repurchase, and securities lending is allocated to each of the Reserve Banks on a percentage basis derived from an annual settlement of the interdistrict settlement account that occurs in the second quarter of each year.

f. Treasury Securities; Government-Sponsored Enterprise Debt Securities; Federal Agency and Government-Sponsored Enterprise Mortgage-Backed Securities; Foreign Currency Denominated Assets; and Warehousing Agreements

Interest income on Treasury securities, GSE debt securities, and foreign currency denominated assets comprising the SOMA is accrued on a straight-line basis. Interest income on federal agency and GSE MBS is accrued using the interest method and includes amortization of premiums, accretion of discounts, and gains or losses associated with principal paydowns. Premiums and discounts related to federal agency and GSE MBS are amortized or accreted over the term of the security to stated maturity, and the amortization of premiums and accretion of discounts are accelerated when principal payments are received. Gains and losses resulting from sales of securities are determined by specific issue based on average cost. Treasury securities, GSE debt securities, and federal agency and GSE MBS are reported net of premiums and discounts in the Statements of Condition and interest income on those securities is reported net of the amortization of premiums and accretion of discounts in the Statements of Income and Comprehensive Income.

In addition to outright purchases of federal agency and GSE MBS that are held in the SOMA, the FRBNY enters into dollar roll transactions (dollar rolls), which primarily involve an initial transaction to purchase or sell “to be announced” (TBA) MBS for delivery in the current month combined with a simultaneous agreement to sell or purchase TBA MBS on a specified future date. During the years ended December 31, 2012 and 2011, the FRBNY executed dollar rolls primarily to facilitate settlement of outstanding purchases of federal agency and GSE MBS. The FRBNY accounts for dollar roll transactions as purchases or sales on a settlement-date basis. In addition, TBA MBS transactions may be paired off or assigned prior to settlement. Net gains (losses) resulting from dollar roll transactions are reported as “Non-interest income: System Open Market Account: Federal agency and government-sponsored enterprise mortgage-backed securities gains, net” in the Statements of Income and Comprehensive Income.

Foreign currency denominated assets, which can include foreign currency deposits, securities purchased under agreements to resell, and government debt instruments, are revalued daily at current foreign currency market exchange rates in order to report these assets in U.S. dollars. Foreign currency translation gains and losses that result from the daily revaluation of foreign currency denominated assets are reported as “Non-interest income: System Open Market Account: Foreign currency translation (losses) gains, net” in the Statements of Income and Comprehensive Income.

Activity related to Treasury securities, GSE debt securities, and federal agency and GSE MBS, including the premiums, discounts, and realized gains and losses, is allocated to each Reserve Bank on a percentage basis derived from an annual settlement of the interdistrict settlement account that occurs in the second quarter of each year. Activity related to foreign currency denominated assets, including the premiums, discounts, and realized and unrealized gains and losses, is allocated to each Reserve Bank based on the ratio of each Reserve Bank’s capital and surplus to the Reserve Banks’ aggregate capital and surplus at the preceding December 31.

Warehousing is an arrangement under which the FOMC has approved the exchange, at the request of the Treasury, of U.S. dollars for foreign currencies held by the Treasury over a limited period. The purpose of the warehousing facility is

to supplement the U.S. dollar resources of the Treasury for financing purchases of foreign currencies and related international operations. Warehousing agreements are designated as held-for-trading purposes and are valued daily at current market exchange rates. Activity related to these agreements is allocated to each Reserve Bank based on the ratio of each Reserve Bank's capital and surplus to the Reserve Banks' aggregate capital and surplus at the preceding December 31.

g. Central Bank Liquidity Swaps

Central bank liquidity swaps, which are transacted between the FRBNY and a foreign central bank, can be structured as either U.S. dollar liquidity or foreign currency liquidity swap arrangements.

Central bank liquidity swaps activity, including the related income and expense, is allocated to each Reserve Bank based on the ratio of each Reserve Bank's capital and surplus to the Reserve Banks' aggregate capital and surplus at the preceding December 31. The foreign currency amounts associated with these central bank liquidity swap arrangements are revalued daily at current foreign currency market exchange rates.

U.S. dollar liquidity swaps

At the initiation of each U.S. dollar liquidity swap transaction, the foreign central bank transfers a specified amount of its currency to a restricted account for the FRBNY in exchange for U.S. dollars at the prevailing market exchange rate. Concurrent with this transaction, the FRBNY and the foreign central bank agree to a second transaction that obligates the foreign central bank to return the U.S. dollars and the FRBNY to return the foreign currency on a specified future date at the same exchange rate as the initial transaction. The Bank's allocated portion of the foreign currency amounts that the FRBNY acquires are reported as "System Open Market Account: Central bank liquidity swaps" in the Statements of Condition. Because the swap transaction will be unwound at the same U.S. dollar amount and exchange rate that were used in the initial transaction, the recorded value of the foreign currency amounts is not affected by changes in the market exchange rate.

The foreign central bank compensates the FRBNY based on the foreign currency amounts it holds for the FRBNY. The Bank's allocated portion of the amount of compensation received during the term of the swap transaction is reported as "Interest income: System Open Market Account: Central bank liquidity swaps" in the Statements of Income and Comprehensive Income.

Foreign currency liquidity swaps

The structure of foreign currency liquidity swap transactions involves the transfer by the FRBNY, at the prevailing market exchange rate, of a specified amount of U.S. dollars to an account for the foreign central bank in exchange for its currency. The foreign currency amount received would be reported as a liability by the Bank.

h. Bank Premises, Equipment, and Software

Bank premises and equipment are stated at cost less accumulated depreciation. Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets, which range from 2 to 50 years. Major alterations, renovations, and improvements are capitalized at cost as additions to the asset accounts and are depreciated over the remaining useful life of the asset or, if appropriate, over the unique useful life of the alteration, renovation, or improvement. Maintenance, repairs, and minor replacements are charged to operating expense in the year incurred.

Costs incurred for software during the application development stage, whether developed internally or acquired for internal use, are capitalized based on the purchase cost and the cost of direct services and materials associated with designing, coding, installing, and testing the software. Capitalized software costs are amortized on a straight-line basis over the estimated useful lives of the software applications, which generally range from two to five years. Maintenance costs related to software are charged to operating expense in the year incurred.

Capitalized assets, including software, buildings, leasehold improvements, furniture, and equipment, are impaired and an adjustment is recorded when events or changes in circumstances indicate that the carrying amount of assets or asset groups is not recoverable and significantly exceeds the assets' fair value.

i. Interdistrict Settlement Account

At the close of business each day, each Reserve Bank aggregates the payments due to or from other Reserve Banks. These payments result from transactions between the Reserve Banks and transactions that involve depository institution accounts held by other Reserve Banks, such as Fedwire funds and securities transfers and check and ACH transactions. The cumulative net amount due to or from the other Reserve Banks is reflected in the “Interdistrict settlement account” in the Statements of Condition.

An annual settlement of the interdistrict settlement account occurs in the second quarter of each year. As a result of the annual settlement, the balance in each Bank’s interdistrict settlement account is adjusted by an amount equal to the average balance in the account during the previous twelve-month period ended March 31. An equal and offsetting adjustment is made to each Bank’s allocated portion of SOMA assets and liabilities.

j. Federal Reserve Notes

Federal Reserve notes are the circulating currency of the United States. These notes, which are identified as issued to a specific Reserve Bank, must be fully collateralized. All of the Bank’s assets are eligible to be pledged as collateral. The collateral value is equal to the book value of the collateral tendered with the exception of securities, for which the collateral value is equal to the par value of the securities tendered. The par value of securities sold under agreements to repurchase is deducted from the eligible collateral value.

The Board of Governors may, at any time, call upon a Reserve Bank for additional security to adequately collateralize outstanding Federal Reserve notes. To satisfy the obligation to provide sufficient collateral for outstanding Federal Reserve notes, the Reserve Banks have entered into an agreement that provides for certain assets of the Reserve Banks to be jointly pledged as collateral for the Federal Reserve notes issued to all Reserve Banks. In the event that this collateral is insufficient, the Federal Reserve Act provides that Federal Reserve notes become a first and paramount lien on all the assets of the Reserve Banks. Finally, Federal Reserve notes are obligations of the United States government.

“Federal Reserve notes outstanding, net” in the Statements of Condition represents the Bank’s Federal Reserve notes outstanding, reduced by the Bank’s currency holdings of \$11,462 million and \$10,670 million at December 31, 2012 and 2011, respectively.

At December 31, 2012 and 2011, all Federal Reserve notes issued to the Reserve Banks were fully collateralized. At December 31, 2012, all gold certificates, all special drawing rights certificates, and \$1,110 billion of domestic securities held in the SOMA were pledged as collateral. At December 31, 2012, no investments denominated in foreign currencies were pledged as collateral.

k. Deposits**Depository Institutions**

Depository institutions’ deposits represent the reserve and service-related balances, such as required clearing balances, in the accounts that depository institutions hold at the Bank. The interest rates paid on required reserve balances and excess balances are determined by the Board of Governors, based on an FOMC-established target range for the federal funds rate. Interest payable is reported as a component of “Interest payable to depository institutions” in the Statements of Condition.

The Term Deposit Facility (TDF) consists of deposits with specific maturities held by eligible institutions at the Reserve Banks. The Reserve Banks pay interest on these deposits at interest rates determined by auction. Interest payable is reported as a component of “Interest payable to depository institutions” in the Statements of Condition. There were no deposits held by the Bank under the TDF at December 31, 2012 and 2011.

Other

Other deposits include the Bank’s allocated portion of foreign central bank and foreign government deposits held at the FRBNY.

I. Items in Process of Collection and Deferred Credit Items

“Items in process of collection” primarily represents amounts attributable to checks that have been deposited for collection and that, as of the balance sheet date, have not yet been presented to the paying bank. “Deferred credit items” is the counterpart liability to items in process of collection. The amounts in this account arise from deferring credit for deposited items until the amounts are collected. The balances in both accounts can vary significantly.

m. Capital Paid-in

The Federal Reserve Act requires that each member bank subscribe to the capital stock of the Reserve Bank in an amount equal to 6 percent of the capital and surplus of the member bank. These shares are non-voting, with a par value of \$100, and may not be transferred or hypothecated. As a member bank’s capital and surplus changes, its holdings of Reserve Bank stock must be adjusted. Currently, only one-half of the subscription is paid in and the remainder is subject to call. A member bank is liable for Reserve Bank liabilities up to twice the par value of stock subscribed by it.

By law, each Reserve Bank is required to pay each member bank an annual dividend of 6 percent on the paid-in capital stock. This cumulative dividend is paid semiannually.

n. Surplus

The Board of Governors requires the Reserve Banks to maintain a surplus equal to the amount of capital paid-in. On a daily basis, surplus is adjusted to equate the balance to capital paid-in. Accumulated other comprehensive income is reported as a component of “Surplus” in the Statements of Condition and the Statements of Changes in Capital. Additional information regarding the classifications of accumulated other comprehensive income is provided in Notes 9 and 10.

o. Interest on Federal Reserve Notes

The Board of Governors requires the Reserve Banks to transfer excess earnings to the Treasury as interest on Federal Reserve notes after providing for the costs of operations, payment of dividends, and reservation of an amount necessary to equate surplus with capital paid-in. This amount is reported as “Interest on Federal Reserve notes expense remitted to Treasury” in the Statements of Income and Comprehensive Income. The amount due to the Treasury is reported as “Accrued interest on Federal Reserve notes” in the Statements of Condition. See Note 12 for additional information on interest on Federal Reserve notes.

If earnings during the year are not sufficient to provide for the costs of operations, payment of dividends, and equating surplus and capital paid-in, remittances to the Treasury are suspended. A deferred asset is recorded that represents the amount of net earnings a Reserve Bank will need to realize before remittances to the Treasury resume. This deferred asset is periodically reviewed for impairment.

p. Income and Costs Related to Treasury Services

When directed by the Secretary of the Treasury, the Bank is required by the Federal Reserve Act to serve as fiscal agent and depository of the United States Government. By statute, the Treasury has appropriations to pay for these services. During the years ended December 31, 2012 and 2011, the Bank was reimbursed for all services provided to the Treasury as its fiscal agent.

q. Compensation Received for Service Costs Provided

The Federal Reserve Bank of Atlanta has overall responsibility for managing the Reserve Banks’ provision of check and ACH services to depository institutions, the FRBNY has overall responsibility for managing the Reserve Banks’ provision of Fedwire funds and securities services, and the Federal Reserve Bank of Chicago has overall responsibility for managing the Reserve Banks’ provision of electronic access services to depository institutions. The Reserve Bank that has overall responsibility for managing these services recognizes the related total System revenue in its Statements of Income and Comprehensive Income. The Bank is compensated for costs incurred to provide these services and reports this compensation as “Non-interest income: Compensation received for service costs provided” in its Statements of Income and Comprehensive Income.

r. Assessments

The Board of Governors assesses the Reserve Banks to fund its operations, the operations of the Bureau and, for a two-year period following the July 21, 2010 effective date of the Dodd-Frank Act, the OFR. These assessments are allocated to each Reserve Bank based on each Reserve Bank's capital and surplus balances. The Board of Governors also assesses each Reserve Bank for expenses related to producing, issuing, and retiring Federal Reserve notes based on each Reserve Bank's share of the number of notes comprising the System's net liability for Federal Reserve notes on December 31 of the prior year.

During the period before the Bureau transfer date of July 21, 2011, there was no limit on the funding provided to the Bureau and assessed to the Reserve Banks; the Board of Governors was required to provide the amount estimated by the Secretary of the Treasury needed to carry out the authorities granted to the Bureau under the Dodd-Frank Act and other federal law. The Dodd-Frank Act requires that, after the transfer date, the Board of Governors fund the Bureau in an amount not to exceed a fixed percentage of the total operating expenses of the System as reported in the Board of Governors' 2009 annual report, which totaled \$4.98 billion. The fixed percentage of total 2009 operating expenses of the System is 10 percent (\$498.0 million) for 2011, 11 percent (\$547.8 million) for 2012, and 12 percent (\$597.6 million) for 2013. After 2013, the amount will be adjusted in accordance with the provisions of the Dodd-Frank Act. The Bank's assessment for Bureau funding is reported as "Assessments: Bureau of Consumer Financial Protection" in the Statements of Income and Comprehensive Income.

The Board of Governors assessed the Reserve Banks to fund the operations of the OFR for the two-year period ended July 21, 2012, following enactment of the Dodd-Frank Act; thereafter, the OFR is funded by fees assessed on bank holding companies and non-bank financial companies that meet the criteria specified in the Dodd-Frank Act.

s. Taxes

The Reserve Banks are exempt from federal, state, and local taxes, except for taxes on real property. The Bank's real property taxes were \$3 million for each of the years ended December 31, 2012 and 2011, and are reported as a component of "Operating expenses: Occupancy" in the Statements of Income and Comprehensive Income.

t. Restructuring Charges

The Reserve Banks recognize restructuring charges for exit or disposal costs incurred as part of the closure of business activities in a particular location, the relocation of business activities from one location to another, or a fundamental reorganization that affects the nature of operations. Restructuring charges may include costs associated with employee separations, contract terminations, and asset impairments. Expenses are recognized in the period in which the Bank commits to a formalized restructuring plan or executes the specific actions contemplated in the plan and all criteria for financial statement recognition have been met.

Note 11 describes the Bank's restructuring initiatives and provides information about the costs and liabilities associated with employee separations and contract terminations.

The Bank had no significant restructuring activities in 2012 and 2011.

u. Recently Issued Accounting Standards

In April 2011, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2011-02, *Receivables (Topic 310): A Creditor's Determination of Whether a Restructuring Is a Troubled Debt Restructuring*, which clarifies accounting for troubled debt restructurings, specifically clarifying creditor concessions and financial difficulties experienced by borrowers. This update is effective for the Bank for the year ended December 31, 2012, and did not have a material effect on the Bank's financial statements.

In April 2011, the FASB issued ASU 2011-03, *Transfers and Servicing (Topic 860): Reconsideration of Effective Control for Repurchase Agreements*, which reconsidered the effective control for repurchase agreements. This update prescribes when the Bank may or may not recognize a sale upon the transfer of financial assets subject to repurchase agreements. This determination is based, in part, on whether the Bank has maintained effective control over the transferred financial assets. This update is effective for the Bank for the year ended December 31, 2012, and did not have a material effect on the Bank's financial statements.

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In December 2011, the FASB issued ASU 2011-11, *Balance Sheet (Topic 210): Disclosures about Offsetting Assets and Liabilities*. This update will require a reporting entity to present enhanced disclosures for financial instruments and derivative instruments that are offset or subject to master netting agreements or similar such agreements. This update is effective for the Bank for the year ending December 31, 2013, and is not expected to have a material effect on the Bank's financial statements.

In December 2011, the FASB issued ASU 2011-12, *Comprehensive Income (Topic 220): Deferral of the Effective Date for Amendments to the Presentation of Reclassifications of Items out of Accumulated Other Comprehensive Income in Accounting Standards Update No. 2011-05*. This update indefinitely deferred the requirements of ASU 2011-05, which required an entity to report the effect of significant reclassifications out of accumulated other comprehensive income on the respective net income line items. Subsequently, in February 2013, the FASB issued ASU 2013-02, *Comprehensive Income (Topic 220): Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income*, which established an effective date for the requirements of ASU 2011-05 related to reporting of significant reclassification adjustments from accumulated other comprehensive income. These presentation requirements of ASU 2011-05 are effective for the Bank for the year ending December 31, 2013, and will be reflected in the Bank's 2013 financial statements.

In January 2013, the FASB issued ASU 2013-01, *Balance Sheet (Topic 210): Clarifying the Scope of Disclosures about Offsetting Assets and Liabilities*. This update clarifies that the scope of ASU 2011-11 applies to derivatives accounted for in accordance with Topic 815. This update is effective for the Bank for the year ending December 31, 2013, and is not expected to have a material effect on the Bank's financial statements.

4 LOANS

Loans to Depository Institutions

The Bank offers primary, secondary, and seasonal loans to eligible borrowers, and each program has its own interest rate. Interest is accrued using the applicable interest rate established at least every 14 days by the Bank's board of directors, subject to review and determination by the Board of Governors. Primary and secondary loans are extended on a short-term basis, typically overnight, whereas seasonal loans may be extended for a period of up to nine months.

Primary, secondary, and seasonal loans are collateralized to the satisfaction of the Bank to reduce credit risk. Assets eligible to collateralize these loans include consumer, business, and real estate loans; Treasury securities; GSE debt securities; foreign sovereign debt; municipal, corporate, and state and local government obligations; asset-backed securities; corporate bonds; commercial paper; and bank-issued assets, such as certificates of deposit, bank notes, and deposit notes. Collateral is assigned a lending value that is deemed appropriate by the Bank, which is typically fair value reduced by a margin. Loans to depository institutions are monitored daily to ensure that borrowers continue to meet eligibility requirements for these programs. The financial condition of borrowers is monitored by the Bank and, if a borrower no longer qualifies for these programs, the Bank will generally request full repayment of the outstanding loan or, for primary or seasonal loans, may convert the loan to a secondary credit loan. Collateral levels are reviewed daily against outstanding obligations, and borrowers that no longer have sufficient collateral to support outstanding loans are required to provide additional collateral or to make partial or full repayment.

The Bank had no loans outstanding as of December 31, 2012. Loans to depository institutions were \$5 million for December 31, 2011, with a remaining maturity within 15 days.

At December 31, 2012 and 2011, the Bank did not have any loans that were impaired, past due, or on non-accrual status, and no allowance for loan losses was required. There were no impaired loans during the years ended December 31, 2012 and 2011.

5 SYSTEM OPEN MARKET ACCOUNT

a. Domestic Securities Holdings

The FRBNY conducts domestic open market operations and, on behalf of the Reserve Banks, holds the resulting securities in the SOMA.

During the years ended December 31, 2012 and 2011, the FRBNY continued the purchase of Treasury securities and federal agency and GSE MBS under the large-scale asset purchase programs authorized by the FOMC. In August 2010, the FOMC announced that the Federal Reserve would maintain the level of domestic securities holdings in the SOMA portfolio by reinvesting principal payments from GSE debt securities and federal agency and GSE MBS in longer-term Treasury securities. In November 2010, the FOMC announced its intention to expand the SOMA portfolio holdings of longer-term Treasury securities by an additional \$600 billion and completed these purchases in June 2011. In September 2011, the FOMC announced that the Federal Reserve would reinvest principal payments from the SOMA portfolio holdings of GSE debt securities and federal agency and GSE MBS in federal agency and GSE MBS. In June 2012, the FOMC announced that it would continue the existing policy of reinvesting principal payments from the SOMA portfolio holdings of GSE debt securities and federal agency and GSE MBS in federal agency and GSE MBS, and suspended the policy of rolling over maturing Treasury securities into new issues at auction. In September 2012, the FOMC announced that the Federal Reserve would purchase additional federal agency and GSE MBS at a pace of \$40 billion per month and maintain its existing policy of reinvesting principal payments from its holdings of agency debt and federal agency and GSE MBS in federal agency and GSE MBS. In December 2012, the FOMC announced that the Federal Reserve would purchase longer-term Treasury securities at a pace of \$45 billion per month after its program to extend the average maturity of its holdings of Treasury securities is completed at the end of 2012.

During the years ended December 31, 2012 and 2011, the FRBNY also continued the purchase and sale of SOMA portfolio holdings under the maturity extension programs authorized by the FOMC. In September 2011, the FOMC announced that the Federal Reserve would extend the average maturity of the SOMA portfolio holdings of securities by purchasing \$400 billion par value of Treasury securities with maturities of six to thirty years and selling or redeeming an equal par amount of Treasury securities with remaining maturities of three years or less by the end of June 2012. In June 2012, the FOMC announced that the Federal Reserve would continue through the end of 2012 its program to extend the average maturity of securities by purchasing \$267 billion par value of Treasury securities with maturities of six to thirty years and selling or redeeming an equal par amount of Treasury securities with maturities of three and a quarter years or less by the end of 2012. In September 2012, the FOMC announced it would continue its program to extend the average maturity of its holdings of securities as announced in June 2012.

The Bank's allocated share of activity related to domestic open market operations was 7.117 percent and 11.549 percent at December 31, 2012 and 2011, respectively.

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The Bank's allocated share of Treasury securities, GSE debt securities, and federal agency and GSE MBS, net, excluding accrued interest, held in the SOMA at December 31 was as follows (in millions):

2012				
	Par	Unamortized premiums	Unaccreted discounts	Total amortized cost
Bills	\$ —	\$ —	\$ —	\$ —
Notes	79,029	2,315	(51)	81,293
Bonds	39,553	7,926	(10)	47,469
Total Treasury securities	\$ 118,582	\$ 10,241	\$ (61)	\$ 128,762
GSE debt securities	\$ 5,465	\$ 193	\$ (1)	\$ 5,657
Federal agency and GSE MBS	\$ 65,952	\$ 1,734	\$ (50)	\$ 67,636

2011				
	Par	Unamortized premiums	Unaccreted discounts	Total amortized cost
Bills	\$ 2,128	\$ —	\$ —	\$ 2,128
Notes	148,560	3,095	(142)	151,513
Bonds	41,424	7,085	(11)	48,498
Total Treasury securities	\$ 192,112	\$ 10,180	\$ (153)	\$ 202,139
GSE debt securities	\$ 12,010	\$ 445	\$ (2)	\$ 12,453
Federal agency and GSE MBS	\$ 96,744	\$ 1,341	\$ (120)	\$ 97,965

The FRBNY executes transactions for the purchase of securities under agreements to resell primarily to temporarily add reserve balances to the banking system. Conversely, transactions to sell securities under agreements to repurchase are executed to temporarily drain reserve balances from the banking system and as part of a service offering to foreign official and international account holders.

There were no material transactions related to securities purchased under agreements to resell during the years ended December 31, 2012 and 2011. Financial information related to securities sold under agreements to repurchase for the years ended December 31 was as follows (in millions):

	Allocated to the Bank		Total SOMA	
	2012	2011	2012	2011
Contract amount outstanding, end of year	\$ 7,629	\$ 11,537	\$ 107,188	\$ 99,900
Average daily amount outstanding, during the year	7,683	8,315	91,898	72,227
Maximum balance outstanding, during the year	11,537	14,380	122,541	124,512
Securities pledged (par value), end of year	6,658	9,942	93,547	86,089
Securities pledged (market value), end of year	7,629	11,537	107,188	99,900

NOTES TO FINANCIAL STATEMENTS

The remaining maturity distribution of Treasury securities, GSE debt securities, federal agency and GSE MBS bought outright, and securities sold under agreements to repurchase that were allocated to the Bank at December 31, 2012 and 2011, was as follows (in millions):

	Within 15 days	16 days to 90 days	91 days to 1 year	Over 1 year to 5 years	Over 5 years to 10 years	Over 10 years	Total
December 31, 2012:							
Treasury securities (par value)	\$ —	\$ —	\$ 1	\$ 26,937	\$ 61,379	\$ 30,265	\$ 118,582
GSE debt securities (par value)	111	199	1,082	3,760	146	167	5,465
Federal agency and GSE MBS (par value) ¹	—	—	—	—	169	65,783	65,952
Securities sold under agreements to repurchase (contract amount)	7,629	—	—	—	—	—	7,629
December 31, 2011:							
Treasury securities (par value)	\$ 1,876	\$ 3,131	\$ 10,383	\$ 75,034	\$ 75,058	\$ 26,630	\$ 192,112
GSE debt securities (par value)	288	580	2,275	6,999	1,597	271	12,010
Federal agency and GSE MBS (par value) ¹	—	—	—	2	4	96,738	96,744
Securities sold under agreements to repurchase (contract amount)	11,537	—	—	—	—	—	11,537

¹ The par amount shown for federal agency and GSE MBS is the remaining principal balance of the securities.

Federal agency and GSE MBS are reported at stated maturity in the table above. The estimated weighted average life of these securities, which differs from the stated maturity primarily because it factors in scheduled payments and prepayment assumptions, was approximately 3.3 and 2.4 years as of December 31, 2012 and 2011, respectively.

The amortized cost and par value of Treasury securities and GSE debt securities that were loaned from the SOMA at December 31 was as follows (in millions):

	Allocated to the Bank		Total SOMA	
	2012	2011	2012	2011
Treasury securities (amortized cost)	\$ 650	\$ 1,746	\$ 9,139	\$ 15,121
Treasury securities (par value)	602	1,614	8,460	13,978
GSE debt securities (amortized cost)	50	147	697	1,276
GSE debt securities (par value)	48	140	676	1,216

NOTES TO FINANCIAL STATEMENTS

The FRBNY enters into commitments to buy and sell Treasury securities and records the related securities on a settlement-date basis. As of December 31, 2012, there were no outstanding commitments.

The FRBNY enters into commitments to buy and sell federal agency and GSE MBS and records the related securities on a settlement-date basis. As of December 31, 2012, the total purchase price of the federal agency and GSE MBS under outstanding purchase commitments was \$118,215 million, of which \$10,164 million was related to dollar roll transactions. The total purchase price of outstanding purchase commitments allocated to the Bank was \$8,414 million, of which \$723 million was related to dollar roll transactions. As of December 31, 2012, there were no outstanding sales commitments for federal agency and GSE MBS. These commitments, which had contractual settlement dates extending through February 2013, are for the purchase of TBA MBS for which the number and identity of the pools that will be delivered to fulfill the commitment are unknown at the time of the trade. These commitments are subject to varying degrees of off-balance-sheet market risk and counterparty credit risk that result from their future settlement. The FRBNY requires the posting of cash collateral for commitments as part of the risk management practices used to mitigate the counterparty credit risk.

Other investments consist of cash and short-term investments related to the federal agency and GSE MBS portfolio. Other liabilities, which are related to federal agency and GSE MBS purchases and sales, includes the FRBNY's obligation to return cash margin posted by counterparties as collateral under commitments to purchase and sell federal agency and GSE MBS. In addition, other liabilities includes obligations that arise from the failure of a seller to deliver securities to the FRBNY on the settlement date. Although the FRBNY has ownership of and records its investments in the MBS as of the contractual settlement date, it is not obligated to make payment until the securities are delivered, and the amount included in other liabilities represents the FRBNY's obligation to pay for the securities when delivered. The amount of other investments and other liabilities allocated to the Bank and held in the SOMA at December 31 was as follows (in millions):

	Allocated to the Bank		Total SOMA	
	2012	2011	2012	2011
Other investments	\$ 2	\$ —	\$ 23	\$ —
Other liabilities:				
Cash margin	\$ 220	\$ 147	\$ 3,092	\$ 1,271
Obligations from MBS transaction fails	6	11	85	97
Total other liabilities	\$ 226	\$ 158	\$ 3,177	\$ 1,368

NOTES TO FINANCIAL STATEMENTS

Information about transactions related to Treasury securities, GSE debt securities, and federal agency and GSE MBS during the years ended December 31, 2012 and 2011, is summarized as follows (in millions):

	Allocated to the Bank					
	Bills	Notes	Bonds	Total Treasury securities	GSE debt securities	Federal agency and GSE MBS
Balance December 31, 2010	\$ 2,098	\$ 89,583	\$ 29,833	\$ 121,514	\$ 17,422	\$ 114,424
Purchases ¹	27,550	83,913	18,616	130,079	—	4,867
Sales ¹	—	(15,907)	—	(15,907)	—	—
Realized gains, net ²	—	261	—	261	—	—
Principal payments and maturities	(27,551)	(7,744)	—	(35,295)	(4,993)	(22,480)
Amortization of premiums and accretion of discounts, net	1	(512)	(574)	(1,085)	(193)	(364)
Inflation adjustment on inflation-indexed securities	—	148	126	274	—	—
Annual reallocation adjustment ⁴	30	1,771	497	2,298	217	1,518
Balance December 31, 2011	\$ 2,128	\$ 151,513	\$ 48,498	\$ 202,139	\$ 12,453	\$ 97,965
Purchases ¹	11,448	34,201	22,158	67,807	—	35,265
Sales ¹	—	(42,586)	(957)	(43,543)	—	—
Realized gains, net ²	—	971	102	1,073	—	—
Principal payments and maturities	(12,760)	(6,010)	—	(18,770)	(2,326)	(26,290)
Amortization of premiums and accretion of discounts, net	—	(459)	(621)	(1,080)	(97)	(417)
Inflation adjustment on inflation-indexed securities	—	50	81	131	—	—
Annual reallocation adjustment ⁴	(816)	(56,386)	(21,793)	(78,995)	(4,373)	(38,887)
Balance December 31, 2012	\$ —	\$ 81,294	\$ 47,468	\$ 128,762	\$ 5,657	\$ 67,636
Year-ended December 31, 2011						
Supplemental information—par value of transactions:						
Purchases ³	\$ 27,551	\$ 81,912	\$ 14,695	\$ 124,158	\$ —	\$ 4,730
Sales ³	—	(15,571)	—	(15,571)	—	—
Year-ended December 31, 2012						
Supplemental information—par value of transactions:						
Purchases ³	\$11,449	\$ 32,835	\$ 17,246	\$ 61,530	\$ —	\$ 33,808
Sales ³	—	(41,355)	(741)	(42,096)	—	—

¹ Purchases and sales are reported on a settlement-date basis and may include payments and receipts related to principal, premiums, discounts, and inflation compensation adjustments to the basis of inflation-indexed securities. The amount reported as sales includes the realized gains and losses on such transactions. Purchases and sales exclude MBS TBA transactions that are settled on a net basis.

² Realized gains, net offset the amount of realized gains and losses included in the reported sales amount.

³ Includes inflation compensation

⁴ Reflects the annual adjustment to the Bank's allocated portion of the related SOMA securities that results from the annual settlement of the interdistrict settlement account, as discussed in Note 3i.

NOTES TO FINANCIAL STATEMENTS

	Total SOMA					
	Bills	Notes	Bonds	Total Treasury securities	GSE debt securities	Federal agency and GSE MBS
Balance December 31, 2010	\$ 18,422	\$ 786,575	\$ 261,955	\$ 1,066,952	\$ 152,972	\$ 1,004,695
Purchases ¹	239,487	731,252	161,876	1,132,615	—	42,145
Sales ¹	—	(137,734)	—	(137,734)	—	—
Realized gains, net ²	—	2,258	—	2,258	—	—
Principal payments and maturities	(239,494)	(67,273)	—	(306,767)	(43,466)	(195,413)
Amortization of premiums and accretion of discounts, net	8	(4,445)	(4,985)	(9,422)	(1,678)	(3,169)
Inflation adjustment on inflation-indexed securities	—	1,284	1,091	2,375	—	—
Balance December 31, 2011	\$ 18,423	\$ 1,311,917	\$ 419,937	\$ 1,750,277	\$ 107,828	\$ 848,258
Purchases ¹	118,886	397,999	263,991	780,876	—	431,487
Sales ¹	—	(507,420)	(11,727)	(519,147)	—	—
Realized gains, net ²	—	12,003	1,252	13,255	—	—
Principal payments and maturities	(137,314)	(67,462)	—	(204,776)	(27,211)	(324,181)
Amortization of premiums and accretion of discounts, net	5	(5,461)	(7,531)	(12,987)	(1,138)	(5,243)
Inflation adjustment on inflation-indexed securities	—	643	1,047	1,690	—	—
Balance December 31, 2012	\$ —	\$ 1,142,219	\$ 666,969	\$ 1,809,188	\$ 79,479	\$ 950,321
Year-ended December 31, 2011						
Supplemental information—par value of transactions:						
Purchases ³	\$ 239,494	\$ 713,878	\$ 127,802	\$ 1,081,174	\$ —	\$ 40,955
Sales ³	—	(134,829)	—	(134,829)	—	—
Year-ended December 31, 2012						
Supplemental information—par value of transactions:						
Purchases ³	\$ 118,892	\$ 383,106	\$ 205,115	\$ 707,113	\$ —	\$ 413,160
Sales ³	—	(492,234)	(9,094)	(501,328)	—	—

¹ Purchases and sales are reported on a settlement-date basis and may include payments and receipts related to principal, premiums, discounts, and inflation compensation adjustments to the basis of inflation-indexed securities. The amount reported as sales includes the realized gains and losses on such transactions. Purchases and sales exclude MBS TBA transactions that are settled on a net basis.

² Realized gains, net offset the amount of realized gains and losses included in the reported sales amount.

³ Includes inflation compensation

NOTES TO FINANCIAL STATEMENTS

b. Foreign Currency Denominated Assets

The FRBNY conducts foreign currency operations and, on behalf of the Reserve Banks, holds the resulting foreign currency denominated assets in the SOMA.

The FRBNY holds foreign currency deposits with foreign central banks and the Bank for International Settlements and invests in foreign government debt instruments of Germany, France, and Japan. These foreign government debt instruments are guaranteed as to principal and interest by the issuing foreign governments. In addition, the FRBNY enters into transactions to purchase Euro-denominated government debt securities under agreements to resell for which the accepted collateral is the debt instruments issued by the governments of Belgium, France, Germany, Italy, the Netherlands, and Spain.

The Bank's allocated share of activity related to foreign currency operations was 20.685 percent and 20.505 percent at December 31, 2012 and 2011, respectively.

Information about foreign currency denominated assets, including accrued interest, valued at amortized cost and foreign currency market exchange rates at December 31 was as follows (in millions):

	Allocated to Bank		Total SOMA	
	2012	2011	2012	2011
Euro:				
Foreign currency deposits	\$ 1,846	\$ 1,921	\$ 8,925	\$ 9,367
Securities purchased under agreements to resell	136	—	659	—
German government debt instruments	451	386	2,178	1,884
French government debt instruments	511	540	2,470	2,635
Japanese yen:				
Foreign currency deposits	735	817	3,553	3,986
Japanese government debt instruments	1,487	1,657	7,187	8,078
Total allocated to the Bank	\$ 5,166	\$ 5,321	\$ 24,972	\$ 25,950

The remaining maturity distribution of foreign currency denominated assets that were allocated to the Bank at December 31, 2012 and 2011, was as follows (in millions):

	Within 15 days	16 days to 90 days	91 days to 1 year	Over 1 year to 5 years	Total
December 31, 2012:					
Euro	\$ 1,366	\$ 357	\$ 448	\$ 773	\$ 2,944
Japanese yen	786	102	443	891	2,222
Total	\$ 2,152	\$ 459	\$ 891	\$ 1,664	\$ 5,166
December 31, 2011:					
Euro	\$ 1,097	\$ 601	\$ 434	\$ 715	\$ 2,847
Japanese yen	857	136	645	836	2,474
Total	\$ 1,954	\$ 737	\$ 1,079	\$ 1,551	\$ 5,321

There were no foreign exchange contracts related to open market operations outstanding as of December 31, 2012.

NOTES TO FINANCIAL STATEMENTS

The FRBNY enters into commitments to buy foreign government debt instruments and records the related securities on a settlement-date basis. As of December 31, 2012, there were no outstanding commitments to purchase foreign government debt instruments. During 2012, there were purchases, sales, and maturities of foreign government debt instruments of \$4,959 million, \$0, and \$4,840 million, respectively, of which \$1,025 million, \$0, and \$1,000 million, respectively, were allocated to the Bank.

In connection with its foreign currency activities, the FRBNY may enter into transactions that are subject to varying degrees of off-balance-sheet market risk and counterparty credit risk that result from their future settlement. The FRBNY controls these risks by obtaining credit approvals, establishing transaction limits, receiving collateral in some cases, and performing daily monitoring procedures.

At December 31, 2012 and 2011, the authorized warehousing facility was \$5 billion, with no balance outstanding.

There were no transactions related to the authorized reciprocal currency arrangements with the Bank of Canada and the Bank of Mexico during the years ended December 31, 2012 and 2011.

c. Central Bank Liquidity Swaps

U.S. Dollar Liquidity Swaps

The Bank's allocated share of U.S. dollar liquidity swaps was approximately 20.685 percent and 20.505 percent at December 31, 2012 and 2011, respectively.

The total foreign currency held under U.S. dollar liquidity swaps in the SOMA at December 31, 2012 and 2011, was \$8,889 million and \$99,823 million, respectively, of which \$1,839 million and \$20,469 million, respectively, was allocated to the Bank.

The remaining maturity distribution of U.S. dollar liquidity swaps that were allocated to the Bank at December 31 was as follows (in millions):

	2012			2011		
	Within 15 days	16 days to 90 days	Total	Within 15 days	16 days to 90 days	Total
Euro	\$ 360	\$ 1,479	\$ 1,839	\$ 7,045	\$ 10,474	\$ 17,519
Japanese yen	—	—	—	1,853	1,016	2,869
Swiss franc	—	—	—	65	16	81
Total	\$ 360	\$ 1,479	\$ 1,839	\$ 8,963	\$ 11,506	\$ 20,469

Foreign Currency Liquidity Swaps

There were no transactions related to the foreign currency liquidity swaps during the years ended December 31, 2012 and 2011.

d. Fair Value of SOMA Assets

The fair value amounts presented below are solely for informational purposes. Although the fair value of SOMA security holdings can be substantially greater than or less than the recorded value at any point in time, these unrealized gains or losses have no effect on the ability of the Reserve Banks, as the central bank, to meet their financial obligations and responsibilities.

The fair value of the fixed-rate Treasury securities, GSE debt securities, federal agency and GSE MBS, and foreign government debt instruments in the SOMA's holdings is subject to market risk, arising from movements in market variables such as interest rates and credit risk. The fair value of federal agency and GSE MBS is also affected by the expected rate of prepayments of mortgage loans underlying the securities. The fair value of foreign government debt instruments is affected by currency risk. Based on evaluations performed as of December 31, 2012, there are no credit impairments of SOMA securities holdings as of that date.

NOTES TO FINANCIAL STATEMENTS

The following tables present the amortized cost and fair value of the Treasury securities, GSE debt securities, federal agency and GSE MBS, and foreign currency denominated assets, net, held in the SOMA at December 31 (in millions):

	Allocated to the Bank					
	2012			2011		
	Amortized cost	Fair value	Fair value greater than amortized cost	Amortized cost	Fair value	Fair value greater than amortized cost
Treasury securities:						
Bills	\$ —	\$ —	\$ —	\$ 2,128	\$ 2,128	\$ —
Notes	81,293	86,344	5,051	151,513	160,465	8,952
Bonds	47,469	54,171	6,702	48,498	58,749	10,251
GSE debt securities	5,657	6,050	393	12,453	13,193	740
Federal agency and GSE MBS	67,636	70,744	3,108	97,965	103,421	5,456
Foreign currency denominated assets	5,166	5,200	34	5,321	5,355	34
Total SOMA portfolio securities holdings	\$ 207,221	\$ 222,509	\$ 15,288	\$ 317,878	\$ 343,311	\$ 25,433
Memorandum— Commitments for:						
Purchases of Treasury securities	\$ —	\$ —	\$ —	\$ 370	\$ 370	\$ —
Purchases of Federal agency and GSE MBS	8,414	8,427	13	4,793	4,836	43
Sales of Federal agency and GSE MBS	—	—	—	512	517	5
Purchases of foreign government debt instruments	—	—	—	44	44	—

NOTES TO FINANCIAL STATEMENTS

	Total SOMA					
	2012			2011		
	Amortized cost	Fair value	Fair value greater than amortized cost	Amortized cost	Fair value	Fair value greater than amortized cost
Treasury securities:						
Bills	\$ —	\$ —	\$ —	\$ 18,423	\$ 18,423	\$ —
Notes	1,142,219	1,213,177	70,958	1,311,917	1,389,429	77,512
Bonds	666,969	761,138	94,169	419,937	508,694	88,757
GSE debt securities	79,479	85,004	5,525	107,828	114,238	6,410
Federal agency and GSE MBS	950,321	993,990	43,669	848,258	895,495	47,237
Foreign currency denominated assets	24,972	25,141	169	25,950	26,116	166
Total SOMA portfolio securities holdings	\$ 2,863,960	\$ 3,078,450	\$ 214,490	\$ 2,732,313	\$ 2,952,395	\$ 220,082
Memorandum—Commitments for:						
Purchases of Treasury securities	\$ —	\$ —	\$ —	\$ 3,200	\$ 3,208	\$ 8
Purchases of Federal agency and GSE MBS	118,215	118,397	182	41,503	41,873	370
Sales of Federal agency and GSE MBS	—	—	—	4,430	4,473	43
Purchases of foreign government debt instruments	—	—	—	216	216	—

The fair value of Treasury securities, GSE debt securities, and foreign government debt instruments was determined using pricing services that provide market consensus prices based on indicative quotes from various market participants. The fair value of federal agency and GSE MBS was determined using a pricing service that utilizes a model-based approach that considers observable inputs for similar securities. The cost basis of foreign currency deposits adjusted for accrued interest approximates fair value. The contract amount for euro-denominated securities sold under agreements to repurchase approximates fair value.

The cost basis of securities purchased under agreements to resell, securities sold under agreements to repurchase, and other investments held in the SOMA approximate fair value.

Because the FRBNY enters into commitments to buy Treasury securities, federal agency and GSE MBS, and foreign government debt instruments and records the related securities on a settlement-date basis in accordance with the FAM, the related outstanding commitments are not reflected in the Statements of Condition.

NOTES TO FINANCIAL STATEMENTS

The following tables provide additional information on the amortized cost and fair values of the federal agency and GSE MBS portfolio at December 31 (in millions):

Distribution of MBS holdings by coupon rate	2012		2011	
	Amortized cost	Fair value	Amortized cost	Fair value
Allocated to the Bank:				
2.0%	\$ 60	\$ 60	\$ —	\$ —
2.5%	2,673	2,688	—	—
3.0%	11,431	11,513	152	154
3.5%	12,781	13,149	2,242	2,271
4.0%	9,805	10,388	18,649	19,606
4.5%	18,681	20,083	46,943	49,796
5.0%	8,904	9,410	21,076	22,251
5.5%	2,845	2,976	7,714	8,092
6.0%	402	419	1,057	1,110
6.5%	54	58	132	141
Total	\$ 67,636	\$ 70,744	\$ 97,965	\$ 103,421
Total SOMA:				
2.0%	\$ 845	\$ 846	\$ —	\$ —
2.5%	37,562	37,766	—	—
3.0%	160,613	161,757	1,313	1,336
3.5%	179,587	184,752	19,415	19,660
4.0%	137,758	145,955	161,481	169,763
4.5%	262,484	282,181	406,465	431,171
5.0%	125,107	132,213	182,497	192,664
5.5%	39,970	41,819	66,795	70,064
6.0%	5,642	5,888	9,152	9,616
6.5%	753	813	1,140	1,221
Total	\$ 950,321	\$ 993,990	\$ 848,258	\$ 895,495

NOTES TO FINANCIAL STATEMENTS

The following tables present the realized gains and the change in the unrealized gain position of the domestic securities holdings during the year ended December 31, 2012 (in millions):

	Allocated to the Bank		Total SOMA	
	Total portfolio holdings realized gains ¹	Fair value changes in unrealized gains ²	Total portfolio holdings realized gains ¹	Fair value changes in unrealized gains ²
Treasury securities	\$ 1,073	\$ (654)	\$ 13,255	\$ (1,142)
GSE debt securities	—	(76)	—	(885)
Federal agency and GSE MBS	23	(188)	241	(3,568)
Total	\$ 1,096	\$ (918)	\$ 13,496	\$ (5,595)

¹ Total portfolio holdings realized gains are reported in "Non-interest income: System Open Market Account" in the Statements of Income and Comprehensive Income.

² Because SOMA securities are recorded at amortized cost, unrealized gains (losses) are not reported in the Statements of Income and Comprehensive Income.

The amount of change in unrealized gains, net, related to foreign currency denominated assets was an increase of \$3 million for the year ended December 31, 2012, of which \$1 million was allocated to the Bank.

Accounting Standards Codification (ASC) Topic 820 (ASC 820) defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. ASC 820 establishes a three-level fair value hierarchy that distinguishes between assumptions developed using market data obtained from independent sources (observable inputs) and the Bank's assumptions developed using the best information available in the circumstances (unobservable inputs). The three levels established by ASC 820 are described as follows:

- Level 1 – Valuation is based on quoted prices for identical instruments traded in active markets.
- Level 2 – Valuation is based on quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market.
- Level 3 – Valuation is based on model-based techniques that use significant inputs and assumptions not observable in the market. These unobservable inputs and assumptions reflect the Bank's estimates of inputs and assumptions that market participants would use in pricing the assets and liabilities. Valuation techniques include the use of option pricing models, discounted cash flow models, and similar techniques.

The following table presents the classification of SOMA financial assets at fair value as of December 31 by ASC 820 hierarchy (in millions):

	2012	2011
	Level 2	Level 2
Assets:		
Treasury securities	\$ 1,974,315	\$ 1,916,546
GSE debt securities	85,004	114,237
Federal agency and GSE MBS	993,990	895,495
Foreign government debt instruments	12,003	12,762
Total assets	\$ 3,065,312	\$ 2,939,040

The SOMA financial assets are classified as Level 2 in the table above because the fair values are based on indicative quotes and other observable inputs obtained from independent pricing services that, in accordance with ASC 820, are consistent with the criteria for Level 2 inputs. Although information consistent with the criteria for Level 1 classification may exist for some portion of the SOMA assets, all securities in each asset class were valued using the inputs that are most applicable to the securities in the asset class. The inputs used for valuing the SOMA financial assets are not necessarily an indication of the risk associated with those assets.

6 BANK PREMISES, EQUIPMENT, AND SOFTWARE

Bank premises and equipment at December 31 were as follows (in millions):

	2012	2011
Bank premises and equipment:		
Land and land improvements	\$ 48	\$ 48
Buildings	238	234
Building machinery and equipment	79	76
Construction in progress	4	2
Furniture and equipment	336	296
Subtotal	705	656
Accumulated depreciation	(359)	(323)
Bank premises and equipment, net	\$ 346	\$ 333
Depreciation expense, for the years ended December 31	\$ 58	\$ 50

Bank premises and equipment at December 31 included the following amounts for capitalized leases (in millions):

	2012	2011
Leased premises and equipment under capital leases	\$ 33	\$ 24
Accumulated depreciation	(20)	(13)
Leased premises and equipment under capital leases, net	\$ 13	\$ 11
Depreciation expense related to leased premises and equipment under capital leases	\$ 7	\$ 5

NOTES TO FINANCIAL STATEMENTS

The Bank leases space to outside tenants with remaining lease terms ranging from one to six years. Rental income from such leases was \$1 million for each of the years ended December 31, 2012 and 2011, respectively, and is reported as a component of “Non-interest income: Other” in the Statements of Income and Comprehensive Income. Future minimum lease payments that the Bank will receive under non-cancelable lease agreements in existence at December 31, 2012, are as follows (in millions):

2013	\$	1.3
2014		1.4
2015		1.3
2016		1.4
2017		0.6
Total	\$	6.0

The Bank had capitalized software assets, net of amortization, of \$39 million and \$35 million at December 31, 2012 and 2011, respectively. Amortization expense was \$16 million and \$13 million for the years ended December 31, 2012 and 2011, respectively. Capitalized software assets are reported as a component of “Other assets” in the Statements of Condition and the related amortization is reported as a component of “Operating expenses: Other” in the Statements of Income and Comprehensive Income.

7 COMMITMENTS AND CONTINGENCIES

In conducting its operations, the Bank enters into contractual commitments, normally with fixed expiration dates or termination provisions, at specific rates and for specific purposes.

At December 31, 2012, the Bank was obligated under non-cancelable leases for premises and equipment with remaining terms ranging from two to approximately three years.

Rental expense under operating leases for certain operating facilities, warehouses, and data processing and office equipment (including taxes, insurance, and maintenance when included in rent), net of sublease rentals, was \$445 thousand and \$360 thousand for the years ended December 31, 2012 and 2011, respectively. Certain of the Bank’s leases have options to renew.

Future minimum rental payments under non-cancelable operating leases, net of sublease rentals, with terms of one year or more, at December 31, 2012, were not material.

At December 31, 2012, there were no material unrecorded unconditional purchase commitments or obligations in excess of one year.

Under the Insurance Agreement of the Reserve Banks, each of the Reserve Banks has agreed to bear, on a per incident basis, a share of certain losses in excess of one percent of the capital paid-in of the claiming Reserve Bank, up to 50 percent of the total capital paid-in of all Reserve Banks. Losses are borne in the ratio of a Reserve Bank’s capital paid-in to the total capital paid-in of all Reserve Banks at the beginning of the calendar year in which the loss is shared. No claims were outstanding under the agreement at December 31, 2012 and 2011.

The Bank is involved in certain legal actions and claims arising in the ordinary course of business. Although it is difficult to predict the ultimate outcome of these actions, in management’s opinion, based on discussions with counsel, the legal actions and claims will be resolved without material adverse effect on the financial position or results of operations of the Bank.

8 RETIREMENT AND THRIFT PLANS

Retirement Plans

The Bank currently offers three defined benefit retirement plans to its employees, based on length of service and level of compensation. Substantially all of the employees of the Reserve Banks, Board of Governors, and Office of Employee Benefits of the Federal Reserve System (OEB) participate in the Retirement Plan for Employees of the Federal Reserve System (System Plan). Under the Dodd-Frank Act, newly hired Bureau employees are eligible to participate in the System Plan and transferees from other governmental organizations can elect to participate in the System Plan. In addition, employees at certain compensation levels participate in the Benefit Equalization Retirement Plan (BEP) and certain Reserve Bank officers participate in the Supplemental Retirement Plan for Select Officers of the Federal Reserve Banks (SERP).

The System Plan provides retirement benefits to employees of the Reserve Banks, Board of Governors, OEB, and certain employees of the Bureau. The FRBNY, on behalf of the System, recognizes the net asset or net liability and costs associated with the System Plan in its consolidated financial statements. During the years ended December 31, 2012 and 2011, certain costs associated with the System Plan were reimbursed by the Bureau.

The Bank's projected benefit obligation, funded status, and net pension expenses for the BEP and the SERP at December 31, 2012 and 2011, and for the years then ended, were not material.

Thrift Plan

Employees of the Bank participate in the defined contribution Thrift Plan for Employees of the Federal Reserve System (Thrift Plan). The Bank matches 100 percent of the first six percent of employee contributions from the date of hire and provides an automatic employer contribution of one percent of eligible pay. The Bank's Thrift Plan contributions totaled \$15 million and \$14 million for the years ended December 31, 2012 and 2011, respectively, and are reported as a component of "Operating expenses: Salaries and benefits" in the Statements of Income and Comprehensive Income.

9 POSTRETIREMENT BENEFITS OTHER THAN RETIREMENT PLANS AND POSTEMPLOYMENT BENEFITS

Postretirement Benefits Other Than Retirement Plans

In addition to the Bank's retirement plans, employees who have met certain age and length-of-service requirements are eligible for both medical and life insurance benefits during retirement.

The Bank funds benefits payable under the medical and life insurance plans as due and, accordingly, has no plan assets.

Following is a reconciliation of the beginning and ending balances of the benefit obligation (in millions):

	2012	2011
Accumulated postretirement benefit obligation at January 1	\$ 221.9	\$ 193.0
Service cost benefits earned during the period	11.0	8.6
Interest cost on accumulated benefit obligation	10.3	10.4
Net actuarial loss	29.7	17.9
Special termination benefits loss	0.1	—
Contributions by plan participants	2.7	2.7
Benefits paid	(11.2)	(10.5)
Medicare Part D subsidies	0.7	0.7
Plan amendments	—	(0.9)
Accumulated postretirement benefit obligation at December 31	\$ 265.2	\$ 221.9

NOTES TO FINANCIAL STATEMENTS

At December 31, 2012 and 2011, the weighted-average discount rate assumptions used in developing the postretirement benefit obligation were 3.75 percent and 4.50 percent, respectively.

Discount rates reflect yields available on high-quality corporate bonds that would generate the cash flows necessary to pay the plan's benefits when due.

Following is a reconciliation of the beginning and ending balance of the plan assets, the unfunded postretirement benefit obligation, and the accrued postretirement benefit costs (in millions):

	2012	2011
Fair value of plan assets at January 1	\$ —	\$ —
Contributions by the employer	7.8	7.1
Contributions by plan participants	2.7	2.7
Benefits paid	(11.2)	(10.5)
Medicare Part D subsidies	0.7	0.7
Fair value of plan assets at December 31	\$ —	\$ —
Unfunded obligation and accrued postretirement benefit cost	\$ 265.2	\$ 221.9
Amounts included in accumulated other comprehensive loss are shown below:		
Prior service cost	\$ 13.0	\$ 17.2
Net actuarial loss	(90.3)	(66.2)
Total accumulated other comprehensive loss	\$ (77.3)	\$ (49.0)

Accrued postretirement benefit costs are reported as a component of "Accrued benefit costs" in the Statements of Condition.

For measurement purposes, the assumed health-care cost trend rates at December 31 are as follows:

	2012	2011
Health-care cost trend rate assumed for next year	7.00%	7.50%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	5.00%	5.00%
Year that the rate reaches the ultimate trend rate	2018	2017

Assumed health-care cost trend rates have a significant effect on the amounts reported for health-care plans. A one percentage point change in assumed health-care cost trend rates would have the following effects for the year ended December 31, 2012 (in millions):

	One percentage point increase	One percentage point decrease
Effect on aggregate of service and interest cost components of net periodic postretirement benefit costs	\$ 4.3	\$ (3.4)
Effect on accumulated postretirement benefit obligation	46.1	(37.1)

NOTES TO FINANCIAL STATEMENTS

The following is a summary of the components of net periodic postretirement benefit expense for the years ended December 31 (in millions):

	2012	2011
Service cost benefits earned during the period	\$ 11.0	\$ 8.6
Interest cost on accumulated benefit obligation	10.3	10.4
Amortization of prior service cost	(4.2)	(4.3)
Amortization of net actuarial loss	5.6	4.1
Total periodic expense	22.7	18.8
Special termination benefits loss	0.1	—
Net periodic postretirement benefit expense	\$ 22.8	\$ 18.8

Estimated amounts that will be amortized from accumulated other comprehensive loss into net periodic postretirement benefit expense in 2013 are shown below:

Prior service cost	\$ (4.0)
Net actuarial loss	8.0
Total	\$ 4.0

Net postretirement benefit costs are actuarially determined using a January 1 measurement date. At January 1, 2012 and 2011, the weighted-average discount rate assumptions used to determine net periodic postretirement benefit costs were 4.50 percent and 5.25 percent, respectively.

Net periodic postretirement benefit expense is reported as a component of “Operating expenses: Salaries and benefits” in the Statements of Income and Comprehensive Income.

The Medicare Prescription Drug, Improvement and Modernization Act of 2003 established a prescription drug benefit under Medicare (Medicare Part D) and a federal subsidy to sponsors of retiree health-care benefit plans that provide benefits that are at least actuarially equivalent to Medicare Part D. The benefits provided under the Bank’s plan to certain participants are at least actuarially equivalent to the Medicare Part D prescription drug benefit. The estimated effects of the subsidy are reflected in actuarial loss in the accumulated postretirement benefit obligation and net periodic postretirement benefit expense.

Federal Medicare Part D subsidy receipts were \$546 thousand and \$512 thousand in the years ended December 31, 2012 and 2011, respectively. Expected receipts in 2013, related to benefits paid in the years ended December 31, 2012 and 2011, are \$432 thousand.

Following is a summary of expected postretirement benefit payments (in millions):

	Without subsidy	With subsidy
2013	\$ 9.9	\$ 9.2
2014	10.4	9.6
2015	11.1	10.3
2016	11.8	10.8
2017	12.6	11.5
2018–2022	77.2	70.0
Total	\$ 133.0	\$ 121.4

NOTES TO FINANCIAL STATEMENTS

Postemployment Benefits

The Bank offers benefits to former or inactive employees. Postemployment benefit costs are actuarially determined and include the cost of medical and dental insurance, survivor income, disability benefits, and self-insured workers' compensation expenses. The accrued postemployment benefit costs recognized by the Bank at December 31, 2012 and 2011, were \$23 million and \$20 million, respectively. This cost is included as a component of "Accrued benefit costs" in the Statements of Condition. Net periodic postemployment benefit expense included in 2012 and 2011 operating expenses were \$5 million and \$4 million, respectively, and are recorded as a component of "Operating expenses: Salaries and benefits" in the Statements of Income and Comprehensive Income.

10 ACCUMULATED OTHER COMPREHENSIVE INCOME AND OTHER COMPREHENSIVE INCOME

Following is a reconciliation of beginning and ending balances of accumulated other comprehensive loss as of December 31 (in millions):

	2012	2011
	Amount related to postretirement benefits other than retirement plans	Amount related to postretirement benefits other than retirement plans
Balance at January 1	\$ (49)	\$ (31)
Change in funded status of benefit plans:		
Amortization of prior service cost	(4)	(4)
Change in prior service costs related to benefit plans	(4)	(4)
Net actuarial loss arising during the year	(30)	(18)
Amortization of net actuarial loss	6	4
Change in actuarial losses related to benefit plans	(24)	(14)
Change in funded status of benefit plans—other comprehensive loss	(28)	(18)
Balance at December 31	\$ (77)	\$ (49)

Additional detail regarding the classification of accumulated other comprehensive loss is included in Note 9.

11 BUSINESS RESTRUCTURING CHARGES

The Bank had no business restructuring charges in 2012 or 2011.

In years prior to 2011, the Reserve Banks announced restructuring programs associated with the U.S. Treasury's Collections and Cash Management Modernization (CCRM) initiative. As of December 31, 2012 and 2011, the remaining liability related to these restructuring programs was not material.

12 DISTRIBUTION OF COMPREHENSIVE INCOME

In accordance with Board policy, Reserve Banks remit excess earnings, after providing for dividends and the amount necessary to equate surplus with capital paid-in, to the U.S. Treasury as interest on Federal Reserve notes. The following table presents the distribution of the Bank's comprehensive income in accordance with the Board's policy for the years ended December 31 (in millions):

	2012	2011
Dividends on capital stock	\$ 332	\$ 330
Transfer to surplus—amount required to equate surplus with capital paid-in	182	125
Interest on Federal Reserve notes expense remitted to Treasury	6,414	8,749
Total distribution	\$ 6,928	\$ 9,204

13 SUBSEQUENT EVENTS

There were no subsequent events that require adjustments to or disclosures in the financial statements as of December 31, 2012. Subsequent events were evaluated through March 14, 2013, which is the date that the Bank issued the financial statements.

ABBREVIATIONS

ACH Automated clearinghouse

ASC Accounting Standards Codification

ASU Accounting Standards Update

BEP Benefit Equalization Retirement Plan

Bureau Bureau of Consumer Financial Protection

FAM *Financial Accounting Manual for Federal Reserve Banks*

FASB Financial Accounting Standards Board

Fannie Mae Federal National Mortgage Association

Freddie Mac Federal Home Loan Mortgage Corporation

FOMC Federal Open Market Committee

FRBNY Federal Reserve Bank of New York

GAAP Accounting principles generally accepted in the United States of America

GSE Government-sponsored enterprise

IMF International Monetary Fund

MBS Mortgage-backed securities

OEB Office of Employee Benefits of the Federal Reserve System

OFR Office of Financial Research

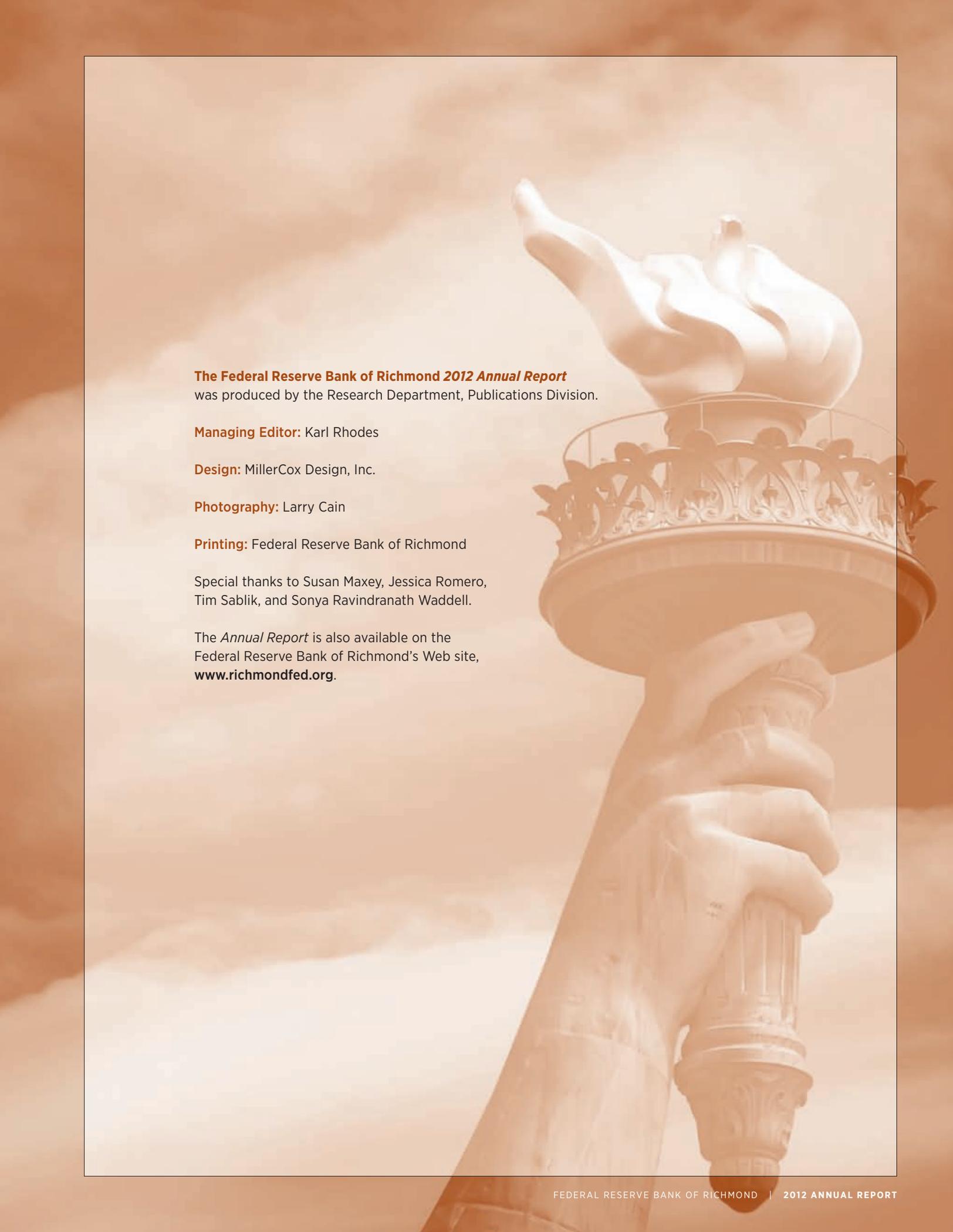
SDR Special drawing rights

SERP Supplemental Retirement Plan for Select Officers of the Federal Reserve Banks

SOMA System Open Market Account

TBA To be announced

TDF Term Deposit Facility



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**FIFTH FEDERAL RESERVE
DISTRICT OFFICES**

Richmond

701 East Byrd Street
Richmond, Virginia 23219
(804) 697-8000

Baltimore

502 South Sharp Street
Baltimore, Maryland 21201
(410) 576-3300

Charlotte

530 East Trade Street
Charlotte, North Carolina 28202
(704) 358-2100



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