

# Federal Reserve Bank of Richmond 2007 Annual Report



**ARE WE SAVING ENOUGH?**  
Households and Retirement

## **Mission**

As a regional Reserve Bank, we work within the Federal Reserve System to foster the stability, integrity, and efficiency of the nation's monetary, financial, and payments systems. In doing so, we inspire trust and confidence in the U.S. financial system.

## **Vision**

To be an innovative policy and services leader for America's economy.

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# Message from the President

For many Americans, 2007 was a difficult year. Housing markets were considerably weaker than most economists expected at the beginning of the year. Residential construction and home prices declined steadily, and the resulting erosion in home equity contributed to rising delinquencies and foreclosures, particularly on more recent mortgage vintages. Financial markets were



rattled as losses mounted on securities backed by pools of home mortgages. The loss of housing-related jobs dragged down overall employment growth in the second half of the year. Real household income gains moderated, held down as well by rising food and energy prices. Consumer spending held up fairly well through the year, but then flattened out in the last few months.

Inflation was disappointing as well last year. The price index for personal consumption expenditures rose by 3.6 percent during 2007, compared to 2.3 percent the year before. Rapid increases in food and energy prices were the obvious culprits, but that provides little comfort to this central banker. The Federal Reserve is responsible for keeping *total* inflation low and stable—including food and energy prices. While the effects of unexpected commodity price increases are difficult to offset rapidly, an appropriate monetary policy would ensure that such shocks even out over time and do not impart

a persistent inflation bias—either up or down.

Amid all the talk of a near-term downturn, it's important not to lose sight of the long-term economic challenges we will face when growth resumes, as it inevitably will. For example, the movement of the baby boomers into retirement raises a host of complex, inter-related issues. Historically, Social Security and Medicare have served as important backstops

average across the entire population. The aggregate saving rate doesn't tell us much about the saving habits of individual U.S. households. Nor does it fully capture changes in the financial assets that families commonly count among their wealth holdings, such as housing equity, pensions, and their expected Social Security benefits. To worry about saving behavior based solely on the drop in

for retirees. But the solvency of these programs is threatened, and fixing them will require either reduced benefits, or increased taxes or debt. Meanwhile, many of today's workers no longer can count on defined-benefit pensions to provide annuities that they can't outlive. Instead, they are learning to finance their own retirement eggs with defined-contribution pensions, most commonly 401(k) plans. And though we have evidence that most Americans are saving reasonably well given their incomes, we also know that some people aren't. Financial literacy programs can help in this regard, but with limits.

We address these issues in this year's Annual Report essay. Our main intent is to explain what the data tell us about Americans' saving habits, and what that may portend as the population ages. It is true that the personal saving rate in the United States has declined to historical lows, even dropping into negative territory during 2005. But that measure of personal savings is an

the saving rate would be a mistake.

The economics of how households allocate spending over their life cycle is instructive in this discussion. People tend to smooth their consumption throughout their lifetimes based on how much they expect to earn. To look at a young worker's assets, one might get the impression that his savings are inadequate. But it's natural for young people to borrow in their early working years. Many are anticipating making more money as they get older. In middle age, the peak earning years, people save at a more rapid rate to accumulate assets to draw on in retirement. This life-cycle theory of consumption and saving behavior has held up quite well in studies that match it against the data.

Through the lens of life-cycle theory, one way to think about savings is how well households are saving given their present and expected income levels. An optimal savings pattern would provide a household with a stream of retirement spending that is close



to pre-retirement spending when adjusted for work-related expenses. Careful research reveals two important things. First, most households nearing retirement appear to have saved reasonably well; the wealth that they can draw on is enough to provide them with a smooth spending transition upon retirement. Second, the largest concentration of “undersavers” is at the bottom tail of the income distribution. In other words, poor people are most likely to also not be saving enough to provide for adequate consumption spending in retirement. This suggests that our approach to “undersaving” problems should best be thought of as part of a broader approach to problems associated with poverty.

These estimates of the adequacy of retirement savings depend critically on the assumption that Social Security and Medicare benefits remain at their current statutory levels. The aging of the baby boom generation challenges those assumptions, because it means a larger share of old people in the population and a smaller share of young. Add to that the fact that Americans are living longer and having fewer children.

With most baby boomers still in the labor force at present, we have five working-age adults for every person aged 65 and above. Twenty years from now, there will be three working-age adults for every elderly person. This means that our economy will produce fewer goods and services, per person, than it would if these demographic shifts did not occur. There will be a relatively smaller consumption pie, resulting in smaller consumption possibilities per person than would otherwise be possible.

This perspective is the key to understand-

ing the pros and cons of various proposals to “fix” the federal retirement benefit programs. The projected insolvency of the Social Security and Medicare funds implies an additional burden for some segment of the population. Cutting benefits when the funds are depleted would reduce the consumption of the generation now retiring. Raising taxes would reduce the consumption of the next working-age generation. Issuing debt would likely mean higher taxes and reduced consumption for the generations beyond today’s young. Whether we raise taxes, cut benefits, or issue debt to cover future deficits, someone will need to consume less than they otherwise would.

Reasonable people can disagree about which solution to our federal retirement problems is best. By itself, economics has little to say about the advisability, as opposed to the costs, of redistributing resources among different population segments and different generations, and we make no recommendations here. But economists are unanimous that the sooner we settle on a solution and begin preparing for it, the better off we are likely to be. The more lead time people have to adjust their retirement saving plans, the more they will be able to smooth the adjustment costs over their lifetime.

Long after the current slowdown has past, the fundamental macroeconomic problems surrounding retirement savings will remain. We hope our essay helps you think it through.



Jeffrey M. Lacker  
President





# ARE WE SAVING ENOUGH?

## Households and Retirement

*By Doug Campbell and John A. Weinberg*



*The authors are respectively an economics writer in the Research Department, and Senior Vice President and Director of Research. The views expressed are the authors' and not necessarily those of the Federal Reserve System.*



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**On October 15 of last year, a retired school teacher from Earleville, Maryland, sat down at a computer terminal and typed responses to four “yes” or “no” questions, beginning with, “Are you at least 61 years and 9 months old?” In answering affirmatively, Kathleen Casey-Kirschling made history. Born one second after midnight New Year’s Day, 1946, she was the first of the 78-million-member baby boom generation to apply for Social Security benefits. She became eligible to collect with the turn of 2008.**

The reason Casey-Kirschling’s otherwise everyday act made news is no mystery. In part because there are so many baby boomers relative to the overall population, Social Security payments to retirees are projected to exceed payroll tax revenues in less than 10 years. By 2041, benefits will have to decline, or taxes or government borrowing will have to increase. In the case of Medicare, the health care insurance system for the American elderly, similar changes are expected to be necessary as early as 2019.

The baby boom generation’s retirement brings into focus perhaps the most significant demographic shift in United States history. Baby boomers, the moniker for the generation born between 1946 and 1964, comprise about 26 percent of the overall U.S. population. Their sheer numbers assure that future growth in the labor force will slow by comparison to recent decades. The birth rate seems unlikely to ever spike up to that experienced in the 1950s, and life expectancy continues to increase.

In 1940, people who had already reached the age of 65 were expected to live to be 77.7 years. By 2030, life expectancy for 65-year-olds is projected to reach 83.7 years. At the same time, birth rates are falling: In 1955—the core of the baby boom—the average woman had 3.5 children in her lifetime; by 2005, the birth rate had leveled off to about 2 children per woman, a trend that is projected to hold steady for the next 25 years.

These trends signify long-term ramifications for the economic well-being of American households. First, the big picture: Population aging presents a problem of consumption maintenance. If a growing number of older people move into retirement, then there are fewer people working as a share of the population, increasing the so-called dependency ratio shown in the first figure in this article. So on a per-person basis, there would be relatively fewer goods and

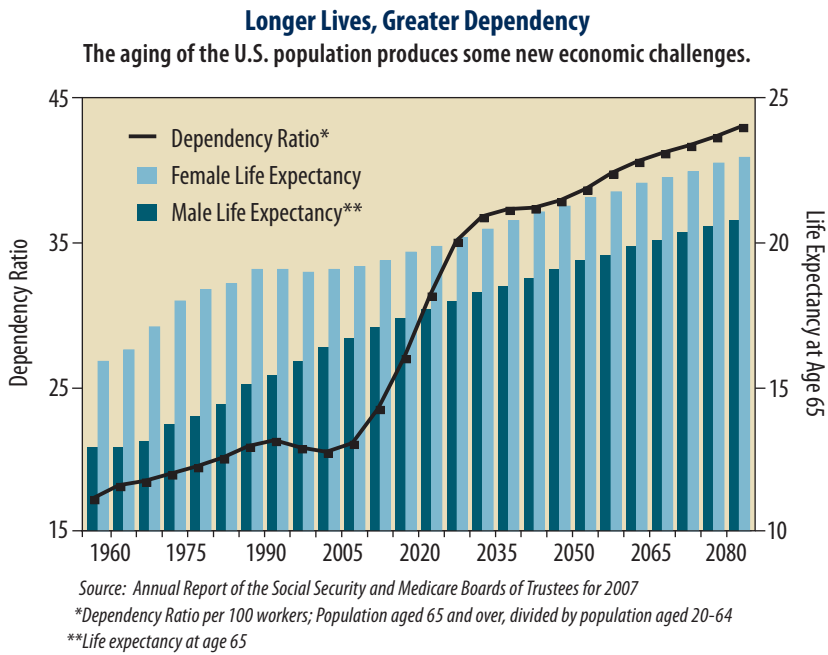
services being produced. The upshot is that people could have less to consume than in the absence of population aging. This statement requires the economist's usual "other-things-being-equal" qualification, which means that other factors in the economy affect economic output per person. Most importantly, productivity growth resulting from technical change or improved work force skills increases output per worker. But regardless of the status of such other factors, an aging population probably means lower average consumption-per-person than would otherwise be possible.

Second, beyond the sustainability of national consumption, population aging threatens the sustainability of the nation's

entitlement programs. Social Security and Medicare are pay-as-you-go programs, meaning younger generations of workers finance the retirements of older generations. For Social Security, the present value of benefits promised to older cohorts is \$13.6 trillion greater than the present value of scheduled tax contributions to the system, according to the Treasury Department. As large numbers of baby boomers retire, they will drain those promised benefits to the point where incoming tax revenue will no longer be sufficient to keep the programs solvent. A similar issue exists at the state and local levels, where many public-employee pension and retiree health care plans are less than fully funded. The growth of public-

sector obligations to retiring boomers could strain government budgets at many levels.

Strains on entitlements are only one type of challenge facing today's workers. Employees also are adjusting to the predominance of a relatively new form of retirement saving—defined-contribution pensions, most commonly in the form of employer-sponsored 401(k) plans, in which workers are the main suppliers to their retirement plans. Under such a plan, a household could potentially





outlive its savings, unless it was effectively annuitized.

Fading away are defined-benefit pensions, which provide guaranteed income streams for retirees that they can't outlive. At precisely the time at which public transfer back-

stops that mitigate the problem of longer lifespans are in trouble, responsibility for saving is being placed upon the shoulders of individuals, as is the investment risk.

Despite the heightened importance of individual preparedness for retirement, a puzzling observation is that Americans seem to be saving less than ever. The personal saving rate, for example, has been declining. And there is no shortage of anecdotes about overboard consumer spending and people entering their 60s with no nest eggs.

All of this adds up to quite a laundry list of concerns. To review, we have an aging population, which means problems in maintaining national consumption as well as maintaining entitlement programs like Social Security and Medicare. Then we have the tricky transition from guaranteed defined-benefit pensions to employee-driven, defined-contribution 401(k) plans. And finally we have economic statistics that

appear to show that Americans are saving at historically low rates. We are left with a big question: Are U.S. households going to be financially prepared for retirement?

In this essay, we initially aim to clear up some misconceptions about Americans' saving habits. We look at the data on demographics, pensions, and wealth, seeking to identify which trends merit concern and action, and which may not.

Our emphasis is on households. Why households? In the popular media, the cited statistics are almost always aggregate—they consider the state of things across the board rather than by household. The popular press reports endless stories about perilously low saving rates; the implication is that “the economy” is in trouble. But our interest isn't in the aggregate economy but in the economic well-being of individual households—people, couples, and families. In fact, when you look at the data on individual households—that is, disaggregated data—a surprisingly different picture emerges. Most households near retirement *are* saving adequately. Crucially, insofar as future policies are concerned, their saving is as modern economic theory predicts: They are mostly doing the best they can given their incomes.

Then we consider the future. The finding that households are now saving optimally assumes that the government will deliver on promised Social Security and Medicare benefits. But the demographic shift will

stress the federal budget, imperiling those benefits. In addition, we face the related problem that the demographic shift may reduce the size of the overall pie that households can consume (relative to a world in which no demographic change occurs). It might seem wise to find a way to spread these burdens across generations so that future generations don't take the biggest hit. Those ways might include saving more, taxing more, or borrowing more. We will explore the effects of these different approaches, with particular attention to their unintended effects. Understanding the economic tradeoffs inherent in each of these strategies may help us choose well.

## Measuring Savings

It goes without saying that saving is important. Taking income from present consumption and moving it to savings allows us to finance spending on both physical and human capital to increase the future standard of living. The growth of future living standards depends on how much income is set aside for savings, as well as growth in productivity.

Concern about Americans' readiness for retirement generally can be traced to a single source—the personal saving rate. The most widely cited measure of personal saving comes from the U.S. government's National Income and Products Accounts (NIPA). Boiled down, the NIPA measure is

## Why Aren't (Some) People Saving More?

Though careful studies show that many people are saving enough, it's also clear that some people aren't. Why not?

The first possible explanation is that figuring out how much to save is complicated. Economic theory holds that people seek to smooth consumption over their lifetimes. But in the 21st century, this is not such an easy calculation. Annamaria Lusardi and Olivia Mitchell explain the difficulty this way: "The consumer must understand present discounted values, the difference between nominal and real amounts, and be able to project expected future labor income, pensions and Social Security benefits, retirement ages, and survival probabilities, among many other factors. These requirements are inherently complex and demanding."

Within the "it's complicated" explanation fall several sub-categories. Some people, for example, may use simple rules of thumb in planning for retirement. These rules might include aiming for certain replacement rates of income upon reaching retirement. But because of the complex nature of investment decisions, this sort of planning may still fall short, and retirees may have to shift down their consumption to adjust. (Some economists dispute the notion that consumers have to understand every detail to properly save for retirement. These economists argue that most people make estimates that turn out to be accurate.)

A related explanation is that people may believe themselves to be financially sophisticated when they really aren't. However, some

recent research by Lusardi and Mitchell discounts this notion, finding that most people who classify themselves as financially literate indeed score well on related testing.

A branch of economics is interested in the idea that undersaving reflects a lack of self-control. Some surveys have shown that households themselves cite "lack of willpower" for their low savings, while others admit to procrastination. Behavioral economists use these examples in support of their theories of why people deviate from standard economic rules.

Though much of this kind of work is open to question, recent behavioral research on participation in 401(k) plans is striking. The research has shown that if employers make "opt in" the default choice for such plans, more people automatically end up saving than if "opt out" is the default. This evidence runs contrary to traditional theory, which holds that people ought to be making the same decision whether it is the default or not.

Many studies point to a graver problem than the misperception that most people aren't saving enough—it's that undersaving is most widespread among the poor. A possible explanation is that because they have less to gain, poor people invest less in financial planning that would help them save more. They may also face disincentives to saving because of financial backstops like Social Security and welfare transfers. Like a lot of research on savings, this finding points to the need for raising wealth for those with low incomes as much as for increasing their savings.



disposable—or after-tax— income minus spending.

This measure held mostly steady between 7 percent and 10 percent of disposable income from the 1950s through the early 1980s. It then began to fall, going south of 7 percent in 1990, to 4 percent in 1996, and 2.3 percent in 2001. In 2005, it went into negative territory. In 2006, Americans saved an average of 0.4 percent of their

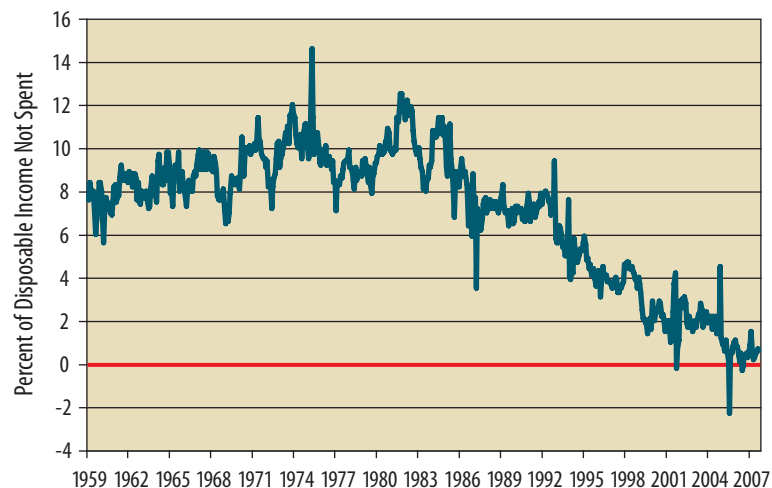
disposable income, and the saving rate has hovered around zero since then. It is impossible to ignore the sharp downward movement that this rate has displayed over the past two decades, and it has fallen more sharply than in most other developed countries.

Why have savings trended so far south? Many assume the main problem is self-control, or lack thereof. People may spend to satisfy immediate needs or cravings, ignoring reality or hoping against all evidence that the future will bring more wealth. A related story is that credit has become easy to obtain, leading households to take on more debt—or at least saving less because they know they can borrow in an emergency.

The components of the NIPA saving rate are worth a closer look. C. Alan Garner, an

## Personal Saving Rate

The personal saving rate has drifted steadily downward since the 1980s.



Source: U.S. Department of Commerce

economist with the Federal Reserve Bank of Kansas City, points out several potential shortcomings. The NIPA rate computes how much household income is put aside for other uses, such as investments in homes or businesses. But it excludes capital gains and losses on existing assets. Therefore, it doesn't include potential changes in wealth from assets ranging from stocks to home equity.

The 1990s and early 2000s saw significant increases in both stocks and housing values. Perhaps households, feeling wealthier, were motivated to spend more. Indeed, some economists believe that there is a "wealth effect" on consumption; when household wealth rises or falls, consumption will go in the same direction.

Measured savings is a consequence of households' consumption decisions and shows the difference between measured

income and the resulting consumption. Consumption can grow with no corresponding increase in measured income, which drives the saving rate lower but this could be because actual income increased more rapidly than measured income. Meanwhile, those examining the NIPA rate don't have the same perspective as consumers, whose confidence in their future earnings or wealth isn't directly observed. To observers, it may look like some households are saving too little; for some of those households, it may just be a case of spending now in anticipation of higher income later.

For data on household wealth, the Federal Reserve's Flow of Funds Accounts provides some aggregate figures. Overall, wealth has gone up almost every year (it dropped in the 2001 recession), though the growth has slowed in recent decades. It may seem surprising that the saving rate has gone down while net household wealth has gone up. But the two are not historically connected, as wealth changes are a product mostly of changes in stock and real estate asset prices, which are not taken into account by the standard measures of saving. By itself, the NIPA rate doesn't tell us whether Americans are likely to reach retirement with sufficient wealth.

As with all national economic indicators, later revisions can change initial results. Historically, the NIPA saving rate has mostly been revised upward, and sometimes by

large amounts. Leonard Nakamura and Tom Stark, economists with the Federal Reserve Bank of Philadelphia, find that initial estimates of personal savings from 1965 to 1999 on average were revised upward by 2.8 percentage points. For the fourth quarter of 1981, for example, the revision was up 7.3 percentage points. Nakamura and Stark attribute the differences to new methodologies that take into account new sources of household income. New data from Census revisions also may play a role in adjusting estimated business sales, which in turn affect personal consumption expenditures captured in NIPA.

Finally, the saving rate is an aggregate measure. It gives no sense of savings across the population's distribution. How much are low-income households saving compared with high-income households? The NIPA saving rate, as generally cited, does not address this question.

### **A Closer Look at Wealth**

Many studies have looked at more robust measures of household wealth. Alicia Munnell and Mauricio Soto, economists at Boston College, analyzed the Health and Retirement Study (HRS), which provides panel data from an initial 1992 sample of 7,600 households aged 51 to 61. It provides a close-up look at where household savings are located at the cusp of retirement.

Financial planners often rely on replace-





ment rates to gauge whether their clients are saving as much as they should. A replacement rate assesses the amount of spending a retired household's savings can sustain relative to its pre-retirement income. A typical rule of thumb is that a retired household should plan to spend between 75 percent and 85 percent of annual income before retirement, because even though expenditures on things like health care might increase, living expenses generally are lower for old people. Munnell and Soto calculate average income replacement rates for households of adult couples with pensions at 79 percent and those without pensions at 62 percent. Clearly, households with replacement rates of 62 percent can expect to experience declines in their living standards upon retirement. On the other hand, these couples who lack pensions make up just 25 percent of the sampled population.

Sizing up these figures, Munnell and Soto conclude that: "The majority of households retiring today are in

pretty good shape. Regardless of how retirement income and pre-retirement income are defined, households with pensions appear to meet the threshold of adequacy."

Importantly, Munnell and Soto found that for the mean of the middle 20 percent of soon-to-retire U.S. households, expected payments from Social Security represent an average of 48 percent of their wealth. Their prediction about the adequacy of household wealth assumes that entitlement programs like Social Security will remain solvent.

Economists at Williams College and the Federal Reserve Board of Governors take the next step by analyzing the HRS data

for insights into the distribution of savings across the population. David Love, Paul Smith, and Lucy McNair develop a new measure they term "comprehensive wealth," asking whether U.S. households are "adequately" saving for retirement. The authors take one of the first looks at the 2004 wave of the HRS, which captures the "early baby boomers" born between 1948 and 1953. They begin with financial net worth,



which they define as the sum of stocks, checking accounts, and CDs, minus non-vehicle and non-housing debts. Also added are balances from defined-contribution pension plans, typically 401(k)s, and IRA balances. Moreover they added present values of defined-benefit pensions, Social Security, and welfare, plus expected future labor income. And they added employer matches to defined-contribution plans.

Their findings show that, “overall, households hold comprehensive wealth that is several multiples” of the wealth level necessary to sustain consumption at the official poverty line. The median ratio of wealth to the present value of future poverty lines is 3.56; the median annuity value of wealth is \$32,000. (These are, admittedly, not large nest eggs, but since old people consume less than young people, they may well be sufficient. A retirement annuity of \$32,000 per person represents a 75 percent replacement rate for a worker earning \$42,700 a year.) Still, about 12 percent of households lack enough comprehensive wealth to bring them over the poverty line, and 9 percent (with ratios between 1.0 and 1.5) are “near” the line. “Not surprisingly,” they write, “there is a close correlation between lifetime



earnings and the share of households below or near the poverty line.”

Put another way, the working poor often don't have enough savings when older to lift them out of poverty in retirement. Poor households in their working years remain

poor in their retirement. “Overall,

our findings show a generally optimistic view of retirement savings adequacy among current older cohorts, though with a notable pocket of inadequacy concentrated among those with the lowest lifetime earnings.” Like Munnell and Soto, these authors find that expected Social Security payments represent a large share of retirement wealth for those at or below the middle of the lifetime earnings distribution.

### **A Theory of Saving**

The main reason that looking at aggregate statistics on saving can be misleading is founded on two 50-year-old economic theories. In his 1957 book, *A Theory of the Consumption Function*, Milton Friedman found that current income matters less in consumption than “permanent” income, by which he meant a long-run average of anticipated income. People tended to smooth their consumption throughout their lifetimes based on how much they expected to earn.



Also in 1957, Albert Ando and Franco Modigliani tested the prediction that people's natural inclination is to smooth their consumption over their lifetimes. When younger and earning less income, people may borrow more and save less. During middle age, when labor income is typically at its peak, people will ratchet up their saving. In retirement, as income diminishes, people spend off their savings. Overall, households estimate the stream of resources over their lifetimes and use that as their benchmark in deciding how much to spend at any given period.

It turns out that these theories, known as the permanent income and life-cycle hypotheses, have matched up with the data

fairly well over time. One of the more recent studies on this front comes from John Karl Scholz, Ananth Seshadri, and Surachai Khitatrakun. What was most unique about their study was that it gained access to previously unavailable Social Security earnings data, providing more precise measures of actual earnings and lifetime income than previously available. They developed optimal decision rules for consumption for each household in the sample, with rules that differed depending on household characteristics, and then plotted the distribution of optimal net worth across households in the HRS.

It should be noted here that the "optimality" of saving as examined by Scholz,

### The Effectiveness of Financial Education Programs

Of all the ways to encourage higher saving rates, perhaps none is more popular than financial education. If only Americans were made aware of the importance of retirement planning—and given some pointers on how to get started—then changes in savings behavior would surely follow.

That's the conventional wisdom, at least. But despite the seemingly obvious link between knowledge and behavior, economists have struggled to measure the degree to which financial literacy efforts actually work. It is well documented that some people have a poor grasp of basic economic concepts, and that shortfalls of knowledge are particularly evident about Social Security and pensions. But the connection between the effect of being exposed to financial education and subsequent improvements in saving habits is tenuous.

The trick is distinguishing between causation and correlation. There are definite correlations between wealth and retirement planning. Among baby boomers who reported that they undertook even "a little" retirement planning, wealth holdings were twice as large as non-planners, according to economists Annamaria Lusardi and Olivia Mitchell. Meanwhile, many studies have documented that households that do little financial planning tend to be the less educated and minorities. But does that mean that planning can lift these households into more secure retirements?

Lusardi and Mitchell, who are two of the world's leading researchers on the topic, created a "financial literacy index" based on a

survey of Americans in their prime working years, with most respondents between 40 and 60, as well as the Health and Retirement Study. With the index, the economists identify which traits and concepts are predictive of retirement planning. In general, they conclude that "financial literacy is a key determinant of retirement planning" and that literacy is highest among those exposed to economics in school and to those who attended company-sponsored programs.

This supports some of their earlier research, which considered the possibility that wealthier households planned more because they had more to gain. They couldn't find any effect of wealth on planning, however, and concluded that planning is more likely to cause wealth, rather than vice-versa.

"Saving for retirement is becoming a more and more challenging and a more important objective requiring ever-greater levels of financial sophistication," Lusardi and Mitchell wrote. "Clearly it is urgent to target effective programs to those who can put this necessary financial knowledge to work."

As it happens, the most effective programs do not come cheap. In a survey of the literature on financial education, Richmond Fed economist Matthew Martin concludes that there are returns from such programs, especially to low-income and lesser-educated households. However, Martin finds that one-size-fits-all efforts may not succeed: "Financial education programs are most effective when they are tailored to the needs of the recipient and include face-to-face time, either with a counselor or in a classroom setting." As a result, the most effective programs also tend to be the most costly.



Seshadri, and Khitatrakun is related to a specific theory of household behavior. While this theory is the standard approach of economists studying saving and consumption, it necessarily abstracts from many forces that might affect behavior. Still, this idea of optimality is a useful notion that builds on the idea of “adequacy” by taking into account the most important economic factors affecting household choices. Their two most important findings:

- More than 80 percent of households in the observed HRS sample have accumulated wealth above the targets implied by the model, while 15.6 percent of surveyed households with a member nearing retirement age fell short of wealth targets. But the authors note that most of the people who are undersaving aren’t undersaving by much.
- At the same time, they find that “undersavers are concentrated in the bottom half of the lifetime earnings distributions.”

In the lowest earnings decile (basically, people whose incomes are at or below the poverty level), 30.4 percent of households are below the optimal target; in the highest decile, 5.4 percent are below. (The authors caution, however, that this result may be more strongly related to whether a person is in a single or married household.)

What’s important about the Scholz, Seshadri, and Khitatrakun model is that it confirms the theoretical notion that households tend to save the amount necessary to provide the maximum level of smoothed consumption over their expected lifetimes. The model takes into account that each household experiences different fluctuations in earnings and life expectancy. Though it may sound odd, viewed through this lens, seemingly paltry levels of wealth may actually be quite consistent with reasonably effective saving behavior, given a household’s income experience. At the aggregate level, it is impossible to identify this household-level activity.

According to these economists and their high-quality data, most people are doing precisely what economic theory says they should be doing. Most people are doing the best they can given their situations. (In fact, one of the authors’ main findings is that many people seem to be *oversaving*.) Most households save enough to generate the



highest level of smoothed consumption over their expected lifetimes. As with Love, Smith, and McNair, these authors find that undersavers are also the poorest, suggesting once again that America faces less of a retirement savings problem than a poverty problem.

A downside to the optimality approach, some economists counter, is that what's "optimal" may still make a household "wealth poor" at retirement. It might be the case that for one household, whose wage earners lose jobs or get sick, entering retirement with only Social Security as a backstop is "optimal," as it provides the smoothest possible consumption over their lifetime. But some may consider relying on Social Security alone—with average monthly payments around \$1,000 a month at present—as simply inadequate. Of course, optimality should not be confused with desirability. Morally or ethically, we might be predisposed to wanting people to have more resources at retirement. Additionally, models that generate optimal consumption paths rely on assumptions that may not be correct, including mortality and risk preferences.

Having acknowledged these challenges, we can still

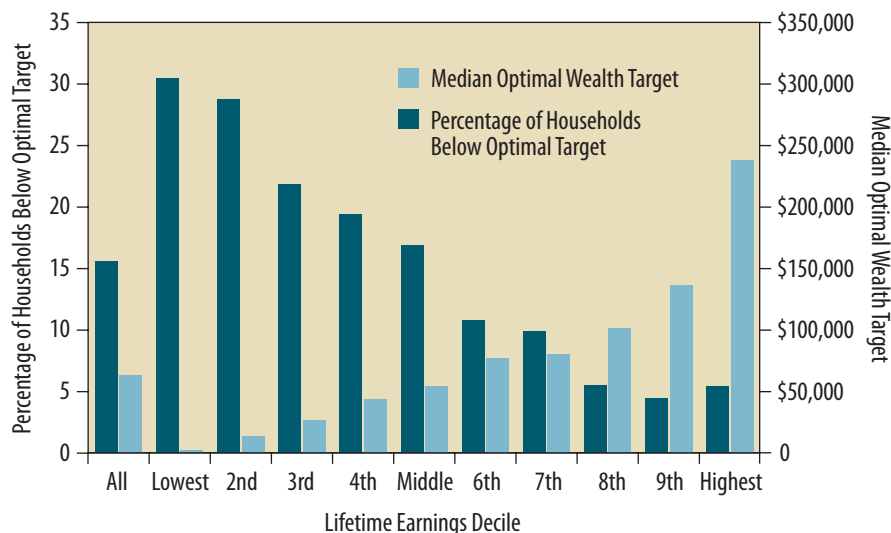
agree that life-cycle theory seems to be generally squaring with the facts. Given the resources that people acquire throughout their lifetimes, most are arranging for their nonworking years in retirement as best as they can. Addressing poverty—where evidence of undersaving is greatest—is in many ways a different problem.

### Demographic Change

The judgment that most Americans are saving reasonably well does not mean we should be sanguine about the future. As the disaggregated data show, Social Security accounts for a significant portion of expected retirement income for many households. But the aging

#### Optimal Savings

A 2006 paper concluded that most U.S. households have prepared optimally for retirement and that undersavers are concentrated in the poorest half of the population distribution.



Source: Scholz, Seshadri, and Khitatrakun



of the U.S. population will put strains on the ability of the government to make good on its promised Social Security payments. On top of that, the demographic shift could mean lower economic output and consumption than in the absence of population aging.

We now face choices about how to prepare for these changes and to make good on our promises to workers. Will we have to raise taxes on current or future workers? Many analysts have postulated that higher household saving rates are desirable because they could help ease the burden of higher taxes or lower spending that might otherwise be passed to future generations. To properly evaluate the choices, let's first consider the size of the shift and

what it might seem to imply about future consumption possibilities.

When we talk about population aging, it is important to take into account both the larger share of old people and the smaller share of children, because they can have opposite effects on overall consumption levels (with old people consuming more because of their medical needs, and children, less). The declining birth rate means a lowered dependency burden, which ordinarily would be a good thing with regards to per capita consumption. But in this case, it is swamped by the growing number of old people per worker.

At face value, what these trends mean is that younger generations of workers will

### **Does the Decline of Defined-Benefit Pensions Signal Trouble for Americans' Retirement Years?**

Retirement, as we know it today, is a relatively new concept. Back in 1880, eight in 10 men aged 65 and up still worked. When they stopped, it usually was because they were physically unable to carry on. They relied on family for financial support until their deaths. Self-financed retirement was a luxury affordable mainly to the rich.

Over time, workers came to rely on employer-sponsored pensions (plus payments from Social Security, which launched in 1937). The Pennsylvania Railroad Pension is touted as having kicked off the private pension era with its creation in 1900. Its "defined-benefit" formula generally has been followed ever since.

Defined-benefit pensions provide an annuity at retirement that workers can't outlive. Benefits are a function of years of service and highest salary. The assets of defined-benefit pensions are professionally managed and the employer bears most of the investment risk. Employers first started offering defined-benefit pensions in part to help with worker loyalty and to ward off strikes.

Today, defined-contribution plans, predominantly 401(k)s, have replaced defined-benefit plans as the leading form of employer-provided pension. This transition has raised concerns among some observers, in part because defined-contribution pensions place more of the burden of saving, not to mention the portfolio risk, on individuals. Participation in such plans is voluntary, meaning some will opt out of them, even if it would not seem to be in their best interest to do

so. And smaller firms don't yet en masse offer 401(k) plans, whose big appeal is the matching contributions that employers make.

Given current trends, what will household portfolios look like as they reach retirement? In one study, economists with Williams College and the Federal Reserve Board of Governors point out that though personal retirement accounts (with defined-contribution plans being the leading contributors) are small in size among people nearing retirement, this doesn't necessarily suggest that Americans have inadequate savings. Instead, it is mostly evidence that they are relatively new vehicles for savings.

In the 2004 Health and Retirement Study, less than a third of households aged 75 and older had personal retirement accounts, compared with about half of households aged 62 to 75 and 61 percent of those between 51 and 61. Despite this transition to defined-contribution coverage, "we do not find evidence of a steep deterioration in retirement adequacy among the younger households in our sample."

Growth in defined-contribution plans is widely evident. In 1985, assets in private defined-benefit pensions almost doubled those in defined-contribution plans — \$814 billion to \$417 billion. In 2005, assets in defined-contribution plans were on top, \$3 trillion versus \$2.2 trillion. By 2040, 401(k) assets are projected to grow eight-fold from their 2000 level.

By one study, the number of people covered by defined-benefit pensions over the past 20 years fell by about 30 percent, while the number covered only by a 401(k) plan grew 300 percent. The number

*(continued)*





support larger numbers of old people. Equally, it means there could be fewer goods and services to go around compared with a world in which there is no demographic change. This result is because, in general, consumption per person depends on output per person. So while productivity growth raises output per person, a growing share of retirees in the population holds down those gains on a per-person basis.

To get a clearer understanding of the implications of population aging on consumption, consider the ratio of working-age people (ages 20 to 64) to elderly people (older than 65). Currently, there are five working-age adults for every person aged 65 and above. By 2030, there will be three

working-age adults for every elderly person. Overall, annual growth in the size of the labor force is expected to slow from 1 percent at present to 0.2 percent after 2020. (Obviously, these figures could change if, for example, more people stay in the labor force past the usual retirement age of 65. Immigration of young workers could also pick up some of the slack.)

Louise Sheiner, Daniel Sichel, and Lawrence Slifman, economists with the Federal Reserve Board of Governors, argue that the best gauge of the macroeconomic effects of population aging is what they call a “weighted support ratio.” This takes into account both the heightened consumption needs of the elderly (primarily because of

of participants in defined-contribution plans grew from about 19 million in 1980 to more than 52 million in 2004.

Meanwhile, even though growth in 401(k) coverage has slowed in recent years, participation rates are expected to climb well into the future. Among those 60-year-olds in the 2<sup>nd</sup> earnings decile (i.e., people whose earnings put them between the lowest 10<sup>th</sup> percentile and 20<sup>th</sup> percentile of the total population), 401(k) participation in 2000 was 23 percent. By 2040, it’s expected to increase to 53 percent. It would seem that even for the relatively poor, pension participation will rise. Overall, participation rates at age 60 are expected to be much higher, topping 80 percent, from the 70<sup>th</sup> earnings percentile on up.

Economists James Poterba, Steven Venti, and David Wise find that the average 65-year-old in 2040 will have more than \$450,000 in personal retirement accounts (in 2000 dollars). Of course, there is wide variance in accumulations. Those in the 2<sup>nd</sup> earnings decile are expected to have about \$51,000 in mean projected 401(k) assets; those in the

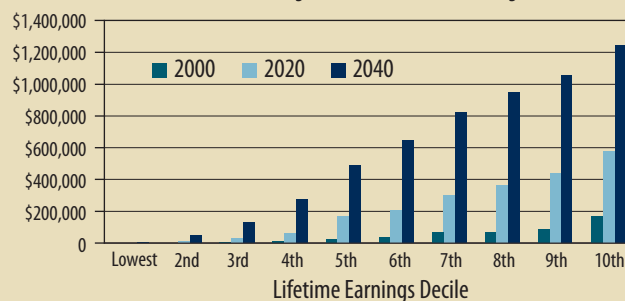
9<sup>th</sup> decile (90<sup>th</sup> percentile and up) about \$1.1 million.

A lingering concern about 401(k) pensions is that so much of their assets are in equities, which tend to be volatile. According to one study, 61 percent of 401(k) assets in 2001 were in stocks. But this extra risk has been shown to be offset by the portability of such plans. Employees who take new jobs can take their 401(k) assets with them, but defined-benefit plans effectively penalize workers who leave.

In general, these projections point to future retirement security for most Americans, not the opposite. While the assets of low-income households remain low in retirement, many economists are optimistic that the transition away from defined-benefit pensions is one that ultimately will lead to more wealth for U.S. households: “The advent of personal account saving is projected to yield very large increases in the financial assets of future retirees across the lifetime earnings spectrum,” wrote Poterba, Venti, and Wise.

### Mean Projected 401(k) Assets for Cohorts Retiring in 2000, 2020, and 2040

By 2040, 401(k) assets are expected to make up an increasing amount of retirement savings for households of all earnings levels.



Source: Poterba, Venti, and Wise

their greater demand for health care) and the lower needs of children. Their weighted support ratio is peaking now at about 0.64 (workers to old people and children, with these populations' consumption needs weighted) as most baby boomers remain in the work force. But it is projected to drop sharply over the next decade, to 0.60 in 2020, then to 0.56 in 2040. That seemingly small decline actually represents major changes in growth of the U.S. labor force; it means the number of workers to dependent population will be much lower than we've recently experienced, as well as lower than the previous low point in the early 1960s. The weighted support ratio falls farther than the simple support ratio, implying a larger impact on the economy.

Now, it is a bit more complicated than that. A society's potential level of consumption depends, among other things, on capital per worker, technical advancement, and the return to capital. Given current trends, Sheiner, Sichel, and Slifman conclude that we will experience a significant reduction in per capita consumption relative to a baseline in which there is no demographic change. (These trends include assumptions about labor force participation among the elderly and levels of immigration.) This is because



the population bulge has made our production bulge as well. We have, in short, experienced a period of low dependency during which per capita output was high. With fertility low relative to that of the baby boom generation, we received a temporary benefit in the form of greater consumption available per person.

### **What Now?**

The data presented earlier on household-level wealth holdings suggest that older baby boomers are reasonably well-prepared for retirement. On the other hand, dependency ratio calculations like those presented in the previous section imply a real economic cost of the demographic bulge that will weigh on the consumption opportunities of future retirees, future workers, or both. How do we square these two facts? A key assumption in the calculations of household wealth is that future Social Security payments will be made according to current policy. This assumption is important, since for many low- and moderate-income households, expected Social Security payments represent a large fraction of retirement wealth. But as we discuss elsewhere, current Social Security payment policy, together with current taxation policy, creates large



fiscal deficits. These will ultimately require changes either in payments or in taxes (or both) and will ultimately affect some people's consumption patterns.

People's responses to the aggregate economic changes brought on by the demographic trends will depend on the prices households face in making consumption decisions and the returns households receive on their labor time and savings. By prices, we mostly refer to wages and interest rates. Does population aging somehow affect prices in such a way that individual households are hindered in their ability to prepare for retirement? We now explain both how population aging *could* affect prices and then how it *doesn't have to*.

Intuitively, the most obvious and simple plan might seem to be to save our way out of demographic change—to put more money aside now while we've got more people working. This would require people to consume less, of course, but it would also help lower the burden on future generations. With extra savings, we could add to the capital stock and thus make future workers more productive.

If only it were as simple as that. The effect of increasing the capital stock may actually discourage saving. Federal Reserve Board economists Douglas W. Elmendorf (now with the Brookings Institution) and Sheiner assume that current consumption and saving rates are close to optimal (an assumption

supported by other research cited in this essay) to isolate the impact of population aging. They point out that forcing greater saving on current workers is not an obviously beneficial approach to the looming demographic trends.

Here is why: Recall that the U.S. workforce is growing more slowly now with the aging of the baby boomers. With fewer workers, we require less in the way of investment to provide new workers with capital. So if we are trying to save our way out of uneven consumption, we increase the future capital-to-labor ratio (because we have less labor and more capital than before). This means returns on capital are smaller than before, and investment payoffs are lower.

This is not to argue that we should simply kick the burden of demographic change and supporting entitlement programs to future generations. Rather, it is to explain the possible complications of that approach. In fact, it's fair to say that all approaches are imperfect.

### The Fed's Role

The Federal Reserve's role in the coming demographic transition is several-fold. First, the Fed can encourage households to make sound financial decisions, supporting financial education efforts that inform people about their choices and the importance of saving. In its regulation of financial institutions, the Fed ensures that consumers receive adequate disclosures. These roles will be increasingly important as the United States begins its demographic shift.

Most importantly, the Fed abides by its two-part mission—to keep prices stable and promote maximum sustainable economic growth. People decide whether and how much to save based principally on their current and expected lifetime income and interest rates. By keeping inflation low, the Federal Reserve helps keep a stable economic environment. In fighting inflation, the Fed makes it easier for people to save.

A study by economists Laurence Kotlikoff, Kent Smetters, and Jan Walliser considered how the combination of demographic change and the burden of Social Security might play out. They conclude that payroll taxes would have to jump by 77 percent, and that this increased tax burden would swamp the extra capital to workers that ordinarily would accompany an aging society. Alternatively, there is the research of Nobel Prize-winning economist Edward C. Prescott and Arizona State University's Kathryn Birkeland: They argue



that addressing the solvency of entitlement programs while maintaining the overall welfare of the U.S. population is as simple as having the government issue more debt. Prescott and Birkeland's point is that in the existing tax-and-transfer system, households may pare back their labor in the face of high taxes. Despite the risks, issuing more government debt along with a mandatory worker "saving-for-retirement system" would mean that workers' productive time is rewarded with a larger savings nest egg. This results in a larger capital stock awaiting future generations.

### No Easy Fix for Entitlement Programs

The financial burden of paying for Social Security and Medicare is growing as the U.S. population ages. That's hardly a revelatory statement, but it bears repeating as the first baby boomers enter retirement and begin to draw benefits from entitlement programs.

Both Social Security and Medicare are essentially "pay-as-you-go" programs, with retiree benefits funded by current payroll taxes levied on employers and employees. The 2007 Treasury Department report calculates that, thanks to population aging, the present value of Social Security's scheduled benefits surpasses the present value of scheduled tax receipts by \$13.6 trillion—that's the difference between the amount older cohorts put in to the program and the amount they plan to withdraw from it.

Meanwhile, Medicare expenses are expected to overtake income as soon as 2010, with trust fund reserves depleted by 2019. The present value of the unfunded liability for Medicare is close to \$70 trillion over an infinite horizon. Federal spending to support the two programs is expected to rise from 6 percent of GDP in 2005 to 20 percent in 2080. Another way to look at it is to focus on the program revenues and outlays as percentages of taxable payroll—income stays relatively flat into the future while expenditures continue to climb.

How do we close these unsustainable financing gaps facing Social Security and Medicare? There is no shortage of proposed reforms.

Broadly, they fall into four categories:

- Keep more workers in the labor force, thereby reducing the growth in the number of retired Americans receiving benefits to workers paying taxes that fund those benefits.
- Raise taxes on workers.
- Reduce benefits.
- Allow greater numbers of young immigrants into the U.S. workforce.

Additionally, there are proposals to phase out the system in favor of private accounts, such as the program that President Bush promoted unsuccessfully in 2005. And there is a school of thought that argues that Social Security should be abolished because its existence has a number of undesirable effects, including that it discourages private savings that might otherwise supplement the program, and that it encourages early exits from the labor force.

So what should be done? One thing that most economists agree upon is that whatever reform is adopted, it will be easier to swallow—as well as more evenly spread across generations—if it is taken sooner rather than later. By government estimates, closing the 75-year unfunded liability of Social Security would require an immediate increase in the payroll tax of about 2 percentage points; waiting until 2041 would require approximately a 4-percentage-point

*(continued)*

By no means is this an endorsement of any of these approaches. Our aim is to briefly point out what sort of consequences we can expect with each one. You can ask households to save more, but doing so would tend to lower everybody's rates of return. While there are many other ways that economists approach the retirement/entitlement problem amid demographic change, the most useful are those that model households as rational, forward-looking units that respond to incentives. If households face a pricing environment where saving makes sense, they will do so.

While understanding the tradeoffs involved with preparing for demographic change is important, it is also important to take action as soon as possible. In their

study, Sheiner, Sichel, and Slifman conclude that if we made no changes to our saving habits, future generations would see their per capita consumption fall *14 percent* compared with what it would have been without demographic change. By contrast, if we alter saving rates now as a means to spread the burden equally across generations, the relative decline in per capita consumption is reduced to just 4 percent. While there is always uncertainty around such projections, the desirability of a timely response to demographic change is clear enough.

### Changes Ahead

As the first retiring baby boomer, Kathleen Casey-Kirschling became a symbol for America's demographic transition. Her arrival

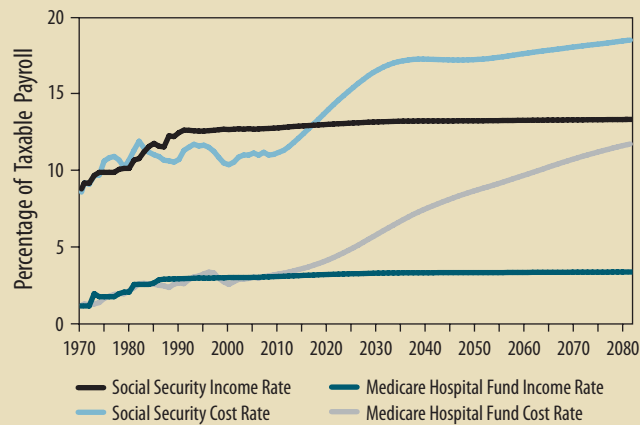
boost. Medicare faces a similar scenario—it needs an immediate 3-percentage-point hike to fix the liability, or waiting until 2020 would require a gradual 10-percentage-point increase over the following 55 years. But this would still not make the systems permanently solvent; it would merely put them into balance for 75 years.

From a fairness perspective, this observation from the Treasury Department is worth considering: "Each time new legislation has ratcheted up taxes and real benefits, substantial windfalls have been conveyed to individuals in mid-to-late working life at the time of the change, as these individuals face increased taxes for only a relatively few years but are entitled to receive the full advantage of the benefit increases."

The late Edward Gramlich, a former Federal Reserve Board gover-

### Social Security and Medicare Income and Cost Rates

Both Social Security and Medicare costs are projected to grow faster than tax revenues to the programs.



Source: Annual Report of the Social Security and Medicare Boards of Trustees for 2007

nor, was one of the nation's leading thinkers on the topic of reforming Social Security and Medicare. His proposal consisted of two main parts: First, he would eliminate the now \$102,000 (but rising slowly each year) cap on wages that are taxable for Social Security, thus bringing in more revenue.

On the benefit side, Gramlich wanted to raise both the early eligibility age and the normal retirement age for Social Security, and then keep qualifying ages common across both Social Security and Medicare. On balance, the changes would be sufficient to permanently fund Social Security, but would

still leave large holes in parts of the Medicare system. And politically, Gramlich conceded, it might be a tough sell. "The package of taxing all payrolls for Social Security and advancing the normal retirement age is indeed strong medicine," he said in a 2005 speech.





that Social Security and other retirement benefits will be paid according to current policy. The fiscal stresses that these policies face imply difficult choices. Increasing taxes to prop up entitlement programs would create additional problems. Should the government take on more debt? Some economists believe that approach is not as unwise as it first sounds—it could ease the burden on current workers while allowing interest rates to remain high

on Social Security's doorstep made long lingering questions more urgent: Do retirees have enough savings? Will her cohorts bankrupt our entitlement programs? Will the sheer size of her generation cause living standards to decline in the future?

We have shown that, contrary to popular opinion, most Americans near retirement are saving largely as economic theory predicts they should. Most of the nation's undersavers are also the poorest. While lack of savings isn't exclusively a problem of the poor, that's where the problem is largest. Our chief concern should be for those who are poor even before retirement.

The aging of the U.S. population is not a surprise. It is a predictable event that we can plan for. Research on household saving behavior shows that most households plan reasonably well. But the important caveat in this conclusion is that household planning appears to be predicated on the assumption

enough to encourage household saving.

As we have described, an older society portends a time when the growth of consumption per person might be held down, and saving might become harder. The somewhat natural lengthening of time that older workers stay in the labor force may cushion the demographic blow, as might increased immigration. But in general, whichever approach we take, our focus should be on making sure that households both today and tomorrow are not impaired in their ability to save. If there is no consensus about what to do next, there is agreement that to delay action will exacerbate the problem for future generations. The earlier we embark on this effort, the more likely we are to achieve a desirable outcome.





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THE FEDERAL RESERVE BANK OF RICHMOND  
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# Message from Management

These are challenging times. Economic growth is slowing and inflation has not been consistently as low as we would like. Financial markets experienced significant disruption during 2007, and concerns about housing, mortgage foreclosures, and related financial instruments have yet to abate. The payments system is in the midst of a transformation from a paper-based system to a



more electronic system with many more payment options and risks. And pockets within our communities continue to struggle economically and financially.

In such times, people look to the central bank to understand these concerns and to intervene effectively through our monetary policy, bank supervision and regulation, payments system, and community outreach roles. The Federal Reserve's effectiveness during these periods depends on our ability to understand exceptional events, to judge whether intervention is beneficial, and if it is, to determine the most effective ways to do so.

Information sources that serve us well in "normal" times provide data that are too delayed and not rich enough in detail during more demanding times. That's why this year we are devoting our management message to thanking the many key constituencies in the Fifth District and beyond

who have helped to inform our policy and services decisions.

The Fifth Federal Reserve District is privileged to have influential and engaged boards of directors in Richmond, as well as Baltimore and Charlotte. Our directors hail from Maryland, North and South Carolina, Virginia, West Virginia, and the District of Columbia. They represent the diverse views

who have apprised us of impending issues and events.

The leadership team initiated a series of banker forums in 2007 and reached out to the many community banks in the District. This exchange of views provided insights on economic, supervision, and payments topics. The Richmond Reserve Bank's Operations Advisory Council, which includes

of business, labor, financial institutions, and of the communities that we serve. Each month these 23 directors network with their colleagues and contacts to gather details of current local economic and banking conditions in the District. This information has been timely and invaluable as we have considered complex policy and services decisions.

The District also has a unique and diverse banking environment. Two of the largest financial institutions in the United States and several large regional banks are headquartered here. During 2007, our on-site examination staff communicated daily with key individuals in these banks, which enabled them to provide data to Fed staff in risk and policy, lending, research, and legal areas. This information has proven to be critical to understanding the complex evolution of financial markets. We very much appreciate the frequent and timely conversations with senior management in these institutions

financial institution representatives from across the District, tackled strategic and operational payments issues. The number of electronic payments now exceeds the number of check payments, and we are rapidly moving to electronic collection of payments initiated as checks. Accordingly, our payments services and infrastructure are changing. We deeply value the close consultative relationships that we have developed for many years with our payments services customers. Together we are making the transition from check to electronic payments even as we look toward consolidating our local check processing operations outside the District in 2009.

We touch base with businesses throughout the District in a number of ways. During 2007, the Bank reached out directly to the CEOs of many different businesses to understand issues such as inflation and labor market trends, investment plans, and



changes in consumer behavior in response to changing economic and financial conditions. These conversations added important color to macroeconomic data. Our Small Business and Agriculture Advisory Council informed us about issues such as the spillover effects on agriculture and food prices of energy policy related to ethanol fuel. In 2007 we also convened representatives from eight companies heavily engaged in consumer payment transactions, which has helped us to better understand trends in the use of cash and other forms of retail payments.

Given our proximity to Washington, D.C., we have close relationships with a number of government agencies. As an example, our Currency Technology Office has worked closely with the Bureau of Engraving and Printing on the design of the new currency, to keep ahead of the counterfeiters. And last year we electronically transferred over \$100 trillion of payments on behalf of the U.S. Treasury. The U.S. Treasury is a partner in every sense of the word; together we have implemented innovative systems to collect government benefits and to facilitate other forms of payments and collections.

This year's Annual Report has an expanded section on our community outreach efforts. We have included a selection of photographs and text related to the economic forum that we held in Frederick, Md. This forum illustrated some of the many ways in which we partnered with banking, community development, and educational institutions to promote economic education and financial literacy in our communities.

Our Community Development Advisory Council provides us with important context and information related to these efforts.

Finally, the message of thanks to the directors, councils, banks, corporations, and community and educational organizations in the District would not be complete without a big "thank you" to our employees. We are exceedingly proud of the 2,650 people from our communities who work for us in the Richmond, Baltimore, and Charlotte offices, and elsewhere in the District. These are challenging times and our employees have stepped up to achieve our vision—"to be an innovative policy and services leader for America's economy."



Sally Green  
First Vice President

**"We have an interest in the people,  
places, and the values behind numbers."**  
*Marsha Shuler, Senior Vice President, Richmond*

## The Bank in the Community

Behind data and numbers lie stories that can be learned only by interaction with people. Local economies play a significant role in shaping the nation's economy. From the mountains of West Virginia to the Low Country of South Carolina, we are committed



President Jeff Lackner, foreground, and First Vice President Sally Green, center, and other senior leaders of the Bank tour the Hood College campus as part of visit to western Maryland to learn more about the regional economy.

to creating a strong presence throughout the region by reaching out to Fifth District communities. We have solidified our commitment to continually enhance the understanding and resilience of the financial system and economy through an array of activities. These activities demonstrate our public interest role, improve the public's understanding of our institution and policies, and enhance the quality and breadth of financial and economic education in the District. Through these efforts, we also build valuable relationships



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with the citizens of our District that contribute to our effectiveness in the Bank's mission areas.

In June, President Jeff Lacker and senior leaders visited Frederick, Md., as part of an economic forum sponsored by the Bank. Fed leaders discussed the opportunities and challenges facing this region with representatives from the biotech industry, financial services companies, and business and professional associations. The two-day visit began with a tour of Fort Detrick, a major employer in the area. The U.S. Army installation employs 8,000 people and is estimated to add \$500 million to Frederick County's economy. Fed leaders learned about Fort Detrick's significant role in researching infectious diseases and battlefield trauma, as well as pharmaceutical and medical developments for both military and civilians. During a visit to the Frederick Innovative Technology Center, an incubator for high-tech and biotech businesses, leaders also learned about entrepreneurs' efforts to translate research partnerships with Fort Detrick into

commercially available health care products and services. Additionally, a forum with Frederick leaders led to an information exchange about growth and the conditions of the regional economy.

There were other Fed activities that engaged constituents. During regional community banker forums in Raleigh, N.C.; Richmond, Va.; Columbia S.C.; and Arlington, Va., community bankers educated Bank leaders about their area's lending and real estate market conditions. The bankers learned from the Fed about current economic, supervisory, and payments system issues.

The Community Affairs Office (CAO) cultivated partnerships between resource seekers and resource providers through its ability to bring the appropriate parties to the table. In response to national data that revealed that South Carolina ranked 44<sup>th</sup> in the country in households with checking accounts and 43<sup>rd</sup> in asset poverty by gender, the CAO united a diverse group of partners to help build the South Carolina Asset Development Collaborative (SCADC). Members of SCADC



First Vice President Sally Green, right, talks with executives of community banks at a forum the Richmond Fed held in northern Virginia.



Vice President Gene Johnson, left, greets guests at the Bank's forum for community bankers in Richmond.

**“Every time we interact with teachers, bankers, and area business leaders, it lets people know that ‘The Fed’ consists of real people, who are interested in hearing the concerns of the community and working to better educate everyone on the economy.”**

*Karen L. Brooks, Assistant Vice President, Baltimore*



Patty Hamm, Public Affairs, places message “bricks” on a house prior to the Charlotte Office hosting a reception for Community Link volunteers.



Irina Piven, IT-Risk Management, volunteers with metro Richmond students at the Junior Achievement Finance Park.

partnered to develop resources and strategies that increase savings and improve access to credit for low-income residents in South Carolina. The collaboration continues to build momentum by informing public policy about the financial challenges of the citizens of the region. The CAO also hosted programs and workshops in West Virginia, Maryland, and Virginia to highlight community development finance needs.

### **Understanding the Public Interest Role**

The public face of our organization depends on our ability to serve as ambassadors of the Bank and the Federal Reserve System. In order to carry out our organization’s mission effectively, we must maintain strong connections to the communities in our district.

The Charlotte Office hosted a reception to honor Community Link’s volunteers, directors, trustees, and committee members. Community Link, a United Way agency, helps working-poor individuals and families obtain safe and affordable housing.

In Richmond, about 80 employees participated in the Junior Achievement Finance Park—a mobile learning environment made up of two 53-foot semi trucks. After completing a five-week curriculum on personal finance, metro Richmond students visited the Finance Park, which houses a miniature city with a bank, restaurants, and a grocery store. Bank employees helped guide students through the Finance Park and assisted them with decisions related to their expenses and budgets.

Similarly, the Baltimore Office participated





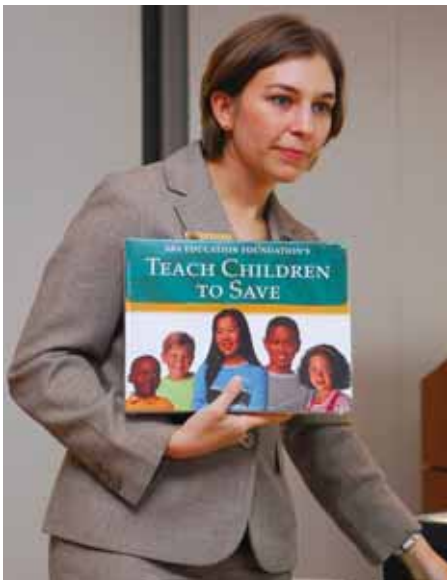
Economic Education, with the Powell Center for Economic Literacy, cosponsored the eighth annual Kidsize Economics program. Lis Turner, Economic Education Specialist, presents Federal Reserve educational resources for elementary teachers to use in their classrooms.

in the “Build-A-Banker” program. The Fed and the Maryland Bankers Association worked with the Academy of Finance to teach high school students about the operation of a bank and the variety of career possibilities in banking.

### Providing Effective Economic and Financial Education to the Community

The Fifth District Federal Reserve partners with communities to provide effective economic and financial education. In doing so, the Bank assists Fifth District residents in developing skills to become well-educated consumers and thus contribute to a robust economy.

Public Affairs sponsored “Teaching Teens about the Business of the Fed,” a workshop for high school business teachers. The workshop focused on helping instructors teach the importance of being financially prepared, and used the September 11 tragedy to explain how the Federal Reserve System contributes



Amanda Gibson displays economic education material at a Public Affairs department session for teachers.



Public Affairs piloted two sessions of the “Back to School at the Fed” program, designed to give bankers the tools to conduct successful classroom visits on the Federal Reserve System, financial literacy, and basic economic principles.



**"As board-level leaders and project-based partners, we're on the ground increasing capacity of nonprofit financial and economic education providers and similarly focused school/community partnerships."**

*Adam Pilsbury, Assistant Vice President, Charlotte*



Pat Cosby, a leader of our statistics team, explains the use of a form that helps banks track their transactions and deposits.



Fed training gives bankers guidance on reporting information that helps maintain stability in the financial system.

to the stability of the nation's financial system. Along with the Virginia Bankers Association, Public Affairs conducted "Back to School with the Fed." The program prepared bankers to educate students in their communities about the Fed and the economy.

Our organization has implemented a variety of strategies to engage the people in Fifth District communities. These efforts have helped us to better understand the participants in our regional economies and gain external

perspectives that contribute to the achievement of the Bank's mission and values. We recognize that earning the trust of the people in our communities translates into confidence in our financial system.



Director of Research John Weinberg, right, and Senior Economist Roy Webb prepare Christopher Newport University students for the College Fed Challenge competition. Fed Challenge helps students understand the Fed's economic role, and the significance of the decisions that the Federal Open Market Committee makes.

# Fifth District Economic Report

The Fifth District economy continued to expand in 2007, albeit at a slower pace than in 2006. The District economy opened the year on generally solid footing, but lost traction in the second half of 2007 as the ongoing downturn in the region's housing market intensified and began to spread to other sectors. Overall, however, the District economy generally outperformed the nation in 2007, according to a number of key measures. Growth in the region continued to be propelled by the strength of its major metropolitan areas.

## Labor Market Conditions

Fifth District businesses continued to add jobs at a healthy clip in 2007, though the pace of hiring cooled a bit from recent years. District payrolls expanded by 1.2 percent (166,800 jobs) in 2007, compared to a 2.2 percent (304,600 jobs) increase the previous year. Despite the moderation, job growth in the region outpaced the nation, with U.S. payrolls up just 0.8 percent (1.1 million jobs).

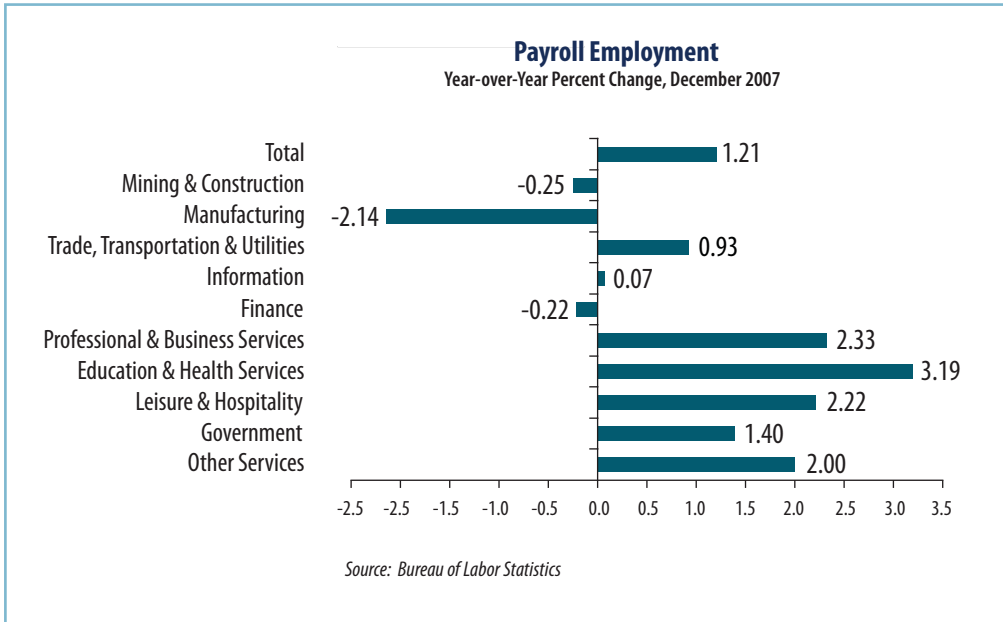
Job growth in the District, as well as the nation, continued to be centered in the services side of the economy. However, jobs data show that gains in that sector were concentrated in just three industries—leisure and hospitality, professional and business services, and educational and health services. These industries comprise less than a quarter of the region's total workforce,

but accounted for 77 percent of the new jobs in 2007.

In contrast, the goods-producing side of the region's economy experienced sharp employment declines during the year. District factories trimmed payrolls for the ninth consecutive year, cutting 27,400 jobs since the end of 2006. Employment numbers from the District's construction sector were also weak as the housing slump intensified over the course of the year. Builders cut over 2,000 jobs in 2007, compared to the previous year's gain of 27,900 jobs.

Employment gains in the District were somewhat uneven across jurisdictions. Job growth maintained its momentum in Maryland, Virginia, and Washington, D.C., some of the region's most service-dominated economies. On the flip side, South Carolina and West Virginia—states more reliant on goods-producing industries—saw a notable softening in payroll growth in 2007. North Carolina—with the District's largest manufacturing presence—was somewhat of an exception. Job growth in the Tarheel state fell short of its 2006 pace, but was still the strongest in the District. North Carolina payrolls were up 1.9 percent in 2007, accounting for nearly half of the region's employment growth for the year.

Drilling down, the data show that employment growth is becoming increasingly concentrated in the District's major metropolitan areas. Over 63 percent of the region's total job gains in 2007 occurred in the District's ten largest metro areas—Baltimore, Md.; Charleston, S.C.; Charlotte,



it finished the year with an increase of just one-tenth of a percentage point at 4.3 percent. Despite the increase, the District's rate continued to track below the national average, which climbed six-tenths of a percentage point in 2007 to finish at 5.0 percent. By jurisdiction, the numbers were mixed. Rates edged up

N.C.; Columbia, S.C.; Greensboro, N.C.; Greenville, S.C.; Raleigh, N.C.; Richmond, Va.; Virginia Beach, Va.; and Washington, D.C. The D.C. metro area alone was home to over 13 percent of District payroll growth in 2007. Despite Washington D.C.'s impressive performance, it was the Charlotte and Raleigh areas that posted the strongest job growth last year. Those areas saw payrolls expand 2.5 and 4.3 percent, respectively, over their 2006 totals, while employment in the D.C. metro area was up only 0.8 percent.

**Household Conditions**

Reports on the economic condition of District households were generally in line with the overall assessment of the region's economy: not quite as strong as 2006, but still solid and generally on par with the United States. Although the District's unemployment rate fluctuated throughout 2007,

slightly in South Carolina, Virginia, and West Virginia, moved lower in Washington, D.C., and Maryland, and remained unchanged in North Carolina. Conditions at the metro area level were more uniform. Unemployment rates inched higher in seven of the region's ten largest metropolitan statistical areas, while rates in the other three either edged lower or remained unchanged. Nonetheless, the District's major metro areas still tended to fare better than the nation. Only the Columbia and Greenville areas posted unemployment rates above the U.S. mark in 2007.

Data on household balance sheets indicated that income growth softened in 2007. District incomes were up 2.1 percent for the year, compared to a 4.0 percent increase a year earlier. Income growth at the state level was generally in line with the District with the exception of West Virginia, where household incomes increased by only 1.4 percent.



In other news, non-business bankruptcies in the District were up 26.4 percent during the first nine months of 2007—a sizable jump but not quite as sharp as the national increase of 27.7 percent. Maryland posted the District's highest gain with bankruptcies surging 45.1 percent, while North Carolina reported a District-low increase of 9.4 percent.

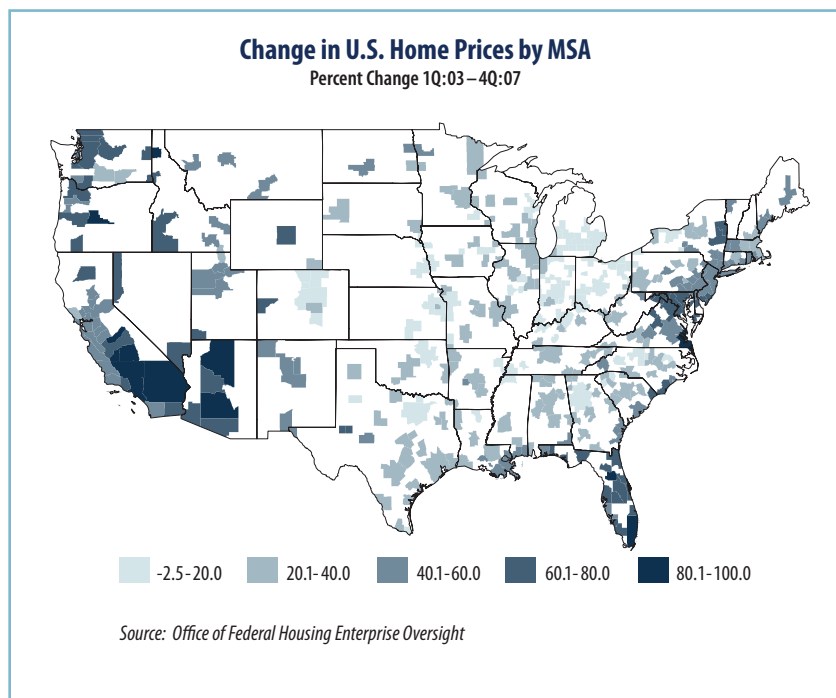
### Housing Market Conditions

The leading economic development of 2007 was the correction in the nation's housing markets, which was deeper than anticipated. Although the Fifth District experienced a housing slump, the drag, on average, was less than in the U.S. economy. Strong demand for housing—fueled by solid job growth and in-migration—helped curb the housing slide in the District. The District's housing market also benefited from the fact that price growth across most of the region has been more moderate in recent years. Nationwide, markets exhibiting the most pronounced declines in housing activity—areas like the Northeast corridor and portions of the West Coast—tended to experience sharp increases in home prices over the last several years.

The pace of home price appreciation in the District—as measured by the Office of Federal Housing Enterprise Oversight's House Price Index—cooled throughout 2007. The average home price in the region was

up 1.0 percent during the year—compared to a 5.9 percent increase in 2006—while U.S. prices inched up only 0.8 percent. In some localities housing market conditions were even stronger. Home price appreciation rates were double the U.S. average in eight out of the District's ten largest metro areas, including four markets—Columbia, Greenville, Raleigh, and Charlotte—which actually saw price growth accelerate in 2007.

On the construction front, residential permit activity in the District was down 20.2 percent for the year, while U.S. totals fell 24.9 percent. Fifth District declines in home sales, on the other hand, were a bit more pronounced. Existing home sales in the region fell 16.8 percent from their year-ago pace, compared to a drop of only 13.7 percent nationally. District sales were pushed lower



by sharp declines in Maryland and Virginia, both of which saw sales activity slip to a ten-year low.

Another important story in 2007 was subprime loans. However, the data suggest that subprime mortgages have been somewhat less of a factor in the Fifth District than in the nation. As of the fourth quarter of 2007, subprime loans made up only 10.5 percent of the region's total mortgage pool compared to the U.S. share of 12.7 percent. In addition, delinquency rates on subprime mortgages were generally below the U.S. average in most District jurisdictions.

### **Business Conditions**

For most of last year, the U.S. housing sector malaise was largely contained. However, as the pullback in activity intensified over the course of the year, spillovers into other sectors became more apparent. The Fifth District economy was no exception.

The effects of the housing slide were especially apparent at District factories. Our survey readings on manufacturing were persistently weak in 2007. Activity was particularly soft in housing-related businesses, such as furniture and building material producers. On a brighter note, production activity was buoyed a bit during the year by stronger overseas demand for U.S. goods due to a weakening dollar. The retail sector saw District sales activity drift lower throughout the year, dragged down by weak housing-related spending and softness in big-ticket categories. In addition, District merchants reported generally lackluster holiday sales.

Not surprisingly, given the strong employment growth in the sector, reports from service providers were more upbeat. District service providers—particularly business consulting and healthcare firms—continued to post strong revenue growth in 2007, though the pace of growth tapered off somewhat in the year's final months.

### **Looking Ahead**

National and local economic conditions softened a bit in 2007 and most major, national economic forecasts are anticipating rather sluggish growth. Nevertheless, the data indicate that solid economic fundamentals remain in place throughout the Fifth District—particularly in its growing urban centers—which suggest the potential for the region's economy to continue to outperform the United States as we enter 2008.

*The data presented and discussed are accurate as of March 27, 2008.*



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## **Federal Reserve Bank of Richmond Board of Directors**

Our Richmond Board 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.

The Board also has the responsibility of appointing the Bank's president and first vice president, with approval from the Federal Reserve Board of Governors. 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.

The Bank's board of directors annually appoints our District 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 Office Boards of Directors**

Our Baltimore and Charlotte Offices have separate boards that oversee operations at their respective locations and, like our 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.

## **Small Business and Agriculture Advisory Council**

Established in 1985, the Small Business and Agriculture Advisory Council advises the Bank president and other senior officers on the impact that monetary, banking, and fiscal policies have on the District's small business and agricultural sectors. The Council's 12 members are appointed by the Bank president.

## **Community Development Advisory Council**

Created in 1998 to enhance communication between the Bank and the public concerning community development issues, our Community Development Advisory Council advises the Bank president and other senior officers on community development concerns and related policy matters. The Council's eight members are appointed by the Bank president.

## **Operations Advisory Committee**

The Operations Advisory Committee was established by the Bank in 1978 to serve as a forum for communication with financial institutions about the Federal Reserve's financial services and to help the Bank respond to the changing needs of our banking constituency. Committee members are appointed by the Bank's first vice president.

*Listings as of December 31, 2007*



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We sincerely thank all the members of the 2007 boards of directors for their guidance and leadership. We are equally grateful to our advisory groups for their support throughout the past year. Each individual and the partnerships formed helped us to better serve the Fifth District communities and organizations.

We express special thanks to the members of our boards of directors whose terms ended in 2007:

**Kathleen Walsh Carr** and **Harry M. Lightsey, III**, from our Richmond Board

**Donald T. Hutchinson** from our Baltimore Board

**Jim Lowry** from our Charlotte Board

We also extend a warm welcome to our new members, whose terms began in 2008:

**Patrick C. Graney, III**, and **Robert H. Gilliam, Jr.**, from our Richmond Board

**William B. Grant** from our Baltimore Board

**David J. Zimmerman** from our Charlotte Board







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The firm engaged by the Board of Governors for the audits of the individual and combined financial statements of the Reserve Banks for 2007 was Deloitte & Touche LLP (D&T). Fees for these services totaled \$ 4.7 million. To ensure auditor independence, the Board of Governors requires that D&T be independent in all matters relating to the audit. 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 2007, the Bank did not engage D&T for any material advisory services.

## Management Assertion

March 20, 2008

### To the Board of Directors:

The management of the Federal Reserve Bank of Richmond ("FRB Richmond") is responsible for the preparation and fair presentation of the Statement of Financial Condition, Statements of Income and Comprehensive Income, and Statement of Changes in Capital as of December 31, 2007 (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 and as set forth in the Financial Accounting Manual for the Federal Reserve Banks ("Manual"), and as such, include amounts, some of which 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 Manual and include all disclosures necessary for such fair presentation.

The management of the FRB Richmond is responsible for establishing and maintaining effective internal control over financial reporting as it relates to the Financial Statements. Such internal control is designed to provide reasonable assurance to management and to the Board of Directors regarding the preparation of the Financial Statements in accordance with the Manual. Internal control contains self-monitoring mechanisms, including, but not limited to, divisions of responsibility and a code of conduct. Once identified, any material deficiencies in internal control are reported to management and appropriate corrective measures are implemented.

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 FRB Richmond assessed its internal control over financial reporting reflected in the Financial Statements, 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 FRB Richmond maintained effective internal control over financial reporting as it relates to the Financial Statements.

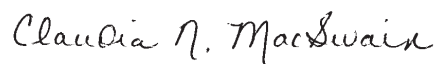
### Federal Reserve Bank of Richmond



**Jeffrey M. Lacker**  
President



**Sally Green**  
First Vice President



**Claudia N. MacSwain**  
Senior Vice President and  
Chief Financial Officer



### **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 statement of condition of the Federal Reserve Bank of Richmond ("FRB Richmond") as of December 31, 2007, and the related statements of income and comprehensive income and changes in capital for the year then ended, which have been prepared in conformity with the accounting principles established by the Board of Governors of the Federal Reserve System. We also have audited the internal control over financial reporting of FRB Richmond as of December 31, 2007, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. FRB Richmond's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management's Assertion*. Our responsibility is to express an opinion on these financial statements and an opinion on FRB Richmond's internal control over financial reporting based on our audit. The financial statements of FRB Richmond for the year ended December 31, 2006, were audited by other auditors whose report, dated March 12, 2007, expressed an unqualified opinion on those statements.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audit of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinions.

FRB Richmond's internal control over financial reporting is a process designed by, or under the supervision of, FRB Richmond's principal executive and principal financial officers, or persons performing similar functions, and effected by 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 of Governors of the Federal Reserve System. FRB Richmond's internal control over financial

*(continued)*



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 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 of Governors of the Federal Reserve System, and that receipts and expenditures of FRB Richmond are being made only in accordance with authorizations of management and directors of FRB Richmond; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of FRB Richmond's assets that could have a material effect on the financial statements.

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 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.

As described in Note 3 to the financial statements, FRB Richmond has prepared these financial statements in conformity with accounting principles established by the Board of Governors of the Federal Reserve System, as set forth in the *Financial Accounting Manual for Federal Reserve Banks*, which is a comprehensive 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 of Governors of the Federal Reserve System and accounting principles generally accepted in the United States of America are also described in Note 3.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of FRB Richmond as of December 31, 2007, and the results of its operations for the year then ended, on the basis of accounting described in Note 3. Also, in our opinion, FRB Richmond maintained, in all material respects, effective internal control over financial reporting as of December 31, 2007, based on the criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Deloitte & Touche LLP

March 20, 2008  
Richmond, Virginia



**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 statement of condition of the Federal Reserve Bank of Richmond (the "Bank") as of December 31, 2006, and the related statements of income and changes in capital for the year then ended, which have been prepared in conformity with the accounting principles, policies, and practices established by the Board of Governors of the Federal Reserve System. These financial statements are the responsibility of the Bank's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards as established by the Auditing Standards Board (United States) and in accordance with the auditing standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

As described in Note 3, these financial statements were prepared in conformity with the accounting principles, policies, and practices established by the Board of Governors of the Federal Reserve System. These principles, policies, and practices, which were designed to meet the specialized accounting and reporting needs of the Federal Reserve System, are set forth in the *Financial Accounting Manual for Federal Reserve Banks* which is a comprehensive basis of accounting other than accounting principles generally accepted in the United States of America.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Bank as of December 31, 2006, and the results of its operations for the year then ended, on the basis of accounting described in Note 3.

The image shows a handwritten signature in black ink that reads "PRICEWATERHOUSECOOPERS LLP". The signature is written in a cursive, flowing style.

PricewaterhouseCoopers LLP

March 12, 2007

## Statements of Condition (in millions)

As of December 31,	2007	2006
<b>Assets</b>		
Gold certificates	\$ 869	\$ 853
Special drawing rights certificates	147	147
Coin	134	78
Items in process of collection	154	237
Loans to depository institutions	905	—
Securities purchased under agreements to resell	4,029	—
U.S. government securities, net	64,603	65,095
Investments denominated in foreign currencies	12,633	5,625
Accrued interest receivable	551	558
Interdistrict settlement account	—	4,858
Bank premises and equipment, net	287	272
Other assets	101	102
<b>Total assets</b>	<b>\$ 84,413</b>	<b>\$ 77,825</b>
<b>Liabilities and Capital</b>		
Liabilities:		
Federal Reserve notes outstanding, net	\$ 66,785	\$ 63,695
Securities sold under agreements to repurchase	3,811	2,460
Deposits:		
Depository institutions	1,780	2,748
Other deposits	64	76
Deferred credit items	111	384
Interest on Federal Reserve notes due to U.S. Treasury	450	39
Interdistrict settlement account	1,177	—
Accrued benefit costs	189	192
Other liabilities	54	45
<b>Total liabilities</b>	<b>74,421</b>	<b>69,639</b>
Capital:		
Capital paid-in	4,996	4,093
Surplus (including accumulated other comprehensive loss of \$50 million and \$73 million at December 31, 2007 and 2006, respectively)	4,996	4,093
<b>Total capital</b>	<b>9,992</b>	<b>8,186</b>
<b>Total liabilities and capital</b>	<b>\$ 84,413</b>	<b>\$ 77,825</b>

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



## Statements of Income and Comprehensive Income (in millions)

For the year ended December 31,	2007	2006
<b>Interest Income</b>		
Interest on U.S. government securities	\$ 3,314	\$ 2,862
Interest on securities purchased under agreements to resell	122	—
Interest on investments denominated in foreign currencies	154	98
Interest on loans to depository institutions	3	—
<b>Total interest income</b>	<b>3,593</b>	<b>2,960</b>
<b>Interest Expense</b>		
Interest expense on securities sold under agreements to repurchase	144	109
<b>Net interest income</b>	<b>3,449</b>	<b>2,851</b>
<b>Other Operating Income</b>		
Compensation received for services provided	56	44
Reimbursable services to government agencies	29	28
Foreign currency gains, net	501	322
Other income	15	11
<b>Total other operating income</b>	<b>601</b>	<b>405</b>
<b>Operating Expenses</b>		
Salaries and other benefits	287	253
Occupancy expense	35	32
Equipment expense	56	62
Assessments by the Board of Governors	129	121
Other credits	(83)	(75)
<b>Total operating expenses</b>	<b>424</b>	<b>393</b>
<b>Net income prior to distribution</b>	<b>3,626</b>	<b>2,863</b>
Change in funded status of benefit plans	23	—
<b>Comprehensive income prior to distribution</b>	<b>\$ 3,649</b>	<b>\$ 2,863</b>
<b>Distribution of Comprehensive Income</b>		
Dividends paid to member banks	\$ 263	\$ 241
Transferred to surplus and change in accumulated other comprehensive loss	903	858
Payments to U.S. Treasury as interest on Federal Reserve notes	2,483	1,764
<b>Total distribution</b>	<b>\$ 3,649</b>	<b>\$ 2,863</b>

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

## Statements of Changes in Capital (in millions)

For the years ended December 31, 2007 and December 31, 2006	Surplus				Total Capital
	Capital Paid-In	Net Income Retained	Accumulated Other Comprehensive Loss	Total Surplus	
Balance at January 1, 2006 (78.8 million shares)	\$ 3,942	\$ 3,308	\$ —	\$ 3,308	\$ 7,250
Net change in capital stock issued (3.0 million shares)	151	—	—	—	151
Transferred to surplus	—	858	—	858	858
Adjustment to initially apply SFAS No. 158	—	—	(73)	(73)	(73)
Balance at December 31, 2006 (81.8 million shares)	\$ 4,093	\$ 4,166	\$ (73)	\$ 4,093	\$ 8,186
Net change in capital stock issued (18.1 million shares)	903	—	—	—	903
Transferred to surplus and change in accumulated other comprehensive loss	—	880	23	903	903
<b>Balance at December 31, 2007 (99.9 million shares)</b>	<b>\$ 4,996</b>	<b>\$ 5,046</b>	<b>\$ (50)</b>	<b>\$ 4,996</b>	<b>\$ 9,992</b>

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 one of the twelve 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 and its branches in Baltimore, Maryland, and Charlotte, North Carolina, serve 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 in the System. 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.

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. Functions include participation in formulating and conducting monetary policy; participation in the payments system, including large-dollar transfers of funds, automated clearinghouse (“ACH”) operations, and check collection; distribution of coin and currency; performance of fiscal agency functions for the U.S. Treasury, certain federal agencies, and other entities; serving as the federal government’s bank; provision of short-term loans to depository institutions; service to the consumer and the community by providing educational

materials and information regarding consumer laws; and supervision of bank holding companies, state member banks, and U.S. offices of foreign banking organizations. Certain services are provided to foreign and international monetary authorities primarily by the FRBNY.

The FOMC, in the conduct of monetary policy, establishes policy regarding domestic open market operations, oversees these operations, and annually issues authorizations and directives to the FRBNY for its execution of transactions. The FRBNY is authorized and directed by the FOMC to conduct operations in domestic markets, including the direct purchase and sale of U.S. government securities, the purchase of securities under agreements to resell, the sale of securities under agreements to repurchase, and the lending of U.S. government securities. The FRBNY executes these open market transactions at the direction of the FOMC and holds the resulting securities and agreements in the portfolio known as the System Open Market Account (“SOMA”).

In addition to authorizing and directing operations in the domestic securities market, the FOMC authorizes and directs the FRBNY to execute operations in foreign markets for major currencies in order to counter disorderly conditions in exchange markets or to meet other needs specified by the FOMC in carrying out the System’s central bank responsibilities. The FRBNY is authorized by the FOMC to hold balances of, and to execute spot and forward foreign exchange (“FX”) and securities contracts for, nine foreign currencies and to invest such foreign currency holdings ensuring adequate liquidity is maintained. The FRBNY is authorized and directed by the FOMC to maintain reciprocal currency arrangements (“FX swaps”) with four central banks and “warehouse” foreign currencies for the U.S. Treasury and Exchange Stabilization Fund (“ESF”) through the Reserve Banks. In connection with its foreign currency activities, the FRBNY may enter into transactions that contain varying degrees of off-balance-sheet market risk that results from their future settlement and counter-party credit risk. The FRBNY controls credit risk by obtaining credit approvals, establishing transaction limits, and performing daily monitoring procedures.

Although the Reserve Banks are separate legal entities, in the interests of greater efficiency and effectiveness they collaborate in the delivery of certain operations and services. The 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 Bank providing the service and the other eleven Reserve Banks. In some cases, costs incurred by a Reserve Bank for services provided to

## Notes to Financial Statements

other Reserve Banks are not shared; in other cases, the Reserve Banks are billed for services provided to them by another Reserve Bank.

Major services provided on behalf of the System by the Bank, for which the costs were not redistributed to the other Reserve Banks, include: Standard Cash Automation, Currency Technology Office, 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 \$296 million and \$269 million for the years ended December 31, 2007 and 2006, respectively, and is included in "Other credits" on the Statements of 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, which differ significantly from those of the private sector. These accounting principles and practices are documented in the *Financial Accounting Manual for Federal Reserve Banks* ("Financial Accounting Manual"), which is issued by the Board of Governors. All of the Reserve Banks are required to adopt and apply accounting policies and practices that are consistent with the Financial Accounting Manual and the financial statements have been prepared in accordance with the Financial Accounting Manual.

Differences exist between the accounting principles and practices in the Financial Accounting Manual and generally accepted accounting principles in the United States ("GAAP"), primarily due to the unique nature of the Bank's powers and responsibilities as part of the nation's central bank. The primary difference is the presentation of all securities holdings at amortized cost, rather than using the fair value presentation required by GAAP. U.S. government securities and investments denominated in foreign currencies comprising the SOMA are recorded at cost, on a settlement-date basis, and adjusted for amortization of premiums or accretion of discounts on a straight-line basis. Amortized cost more appropriately reflects the Bank's securities holdings given the System's unique responsibility to conduct monetary policy. While the application of current market prices to the securities holdings may result in values substantially above or below their carrying values, these unrealized changes in value would

have no direct effect on the quantity of reserves available to the banking system or on the prospects for future Bank earnings or capital. Both the domestic and foreign components of the SOMA portfolio may involve transactions that result in gains or losses when holdings are sold prior to maturity. Decisions regarding securities and foreign currency transactions, including their purchase and sale, are motivated by monetary policy objectives rather than profit. Accordingly, market values, earnings, and any gains or losses resulting from the sale of such securities and currencies are incidental to the open market operations and do not motivate decisions related to policy or open market activities.

In addition, the Bank has elected not to present a Statement of Cash Flows because the liquidity and cash position of the Bank are not a primary concern given the Reserve Banks' unique powers and responsibilities. A Statement of Cash Flows, therefore, would not provide additional meaningful information. 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. There are no other significant differences between the policies outlined in the Financial Accounting Manual and GAAP.

The preparation of the financial statements in conformity with the Financial Accounting Manual 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. Unique accounts and significant accounting policies are explained below.

#### a. Gold and Special Drawing Rights Certificates

The Secretary of the U.S. Treasury is authorized to issue gold and special drawing rights ("SDR") certificates to the Reserve Banks.

Payment for the gold certificates by the Reserve Banks is made by crediting equivalent amounts in dollars into the account established for the U.S. Treasury. The gold certificates held by the Reserve Banks are required to be backed by the gold of the U.S. Treasury. The U.S. Treasury may reacquire the gold certificates at any time and the Reserve Banks must deliver them to the U.S. Treasury. At such time, the U.S. 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 a fine troy ounce. The Board of Governors allocates the gold certificates among Reserve Banks once a year based on the average Federal Reserve notes outstanding in each Reserve Bank.



SDR certificates are issued by the International Monetary Fund (“Fund”) to its members in proportion to each member’s quota in the Fund at the time of issuance. SDR certificates serve as a supplement to international monetary reserves and may be transferred from one national monetary authority to another. Under the law providing for United States participation in the SDR system, the Secretary of the U.S. Treasury is authorized to issue SDR certificates somewhat like gold certificates to the Reserve Banks. When SDR certificates are issued to the Reserve Banks, equivalent amounts in dollars are credited to the account established for the U.S. Treasury, and the Reserve Banks’ SDR certificate accounts are increased. The Reserve Banks are required to purchase SDR certificates, at the direction of the U.S. Treasury, for the purpose of financing SDR acquisitions or for financing exchange stabilization operations. At the time SDR transactions occur, the Board of Governors allocates SDR certificate transactions among Reserve Banks based upon each Reserve Bank’s Federal Reserve notes outstanding at the end of the preceding year. There were no SDR transactions in 2007 or 2006.

#### ***b. Loans to Depository Institutions***

Depository institutions that maintain reservable transaction accounts or nonpersonal time deposits, as defined in regulations issued by the Board of Governors, have borrowing privileges at the discretion of the Reserve Bank. Borrowers execute certain lending agreements and deposit sufficient collateral before credit is extended. The Bank offers three discount window programs to depository institutions: primary credit, secondary credit, and seasonal credit, each with its own interest rate. Interest is accrued using the applicable discount rate established at least every fourteen days by the board of directors of the Reserve Bank, subject to review and determination by the Board of Governors.

In addition, depository institutions that are eligible to borrow under the Reserve Bank’s primary credit program are also eligible to participate in the temporary Term Auction Facility (“TAF”) program. Under the TAF program, the Reserve Banks conduct auctions for a fixed amount of funds, with the interest rate determined by the auction process, subject to a minimum bid rate. All advances under the TAF must be fully collateralized.

Outstanding loans are evaluated for collectibility, and currently all are considered collectible and fully collateralized. If loans were ever deemed to be uncollectible, an appropriate reserve would be established.

#### ***c. U.S. Government Securities and Investments Denominated in Foreign Currencies***

Interest income on U.S. government securities and investments

denominated in foreign currencies comprising the SOMA is accrued on a straight-line basis. Gains and losses resulting from sales of securities are determined by specific issues based on average cost. Foreign-currency-denominated assets are revalued daily at current foreign currency market exchange rates in order to report these assets in U.S. dollars. Realized and unrealized gains and losses on investments denominated in foreign currencies are reported as “Foreign currency gains (losses), net” in the Statements of Income and Comprehensive Income.

Activity related to U.S. government securities, including the premiums, discounts, and realized and unrealized 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 April of each year. The settlement also equalizes Reserve Bank gold certificate holdings to Federal Reserve notes outstanding in each District. Activity related to investments denominated in foreign currencies is allocated to each Reserve Bank based on the ratio of each Reserve Bank’s capital and surplus to aggregate capital and surplus at the preceding December 31.

#### ***d. Securities Purchased Under Agreements to Resell, Securities Sold Under Agreements to Repurchase, and Securities Lending***

The FRBNY may engage in tri-party purchases of securities under agreements to resell (“tri-party agreements”). Tri-party agreements are conducted with two commercial custodial banks that manage the clearing and settlement of collateral. Collateral is held in excess of the contract amount. Acceptable collateral under tri-party agreements primarily includes U.S. government securities, pass-through mortgage securities of the Government National Mortgage Association, Federal Home Loan Mortgage Corporation, and Federal National Mortgage Association, STRIP securities of the U.S. Government, and “stripped” securities of other government agencies. The tri-party agreements are accounted for as financing transactions, with the associated interest income accrued over the life of the agreement.

Securities sold under agreements to repurchase are accounted for as financing transactions and the associated interest expense is recognized over the life of the transaction. These transactions are reported in the Statements of Condition at their contractual amounts and the related accrued interest payable is reported as a component of “Other liabilities.”

U.S. government securities held in the SOMA are lent to U.S. government securities dealers in order to facilitate the effective functioning of the domestic securities market. Securities-lending

## Notes to Financial Statements

transactions are fully collateralized by other U.S. government securities and the collateral taken is in excess of the market value of the securities loaned. The FRBNY charges the dealer a fee for borrowing securities and the fees are reported as a component of "Other income."

Activity related to 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. On February 15, 2007 the FRBNY began allocating to the other Reserve Banks the activity related to securities purchased under agreements to resell.

### *e. FX Swap Arrangements and Warehousing Agreements*

FX swap arrangements are contractual agreements between two parties, the FRBNY and an authorized foreign central bank, whereby the parties agree to exchange their currencies up to a prearranged maximum amount and for an agreed-upon period of time (up to twelve months), at an agreed-upon interest rate. These arrangements give the FOMC temporary access to the foreign currencies it may need to support its international operations and give the authorized foreign central bank temporary access to dollars. Drawings under the FX swap arrangements can be initiated by either party and must be agreed to by the other party. The FX swap arrangements are structured so that the party initiating the transaction bears the exchange rate risk upon maturity. Foreign currencies received pursuant to these agreements are reported as a component of "Investments denominated in foreign currencies" in the Statements of Condition.

Warehousing is an arrangement under which the FOMC agrees to exchange, at the request of the U.S. Treasury, U.S. dollars for foreign currencies held by the U.S. Treasury or ESF over a limited period of time. The purpose of the warehousing facility is to supplement the U.S. dollar resources of the U.S. Treasury and ESF for financing purchases of foreign currencies and related international operations.

FX swap arrangements and warehousing agreements are revalued daily at current market exchange rates. Activity related to these agreements, with the exception of the unrealized gains and losses resulting from the daily revaluation, is allocated to each Reserve Bank based on the ratio of each Reserve Bank's capital and surplus to aggregate capital and surplus at the preceding December 31. Unrealized gains and losses resulting from the daily revaluation are recorded by FRBNY and not allocated to the other Reserve Banks.

### *f. 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 two to fifty 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, either developed internally or acquired for internal use, are capitalized based on the cost of direct services and materials associated with designing, coding, installing, or testing software. Capitalized software costs are amortized on a straight-line basis over the estimated useful lives of the software applications, which range from two to five years. Maintenance costs related to software are charged to expense in the year incurred.

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

### *g. Interdistrict Settlement Account*

At the close of business each day, each Reserve Bank assembles the payments due to or from other Reserve Banks. These payments result from transactions between 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.

### *h. Federal Reserve Notes*

Federal Reserve notes are the circulating currency of the United States. These notes are issued through the various Federal Reserve agents (the chairman of the board of directors of each Reserve Bank and their designees) to the Reserve Banks upon deposit with such agents of specified classes of collateral security, typically U.S. government securities. These notes are identified as issued to a specific Reserve Bank. The Federal Reserve Act provides that the collateral security tendered by the Reserve Bank to the Federal Reserve agent must be at least equal to the sum of the notes applied for by such Reserve Bank.

Assets eligible to be pledged as collateral security include all of the Bank's assets. 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 pledged for securities sold under agreements to repurchase is deducted.

The Board of Governors may, at any time, call upon a Reserve Bank for additional security to adequately collateralize the 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. At December 31, 2007, all Federal Reserve notes issued to the Reserve Banks were fully collateralized.

"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 \$13,767 million and \$11,394 million at December 31, 2007 and 2006, respectively.

#### *i. Items in Process of Collection and Deferred Credit Items*

Items in process of collection in the Statements of Condition 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 are the counterpart liability to items in process of collection, and 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.

#### *j. 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. To reflect the Federal Reserve Act requirement that annual dividends are deducted from net earnings, dividends are presented as a distribution of comprehensive income in the Statements of Income and Comprehensive Income.

#### *k. Surplus*

The Board of Governors requires the Reserve Banks to maintain a surplus equal to the amount of capital paid-in as of December 31 of each year. This amount is intended to provide additional capital and reduce the possibility that the Reserve Banks would be required to call on member banks for additional capital.

Accumulated other comprehensive income is reported as a component of surplus in the Statements of Condition and the Statements of Changes in Capital. The balance of accumulated other comprehensive income is comprised of expenses, gains, and losses related to defined benefit pension plans and other postretirement benefit plans that, under accounting standards, are included in other comprehensive income but excluded from net income. Additional information regarding the classifications of accumulated other comprehensive income is provided in Notes 9 and 10.

The Bank initially applied the provisions of SFAS No. 158, *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans*, at December 31, 2006. This accounting standard requires recognition of the overfunded or underfunded status of a defined benefit postretirement plan in the Statements of Condition, and recognition of changes in the funded status in the years in which the changes occur through comprehensive income. The transition rules for implementing the standard required applying the provisions as of the end of the year of initial implementation, and the effect as of December 31, 2006 is recorded as "Adjustment to initially apply SFAS No. 158" in the Statements of Changes in Capital.

#### *l. Interest on Federal Reserve Notes*

The Board of Governors requires the Reserve Banks to transfer excess earnings to the U.S. 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 "Payments to U.S. Treasury as interest on Federal Reserve notes" in the Statements of Income and Comprehensive Income and is reported as a liability, or as an asset if overpaid during the year, in the Statements of Condition. Weekly payments to the U.S. Treasury may vary significantly.

In the event of losses or an increase in capital paid-in at a Reserve Bank, payments to the U.S. Treasury are suspended and earnings are retained until the surplus is equal to the capital paid-in.

In the event of a decrease in capital paid-in, the excess surplus, after equating capital paid-in and surplus at December 31, is distributed to the U.S. Treasury in the following year.



## Notes to Financial Statements

### *m. Income and Costs Related to U.S. Treasury Services*

The Bank is required by the Federal Reserve Act to serve as fiscal agent and depository of the United States. By statute, the Department of the Treasury is permitted, but not required, to pay for these services. During the years ended December 31, 2006 and 2007, the Bank was reimbursed for all services provided to the Department of the Treasury.

### *n. Compensation Received for Services Provided*

The Federal Reserve Bank of Atlanta ("FRBA") Bank has overall responsibility for managing the Reserve Banks' provision of check and ACH services to depository institutions, and, as a result, recognizes total System revenue for these services on its Statements of Income and Comprehensive Income. Similarly, the FRBNY manages the Reserve Banks' provision of Fedwire funds and securities transfer services, and recognizes total System revenue for these services on its Statements of Income and Comprehensive Income. The FRBA and FRBNY compensate the other Reserve Banks for the costs incurred to provide these services. The Bank reports this compensation as "Compensation received for services provided" in the Statements of Income and Comprehensive Income.

### *o. Assessments by the Board of Governors*

The Board of Governors assesses the Reserve Banks to fund its operations based on each Reserve Bank's capital and surplus balances as of December 31 of the prior year. The Board of Governors also assesses each Reserve Bank for the expenses incurred for the U.S. Treasury to prepare and retire 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.

### *p. 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 \$2 million for each of the years ended December 31, 2007 and 2006, and are reported as a component of "Occupancy expense."

### *q. 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 costs associated with the impairment of certain of the Bank's assets are discussed in Note 6. Costs and liabilities associated with enhanced pension benefits in connection with the restructuring activities for all of the Reserve Banks are recorded on the books of the FRBNY.

### *r. Recently Issued Accounting Standards*

In September, 2006, the FASB issued SFAS No. 157, Fair Value Measurements ("SFAS No. 157"). SFAS No. 157 establishes a single authoritative definition of fair value, sets out a framework for measuring fair value, and expands on required disclosures about fair value measurement. SFAS No. 157 is generally effective for the Bank on January 1, 2008, though the effective date of some provisions is January 1, 2009. The provisions of SFAS No. 157 will be applied prospectively and are not expected to have a material effect on the Bank's financial statements.

## **4. U.S. Government Securities, Securities Purchased Under Agreements to Resell, Securities Sold Under Agreements to Repurchase, and Securities Lending**

The FRBNY, on behalf of the Reserve Banks, holds securities bought outright in the SOMA. The Bank's allocated share of SOMA balances was approximately 8.664 percent and 8.307 percent at December 31, 2007 and 2006, respectively.

The Bank's allocated share of U.S. Government securities, net, held in the SOMA at December 31, was as follows (in millions):

	2007	2006
Par value:		
U.S. government:		
Bills	\$ 19,740	\$ 23,012
Notes	34,811	33,425
Bonds	9,617	8,268
<b>Total par value</b>	<b>64,168</b>	<b>64,705</b>
Unamortized premiums	692	723
Unaccreted discounts	(257)	(333)
<b>Total allocated to the Bank</b>	<b>\$ 64,603</b>	<b>\$ 65,095</b>



At December 31, 2007 and 2006, the fair value of the U.S. government securities allocated to the Bank, excluding accrued interest, was \$67,333 million and \$66,116 million, respectively, as determined by reference to quoted prices for identical securities.

The total of the U.S. government securities, net, held in the SOMA was \$745,629 million and \$783,619 million at December 31, 2007 and 2006, respectively. At December 31, 2007 and 2006, the fair value of the U.S. government securities held in the SOMA, excluding accrued interest, was \$777,141 million and \$795,900 million, respectively, as determined by reference to quoted prices for identical securities.

Although the fair value of security holdings can be substantially greater 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 central bank, to meet their financial obligations and responsibilities, and should not be misunderstood as representing a risk to the Reserve Banks, their shareholders, or the public. The fair value is presented solely for informational purposes.

Financial information related to securities purchased under agreements to resell and securities sold under agreements to repurchase for the year ended December 31, 2007 was as follows (in millions):

	Securities Purchased Under Agreements to Resell	Securities Sold Under Agreements to Repurchase
Allocated to the Bank:		
Contract amount outstanding, end of year	\$ 4,029	\$ 3,811
Weighted average amount outstanding, during the year	3,039	3,019
Maximum month-end balance outstanding, during the year	4,462	3,811
Securities pledged, end of year		3,816
System total:		
Contract amount outstanding, end of year	\$ 46,500	\$ 43,985
Weighted average amount outstanding, during the year	35,073	34,846
Maximum month-end balance outstanding, during the year	51,500	43,985
Securities pledged, end of year		44,048

At December 31, 2006, the total contract amount of securities sold under agreements to repurchase was \$29,615 million, of which \$2,460 million was allocated to the Bank. The total par value of SOMA securities that were pledged for securities sold under agreements to repurchase at December 31, 2006 was \$29,676 million, of which \$2,465 million was allocated to the Bank.

The contract amounts for securities purchased under agreements to resell and securities sold under agreements to repurchase approximate fair value.

The maturity distribution of U.S. government securities bought outright, securities purchased under agreements to resell, and securities sold under agreements to repurchase that were allocated to the Bank at December 31, 2007, was as follows (in millions):

	U.S. Government Securities (Par value)	Securities Purchased Under Agreements to Resell (Contract amount)	Securities Sold Under Agreements to Repurchase (Contract amount)
Within 15 days	\$ 2,365	\$ 4,029	\$ 3,811
16 days to 90 days	12,972	—	—
91 days to 1 year	13,193	—	—
Over 1 year to 5 years	20,843	—	—
Over 5 years to 10 years	7,100	—	—
Over 10 years	7,695	—	—
<b>Total allocated to the Bank</b>	<b>\$ 64,168</b>	<b>\$ 4,029</b>	<b>\$ 3,811</b>

At December 31, 2007 and 2006, U.S. government securities with par values of \$16,649 million and \$6,855 million, respectively, were loaned from the SOMA, of which \$1,443 million and \$569 million, respectively, were allocated to the Bank.

## 5. Investments Denominated in Foreign Currencies

The FRBNY, on behalf of the Reserve Banks, holds foreign currency deposits with foreign central banks and with the Bank for International Settlements and invests in foreign government debt instruments. Foreign government debt instruments held include both securities bought outright and securities purchased under agreements to resell. These investments are guaranteed as to principal and interest by the issuing foreign governments.

## Notes to Financial Statements

The Bank's allocated share of investments denominated in foreign currencies was approximately 26.710 percent and 27.462 percent at December 31, 2007 and 2006, respectively.

The Bank's allocated share of investments denominated in foreign currencies, including accrued interest, valued at foreign currency market exchange rates at December 31, was as follows (in millions):

	2007	2006
<b>Euro:</b>		
Foreign currency deposits	\$ 7,342	\$ 1,714
Securities purchased under agreements to resell	681	608
Government debt instruments	1,246	1,119
<b>Japanese Yen:</b>		
Foreign currency deposits	751	715
Government debt instruments	1,525	1,469
<b>Swiss Franc:</b>		
Foreign currency deposits	1,088	—
<b>Total allocated to the Bank</b>	<b>\$ 12,633</b>	<b>\$ 5,625</b>

At December 31, 2007, the total amount of foreign currency deposits held under FX contracts was \$24,381 million, of which \$6,512 million was allocated to the Bank. At December 31, 2006, there were no open foreign exchange contracts.

At December 31, 2007 and 2006, the fair value of investments denominated in foreign currencies, including accrued interest, allocated to the Bank was \$12,627 million and \$5,612 million, respectively. The fair value of government debt instruments was determined by reference to quoted prices for identical securities. The cost basis of foreign currency deposits and securities purchased under agreements to resell, adjusted for accrued interest, approximates fair value. Similar to the U.S. government securities discussed in Note 4, unrealized gains or losses have no effect on the ability of a Reserve Bank, as central bank, to meet its financial obligations and responsibilities.

Total System investments denominated in foreign currencies were \$47,295 million and \$20,482 million at December 31, 2007 and 2006, respectively. At December 31, 2007 and 2006, the fair value of the total System investments denominated in foreign currencies, including accrued interest, was \$47,274 million and \$20,434 million, respectively.

The maturity distribution of investments denominated in foreign currencies that were allocated to the Bank at December 31, 2007, was as follows (in millions):

	European Euro	Japanese Yen	Swiss Franc	Total
Within 15 days	\$1,335	\$ 799	\$ —	\$ 2,134
16 days to 90 days	6,171	108	1,088	7,367
91 days to 1 year	736	537	—	1,273
Over 1 year to 5 years	1,027	832	—	1,859
<b>Total allocated to the Bank</b>	<b>\$9,269</b>	<b>\$2,276</b>	<b>\$1,088</b>	<b>\$12,633</b>

At December 31, 2007 and 2006, the authorized warehousing facility was \$5,000 million, with no balance outstanding.

### 6. Bank Premises, Equipment, and Software

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

	2007	2006
<b>Bank premises and equipment:</b>		
Land	\$ 35	\$ 32
Buildings	150	143
Building machinery and equipment	58	51
Construction in progress	31	26
Furniture and equipment	293	292
<b>Subtotal</b>	<b>567</b>	<b>544</b>
Accumulated depreciation	(280)	(272)
<b>Bank premises and equipment, net</b>	<b>\$ 287</b>	<b>\$ 272</b>
<b>Depreciation expense, for the year ended December 31</b>	<b>\$ 44</b>	<b>\$ 45</b>

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

	2007	2006
Leased premises and equipment under capital leases	\$ 20	\$ 11
Accumulated depreciation	(10)	(5)
<b>Leased premises and equipment under capital leases, net</b>	<b>\$ 10</b>	<b>\$ 6</b>



Depreciation expense related to leased premises and equipment under capital leases was \$4 million for the year ended December 31, 2007.

The Bank leases space to outside tenants with remaining lease terms ranging from 3 to 10 years. Rental income from such leases was \$1 million and \$2 million for the years ended December 31, 2007 and 2006, respectively, and is reported as a component of "Other income." Future minimum lease payments that the Bank will receive under noncancelable lease agreements in existence at December 31, 2007, are as follows (in thousands):

2008	\$	917
2009		971
2010		1,027
2011		1,002
2012		579
Thereafter		2,563
<b>Total</b>	<b>\$</b>	<b>7,059</b>

The Bank has capitalized software assets, net of amortization, of \$35 million and \$36 million at December 31, 2007 and 2006, respectively. Amortization expense was \$19 million for each of the years ended December 31, 2007 and 2006, respectively. Capitalized software assets are reported as a component of "Other assets" and the related amortization is reported as a component of "Other credits."

Assets impaired as a result of the Bank's restructuring plan, as discussed in Note 11, include check equipment. Asset impairment losses of \$3.0 million for the period ending December 31, 2007 were determined using fair values based on quoted market values or other valuation techniques and are reported as a component of "Other credits." The Bank had no impairment losses in 2006.

## 7. Commitments and Contingencies

At December 31, 2007, the Bank was obligated under noncancelable leases for premises and equipment with remaining terms ranging from six months to approximately two 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 and rental charges to other entities within the Federal Reserve System, was approximately \$1 million for each of the years ended December 31, 2007 and 2006, respectively.

Future minimum rental payments under noncancelable operating leases and capital leases, net of sublease rentals, with terms of one

year or more, at December 31, 2007 were not material.

At December 31, 2007, there were no material unrecorded unconditional purchase commitments or long-term obligations in excess of one year.

At December 31, 2007, the Bank had commitments of approximately \$51 million for the construction of security enhancements throughout the District and an employee parking deck at the Richmond Office. Expected payments related to these commitments are \$43 million and \$9 million for the years ending December 31, 2008 and 2009, respectively.

Under the Insurance Agreement of the Federal Reserve Banks, each of the Reserve Banks has agreed to bear, on a per incident basis, a pro rata share of 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, 2007 or 2006.

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 aforementioned litigation 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 Bank's employees participate in the Retirement Plan for Employees of the Federal Reserve System ("System Plan"). Employees at certain compensation levels participate in the Benefit Equalization Retirement Plan ("BEP") and certain Reserve Bank officers participate in the Supplemental Employee Retirement Plan ("SERP").

The System Plan provides retirement benefits to employees of the Federal Reserve Banks, the Board of Governors, and the Office of Employee Benefits of the Federal Reserve Employee Benefits System. The FRBNY, on behalf of the System, recognizes the net asset and costs associated with the System Plan in its financial statements. Costs associated with the System Plan are not redistributed to other participating employers.

## Notes to Financial Statements

The Bank's projected benefit obligation, funded status, and net pension expenses for the BEP and the SERP at December 31, 2007 and 2006, and for the years then ended, were not material.

### Thrift Plan

Employees of the Bank may also participate in the defined contribution Thrift Plan for Employees of the Federal Reserve System ("Thrift Plan"). The Bank's Thrift Plan contributions totaled \$9 million for each of the years ended December 31, 2007 and 2006, and are reported as a component of "Salaries and other benefits" in the Statements of Income and Comprehensive Income. The Bank matches employee contributions based on a specified formula. For the years ended December 31, 2007 and 2006, the Bank matched 80 percent on the first 6 percent of employee contributions for employees with less than five years of service and 100 percent on the first 6 percent of employee contributions for employees with five or more years of service.

## 9. Postretirement Benefits Other Than Pensions and Postemployment Benefits

### Postretirement Benefits other than Pensions

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

	2007	2006
Accumulated postretirement benefit obligation at January 1	\$ 175.1	\$ 135.3
Service cost-benefits earned during the period	7.5	4.8
Interest cost on accumulated benefit obligation	10.3	8.0
Net actuarial (gain) loss	(14.0)	33.2
Curtailment gain	(1.0)	—
Contributions by plan participants	1.3	1.4
Benefits paid	(8.4)	(8.1)
Medicare Part D subsidies	0.5	0.5
Plan amendments	(1.0)	—
<b>Accumulated postretirement benefit obligation at December 31</b>	<b>\$ 170.3</b>	<b>\$ 175.1</b>

At December 31, 2007 and 2006, the weighted-average discount rate assumptions used in developing the postretirement benefit obligation were 6.25 percent and 5.75 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):

	2007	2006
Fair value of plan assets at January 1	\$ —	\$ —
Contributions by the employer	6.6	6.2
Contributions by plan participants	1.3	1.4
Benefits paid, net of Medicare Part D subsidies	(7.9)	(7.6)
<b>Fair value of plan assets at December 31</b>	<b>\$ —</b>	<b>\$ —</b>
<b>Unfunded obligation and accrued postretirement benefit cost</b>	<b>\$ 170.3</b>	<b>\$ 175.1</b>
Amounts included in accumulated other comprehensive loss are shown below:		
Prior service cost	\$ 5.2	\$ 6.2
Net actuarial loss	(56.0)	(79.0)
Deferred curtailment gain	0.6	—
<b>Total accumulated other comprehensive loss</b>	<b>\$ (50.2)</b>	<b>\$ (72.8)</b>

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:

	2007	2006
Health care cost trend rate assumed for next year	8.00%	9.00%
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	2013	2012





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, 2007 (in millions):

	1% Point Increase	1% Point Decrease
Effect on aggregate of service and interest cost components of net periodic postretirement benefit costs	\$ 3.1	\$ (2.5)
Effect on accumulated postretirement benefit obligation	22.7	(18.8)

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

	2007	2006
Service cost-benefits earned during the period	\$ 7.5	\$ 4.8
Interest cost on accumulated benefit obligation	10.3	8.0
Amortization of prior service cost	(1.4)	(1.4)
Amortization of net actuarial loss	7.9	4.2
<b>Net periodic postretirement benefit expense</b>	<b>\$ 24.3</b>	<b>\$ 15.6</b>
Estimated amounts that will be amortized from accumulated other comprehensive loss into net periodic postretirement benefit expense in 2008 are shown below:		
Prior service cost	\$ (1.4)	
Net actuarial loss	5.4	
<b>Total</b>	<b>\$ 4.0</b>	

Net postretirement benefit costs are actuarially determined using a January 1 measurement date. At January 1, 2007 and 2006, the weighted-average discount rate assumptions used to determine net periodic postretirement benefit costs were 5.75 percent and 5.50 percent, respectively.

Net periodic postretirement benefit expense is reported as a component of "Salaries and other benefits" in the Statements of Income and Comprehensive Income.

A deferred curtailment gain was recorded in 2007 as a component of accumulated other comprehensive loss; the gain will be recognized in net income in future years when the related employees terminate employment.

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, retroactive to January 1, 2004, are reflected in actuarial loss in the accumulated postretirement benefit obligation and net periodic postretirement benefit expense.

There were no receipts of federal Medicare Part D subsidies in the year ended December 31, 2006. Receipts in the year ending December 31, 2007, related to benefits paid in each of the years ended December 31, 2006 and 2007 were \$0.4 million. Expected receipts in 2008, related to benefits paid in the year ended December 31, 2007 are \$0.1 million.

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

	Without Subsidy	With Subsidy
2008	\$ 8.9	\$ 8.3
2009	9.8	9.1
2010	10.7	10.1
2011	11.6	10.9
2012	12.3	11.4
2013–2017	70.7	64.8
<b>Total</b>	<b>\$ 124.0</b>	<b>\$ 114.6</b>

#### Postemployment Benefits

The Bank offers benefits to former or inactive employees.

Postemployment benefit costs are actuarially determined using a December 31 measurement date and include the cost of medical and dental insurance, survivor income, and disability benefits. The accrued postemployment benefit costs recognized by the Bank at December 31, 2007 and 2006 were \$16 million and \$15 million, respectively.

## Notes to Financial Statements

This cost is included as a component of "Accrued benefit costs" in the Statements of Condition. Net periodic postemployment benefit expense included in 2007 and 2006 operating expenses were \$4 million for each of the years, respectively, and are recorded as a component of "Salaries and other 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 (in millions):

	Amount Related to Postretirement Benefits other than Pensions
Balance at January 1, 2006	\$ —
Adjustment to initially apply SFAS No. 158	(73)
Balance at December 31, 2006	\$ (73)
Change in funded status of benefit plans:	
Net actuarial gain arising during the year	15
Deferred curtailment gain	1
Amortization of prior service credit	(1)
Amortization of net actuarial loss	8
Change in funded status of benefit plans— other comprehensive income	23
<b>Balance at December 31, 2007</b>	<b>\$ (50)</b>

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

### 11. Business Restructuring Charges

#### 2007 Restructuring Plans

In 2007, the Reserve Banks announced a restructuring initiative to align the check processing infrastructure and operations with declining check processing volumes. The new infrastructure will involve consolidation of operations into four regional Reserve Bank processing sites in Philadelphia, Cleveland, Atlanta, and Dallas. Additional announcements in 2007 included restructuring plans associated with the U.S. Treasury's Collections and Cash Management Modernization (CCMM) initiative.

#### 2005 and Prior Restructuring Costs

The Bank incurred various restructuring charges prior to 2006 related to the restructuring of savings bonds operations.

Following is a summary of financial information related to the restructuring plans (in millions):

	2005 and Prior Restructuring Plans	2007 Restructuring Plans	Total
<i>Information related to restructuring plans as of December 31, 2007:</i>			
Total expected costs related to restructuring activity	\$ 0.9	\$ 7.2	\$ 8.1
Estimated future costs related to restructuring activity	—	1.4	1.4
Expected completion date	2005	2010	
<i>Reconciliation of liability balances:</i>			
Balance at January 1, 2006	\$ 0.5	\$ —	\$ 0.5
Employee separation costs and adjustments	(0.2)	—	(0.2)
Payments	(0.2)	—	(0.2)
Balance at December 31, 2006	\$ 0.1	\$ —	\$ 0.1
Employee separation costs	—	5.8	5.8
Adjustments	(0.1)	—	(0.1)
<b>Balance at December 31, 2007</b>	<b>\$ —</b>	<b>\$ 5.8</b>	<b>\$ 5.8</b>

Employee separation costs are primarily severance costs for identified staff reductions associated with the announced restructuring plans. Separation costs that are provided under terms of ongoing benefit arrangements are recorded based on the accumulated benefit earned by the employee. Separation costs that are provided under the terms of one-time benefit arrangements are generally measured based on the expected benefit as of the termination date and recorded ratably over the period to termination. Restructuring costs related to employee separations are reported as a component of "Salaries and other benefits" in the Statements of Income.

Adjustments to the accrued liability are primarily due to changes in the estimated restructuring costs and are shown as a component of



the appropriate expense category in the Statements of Income.

Restructuring costs associated with the impairment of certain Bank assets, including software, buildings, leasehold improvements, furniture, and equipment, are discussed in Note 6. Costs associated with enhanced pension benefits for all Reserve Banks are recorded on the books of the FRBNY as discussed in Note 8.

## **12. Subsequent Events**

In March 2008, the Board of Governors announced several initiatives to address liquidity pressures in funding markets and promote financial stability, including increasing the Term Auction Facility (see Note 3b) to \$100 billion and initiating a series of term repurchase transactions (see Notes 3d and 4) that may cumulate to \$100 billion. In addition, the Reserve Banks' securities lending program (see Notes 3d and 4) was expanded to lend up to \$200 billion of Treasury securities to primary dealers for a term of 28 days, secured by federal agency debt, federal agency residential mortgage-backed securities, agency collateralized mortgage obligations, non-agency AAA/Aaa-rated private-label residential mortgage-backed securities, and AAA/Aaa-rated commercial mortgage-backed securities. The FOMC also authorized increases in its existing temporary reciprocal currency arrangements (see Notes 3e and 5) with specific foreign central banks. These initiatives will affect 2008 activity related to loans to depository institutions, securities purchased under agreements to resell, U.S. government securities, net, and investments denominated in foreign currencies, as well as income and expenses. The effects of the initiatives do not require adjustment to the amounts recorded as of December 31, 2007.



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