# Federal Reserve Bank of Boston

## ANNUAL REPORT 2005



U.S. HEALTH CARE REFORM: DIFFICULT TRADE-OFFS



Half of the improvement in our standard of living over the past 25 years stems from improvements in health care.



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## LETTER FROM THE PRESIDENT

As I think back on developments in 2005—at the national level, in New England, and in the Bank— I am struck by the importance of striking the right balance between coping with immediate challenges and looking ahead to address longterm issues. The Bank has been successful in addressing this balance in 2005. We are in the process of completing several major transitions, while at the same time proceeding with initiatives that will allow us to serve New England and the nation in new and exciting ways in the years to come.

At the national level, 2005 was marked by unexpected and daunting challenges. The Gulf Coast hurricanes caused enormous human tragedy, extensive property damage, and disruptions to energy supplies which contributed to sharp spikes in oil and natural gas prices. Nevertheless, the U.S. economy turned in a good performance in 2005, with real growth up 3.5 percent from the previous year, a rate of increase that speaks well for the resilience of our economy approaching its fifth year of expansion. About 2 million jobs were added, the unemployment rate declined, and despite the sharp increase in energy prices, core inflation remained moderate at just over 2 percent. A good definition of success, despite the challenges.

For the past several years, economic growth has been driven largely by consumer spending and strength in the housing sector. By the end of 2005, we began to see small signs of a flattening in housing and a few indications that consumer spending might be less vibrant than in the past, both as a result of slowing housing markets and increases in energy costs. Business spending, however, appears poised to pick up. Improved business confidence and stronger balance sheets are prompting businesses to boost capital spending and increase hiring, and the outlook for economic growth in 2006 is encouraging. Here in New England, the economy continued to expand in 2005, but at a slower pace than nationally. While the region's unemployment rate remained below the national average, it did not improve over the course of the year, and New England has yet to regain its prerecession job total. Nevertheless, prospects appear to be improving for a broad range of businesses in the region, and the pace of job growth should improve.

While the near-term outlook is positive, the U.S. economy faces risks in the longer term-risks that demand all of our attention. We have seen no improvement in the low rate of personal savings in the United States, and large current account and fiscal deficits pose threats to future standards of living. The rising cost of health care is another critical issue, not unrelated to our fiscal problems. While advances in health care technology have provided great benefits, paying for the associated increase in costs against the demographics of the aging "Baby Boomers" is a major challenge, potentially undermining the competitiveness of U.S. businesses and creating consumer concern and uncertainty. How to value and pay for health care was the subject of the Bank's 2005 economic conference—our fiftieth—which brought together national and international experts to both assess the problem and suggest solutions. The results of that conference are the subject of Jane Little's and Teresa Foy's essay in this annual report.

In the Bank, 2005 was a year of significant challenge and transition, but also one of progress toward goals of long-term, strategic importance. The year's key transition effort involved the extensive planning required for the consolidation of all First District check processing at our office in Windsor Locks, Connecticut, in early 2006. This consolidation is being undertaken in response to the nationwide shift from paper to electronic payment forms. Early in the new year, we bid farewell



Cathy E. Minehan, President, and Paul M. Connolly, First Vice President

to check staff in Boston, where we had check processing operations since 1915. But we also welcomed many new staff in Windsor Locks, where our office had undergone considerable renovation for the move. All our staff—in Boston and Windsor Locks—did an outstanding job in surpassing key operations targets in 2005 while at the same time preparing for the consolidation.

Another significant transition is also nearing completion: the renovation and restoration of the plaza and associated infrastructure surrounding the Bank. Completion of this project will provide improved security and a much more inviting approach to the Bank, which has been affected by construction activity in connection with Boston's "Big Dig" for at least the past decade. While the volume of paper payments is declining, electronic forms of payments are expanding. The Bank has been chosen to play a leadership role in fostering the development of electronic payments in order to improve the long-term efficiency of the U.S. payments system and the economy. Together with the U.S. Treasury, we are working to advance electronic payment solutions through the development of an Internet Payment Platform that will provide federal agencies with a more efficient electronic approach to approving and tracking purchase orders, invoices, and payments. We also are expanding the Stored Value Card program that we operate for overseas U.S. military personnel. And in 2005, we launched an Emerging Payments Research Group, drawing from the Bank's research and financial services functions.

The Group is gaining a greater understanding of consumer behavior and payment choices and their implications for the economy.

Our Research Department continued to conduct policy-oriented research in support of the Bank's role in the formulation of U.S. monetary policy-a task complicated in 2005 by the economic disruptions caused by the hurricane damage in the Gulf and rising energy costs. Looking to the future, Research has expanded on its traditional areas of focus with the establishment of a Center for Behavioral Economics and Decision-Making. This new center will take advantage of fresh thinking on consumer behavior so as to increase our understanding of economic decision-making, and ultimately improve policy-making. The Bank also formed the New England Public Policy Center to conduct research on major policy issues that affect our region-both immediate and longterm—and to facilitate information sharing among policy makers, policy analysts, and the public. Conferences and research sponsored by the center included such topics as energy policy in New England, Boston's economic vitality, and state and local tax issues.

Another significant achievement was the work of our Supervision and Regulation staff in the area of quantifying operational risk at large financial institutions, work which is helping to inform national and international regulatory policy. We also maintained an active program of outreach to regional and community banks, alerting them to emerging supervisory developments.

Attendance was up at the Bank's economic education programs and at the interactive New England Economic Adventure. Our community development initiatives focused on the financial needs of New England's immigrant populations, and we undertook an analysis of successful models of community development by universities. We developed a new newsletter focusing on the issues facing community development organizations around New England to further the efforts of our Community Development Advisory Council.

The Bank's accomplishments and contributions reflect the dedication of all associated with the Bank. We also benefit greatly from the insights and advice of others-the many people who serve on our various advisory boards and, of course, the Bank's board of directors. This year marked the completion of terms for two directors-Bain Consulting Chairman Orit Gadiesh and First National Bank of Suffield President James Wood. We very much appreciate their contributionstheir interest in prudent management of day-today challenges and their counsel on long-term strategic matters. In addition, Dr. Samuel Thier stepped down this year as the Bank's chairman. We are extremely grateful to Sam for his leadership throughout his term as chair, and for his willingness to remain with us as a director. He will be succeeded as chair by Blenda Wilson, President and Chief Executive Officer of the Nellie Mae Education Foundation.

In closing, 2005 was a year of successful transition, accomplishment, and building for the future. All of our staff, past and present, in every area, in Boston and Windsor Locks, have made this success possible—their efforts are to be celebrated.

Jacky E. Hearton

Cathy E. Minehan President and Chief Executive Officer



This year's annual report essay focuses on how we value and pay for health care.



As physicians have become more effective and societies have grown wealthier, people have chosen to spend a higher share of their incomes on health care.

# REFORMING THE U.S. HEALTH CARE SYSTEM:

### WHERE THERE'S A WILL, THERE COULD BE A WAY

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Periodically, the tensions and contradictions emanating from the big, marvelously innovative, highly inequitable, and hugely expensive U.S. health care system force a general reassessment of the way this country finances and delivers health care for its citizens. One of these periods appears to be approaching—although, as Ted Marmor pointed out over a decade ago, coalitions preferring the status quo almost always prevent these reassessments from resulting in more than incremental change.<sup>1</sup> Today, over 46 million people are uninsured, families with health insurance fear that they may lose it, firms with household names seek ways to extricate themselves from providing health insurance for their employees, and the new Deficit Reduction Act of 2005 permits doctors and hospitals to deny services to Medicaid recipients who cannot meet required co-payments and deductibles. In an early 2006 article, The *Economist* asserts that the "world's biggest and most expensive health-care system is beginning to fall apart;" it also suggests that health reform is "one of the most complicated challenges facing America's economy."<sup>2</sup> Why has health care become a major challenge to the U.S. *economy* and to *economic* policy makers? At least three developments explain the growing importance of health reform as an economic issue.

Clearly, the health care sector is now very large and touches most aspects of the U.S. and New England economies. In 2004, spending on medical care amounted to 16 percent of U.S. nominal GDP—more than consumers spent on food, clothing, and energy in total and about equal to all business investment in plant and equipment. Further, health care's share of non-farm employment is now 9 percent and growing—that's roughly akin to manufacturing's shrinking share of the workforce. In New England, health care looms even larger,

#### Figure 1



**Source:** Organisation for Economic Co-operation and Development. Data are expressed in purchasing-power-parity U.S. dollars.

#### FIGURE 2

#### HEALTH CARE SPENDING VS. HEALTHY LIFE EXPECTANCY, 2002 International Comparisons



Source: Organisation for Economic Co-operation and Development

accounting for almost 12 percent of regional employment. In the future, this sector is almost certain to absorb an even greater share of GDP, for, as OECD data suggest, as national incomes rise, countries generally *choose* to spend a growing share of their income on health and health care (Figure 1).<sup>3</sup>

With health care spending projected to reach 22 percent of GDP by 2025,<sup>4</sup> it becomes increasingly important that U.S. policy makers be able to measure health care output, prices, and productivity accurately-no easy task. Currently, the most familiar measure of health care costs is probably the medical care CPI, which measures inflation in consumers' out-of-pocket costs for medical care, a fraction of total health care spending. For a variety of reasons, the medical CPI has been increasing a lot faster than the core CPI, helping to boost broad measures of inflation and labor costs as well. In addition, rapid medical cost inflation has contributed to a widespread impression that productivity in the U.S. health care sector may be rather low. By contrast, a growing body of recent research provides evidence of significant productivity gains in health care for patients suffering from specific widespread problems like cataracts, depression, and heart attacks. But do these findings apply to the whole health care sector? Indeed, international data indicate that the United States spends far more per person on health care than would be expected given its per capita income (Figure 1),<sup>5</sup> while data on expenditures and outcomes suggest that this country's extra spending may not be particularly productive (Figure 2).6

A second reason for economists' concern about the health care system reflects its possibly distorting effect on the operation of the U.S. labor market. Compared with other OECD countries, employment-based insurance plays an unusually large role in the U.S. health care system, where it finances about 40 percent of U.S. health care spending. But of course, not all employers offer health insurance. And over the decade to 2003, the share of private-sector workers actually participating in employer-provided medical plans fell from 63 percent to 45 percent, in part reflecting workforce shifts from full- to part-time and union to non-union status. In addition, a smaller share of workers who are offered health insurance now choose to take it—most likely because a growing fraction of employers are requiring workers electing this benefit to contribute more toward its cost.<sup>7</sup> Another factor may be the increase in two-worker households.

Are these employment-based financing arrangements affecting the supply or demand for labor in this country? Are they influencing the structure of employment, encouraging a shift toward the use of temporary or contract labor? Does our health care system distort our labor market and reduce its flexibility? The answers to these questions concern policy makers.

Turning, finally, to fiscal issues, the tax-financed share of health care is estimated to have reached about 60 percent in 1999,<sup>8</sup> up from 55 percent in 1990 and a higher percentage than most people expect. The large and rising share of publicly funded health care puts pressure on federal and state budgets, limiting those governments' non-health policy options. According to the Social Security and Medicare Trustees Report of 2005, total Medicare expenditures will rise as a share of GDP from 2.6 percent currently to 13.6 percent in 2079. If so, Medicare expenditures will exceed those for Social Security in 2024 and represent twice the cost of Social Security in 2079 (Figure 3). Moreover, at the state level, many governments have taken steps to expand the scope of Medicaid in order to extend health insurance coverage to particularly vulnerable groups, such as children. This trend has placed an increased burden on state budgets (Figure 4). How the nation and individual states address these imbalances-through increased taxes, reduced benefits, or increased borrowing-will affect U.S. interest rates, private savings and investment, and international capital flows.

Prompted by its interest in these issues, the Federal Reserve Bank of Boston brought together economists, health practitioners, and policy makers to examine the topic "Wanting It All: The Challenge of Reforming the U.S. Health Care System" in June 2005. This essay summarizes the themes and the consensus-based prescriptions for action that emerged from that conference. (Please see the box on page 14 for a list of conference presenters.)

#### Figure 3

#### Social Security and Medicare Costs as a Share of GDP



Source: Medicare Trustees Report, 2005; Social Security Trustees Report, 2005.

Figure 4

#### MEDICAID AS A SHARE OF STATE EXPENDITURES



Source: National Association of State Budget Officers, State Expenditure Report, 1990 - 2004.



Rising health care costs are the result of advancements in medical technology, not population growth or aging.

#### DEFINING THE HEALTH CARE CHALLENGE— "THE PROBLEM WITH NO OBVIOUS SOLUTION"

This country's health care goals include broad, secure access to "appropriate," high-quality care based on active discovery and innovation at an "acceptable" (aye, there's the rub) cost to the ultimate payer. All industrial countries share these goals, although, as Kieke Okma points out, not necessarily the weights they assign to them. For example, Europeans tend to put more weight on access to care than do Americans, who seem to put consumer choice at the top of the list and access toward the bottom. But in the end, in "wanting it all," every country struggles with the inherent conflicts between these goals. In particular, since all countries adopt new medical technologies as they become available, all struggle to contain the rapid pace of growth in health care costs. And most could put more emphasis on prevention and achieving good health.9

These inherent conflicts reflect the essential value of health care to many patients/consumers. They also reflect, as William Nordhaus points out, society's embrace of "specific egalitarianism"<sup>10</sup> as well as society's reluctance to ration health care by price or even by regulation. Obviously, these attitudes do not accord well with an equally widespread lack of political will to pay for other people's health care. And these inconsistencies are only exacerbated by information asymmetries; by the absence of cost consciousness among consumers; and by limited competition among providers and health plans. Finally, Richard Frank and others raise a host of behavioral issues that further compound the situation, issues that include patient-doctor inertia, rules of thumb, excessive optimism, and myopia regarding the need to save for medical emergencies. These inherent conflicts lead David Cutler to call health reform "a hard problem;" Nordhaus to call it "a very hard problem;" and Henry Aaron to call it "the problem that won't go away."

#### MEASURING AND VALUING HEALTH CARE

David Cutler and William Nordhaus both demonstrate that improvements in public health and medical care have added enormously to our standard of living over the past one hundred years. Nordhaus even concludes that the value of the gains stemming from improvements in health status equals the value of all other gains in consumption over the past quarter century. Not surprisingly, then, as physicians have become more effective and societies have grown wealthier, people have chosen to spend a higher share of their incomes on health care-they value what doctors can do for them. In addition, as Cutler points out, health care turns out to be highly price elastic; properly measured, some quality-adjusted health care prices are actually falling, and people spend more in response. Further, as Cutler also demonstrates, cost-benefit analysis of specific interventions, like treatment for heart attack, finds that such interventions are clearly "worth" their cost, based on common assumptions regarding the economic value of the additional years of life resulting from the intervention. For example, \$30,000 in expenditures for a 45-year-old cardiac patient leads on average to three years' longer life. Since three years' longer life has a discounted present value of \$120,000 by common estimates, the return on the investment is 4 to 1.

But, as Cutler also notes, the fact that much of today's health care is highly valued (particularly by individual doctors, patients, and their families confronting specific medical crises) does not necessarily make it affordable (particularly to taxpayers, to whom hypothetical patients are mere statistics). Nor does this high valuation mean that all health care dollars are well spent. Cutler suggests that at least 20 percent of health care spending is wasted, while Wennberg, Skinner, and Fisher (who find that Medicare spends half as much per patient in Minnesota as in Miami with equally good results) conclude that the waste in Medicare is closer to 30 percent.<sup>11</sup> But under spending also contributes to the inefficiency of the U.S. health care system. For example, too little

is spent on prevention and chronic disease management—for the insured as well as for the uninsured. And the system often does a poor job of coordinating different aspects or phases of a patient's care, such as the transition from acute to chronic care, or the transfer of records from one hospital or doctor to another.

#### IMPROVING EFFICIENCY: Consumer Incentives, Provider Incentives, and Technology

Prescriptions for reducing the inefficiencies plaguing the U.S. health care system include making consumers more sensitive to the costs of their medical care, making providers more responsible for health care outcomes, and encouraging better use of information and communication technology throughout the health care system. To start with consumer awareness, most analysts, including those at the Boston Fed conference, agree that the tax subsidy for employer-provided health insurance, which currently cuts federal tax revenues by about \$200 billion per year,<sup>12</sup> reduces cost consciousness and should be eliminated for the non-poor.<sup>13</sup>

A second, newly popular approach to encouraging patients to be more cost conscious involves increasing the availability of low-cost insurance with high deductibles and high co-payments, combined with Health Savings Accounts (HSAs) or Health Reimbursement Arrangements. Together, these elements make up "consumer driven health care" (CDHC), which, to be effective, requires that health care cost information be widely available and of significance to patients making health care decisions. While several conference participants, including Alain Enthoven, Mark Pauly, Gene Steuerle, and Stuart Altman, see some merit in aspects of consumer driven health care,<sup>14</sup> many attendees are concerned that CDHC will encourage underutilization of preventive care, particularly by low-income individuals unable to afford the high co-payments and deductibles. And such concerns appear to be warranted, judging by a recent study that finds that, for reasons of cost, 35 percent of individuals with CDHC plans skipped or delayed health care, compared with 17 percent of persons with comprehensive health plans.<sup>15</sup> In addition, conference participants including Richard Frank, Robert Galvin, Sherry Glied, and David Meltzer point to the general absence of the information regarding health care costs that would be required to make CDHC work; the reluctance of doctors and patients to discuss matters of cost; the importance of advice from family and friends; and the prominence of inertia in determining patient choice of health care providers.

As for motivating providers to improve efficiency, many conference participants see considerable promise in "pay for performance," a reimbursement system that rewards providers for good outcomes and for following prescribed protocols for vaccinations and other preventive carethat is, for doing what they ought to do. A smaller group, led by Alain Enthoven, advocates combining "pay for performance" with support for integrated delivery systems like Kaiser Permanente in California and Harvard Vanguard in Massachusetts. Such systems are built around a core multi-specialty group practice that has a significant share of its revenues based on per capita pre-payment. Further, members of the practice are encouraged to adhere to up-to-date clinical standards developed by the team.<sup>16</sup> According to Enthoven, integrated delivery systems, also known as "delivery system HMOs," should be sharply distinguished from "carrier HMOs," rather inclusive networks of unaffiliated physicians generally working under fee-for-service arrangements. In choosing to receive care from an integrated delivery system, an individual is opting to hire a general contractor, to use a Karen Davis metaphor, rather than to deal with the plumber, the roofer, the painter, and the candlestick maker individually. Obviously, the individual's care is likely to be better coordinated, and, between capitation and patient inertia regarding choice of doctor, the system's managers have considerable incentive to provide good preventive care and disease management, using non-physician providers whenever appropriate.

Many conference participants see considerable promise in "pay for performance," a reimbursement system that rewards providers for good outcomes and for following prescribed protocols.



This essay provides a summary of the views presented at the Federal Reserve Bank of Boston's 50th Economic Conference: **"Wanting It All: The Challenge of Reforming the U.S. Health Care System, "** which was held in June of 2005. We thank all of the presenters, who are listed below, for contributing to the success of the conference.

| Henry Aaron                   | Judith Feder               | David N  |
|-------------------------------|----------------------------|----------|
| Senior Fellow                 | Dean, Georgetown Public    | Associa  |
| The Brookings Institution     | Policy Institute           | Univers  |
|                               | Georgetown University      |          |
| Stuart Altman                 |                            | James N  |
| Professor                     | Richard Frank              | Presider |
| Brandeis University           | Professor                  | Partners |
|                               | Harvard Medical School     |          |
| David Brailer, M.D.           |                            | Joseph I |
| National Coordinator for      | Henry Farber               | Professo |
| Health Information Technology | Professor                  | Harvard  |
| U.S. Department of Health and | Princeton University       |          |
| Human Services                |                            | William  |
|                               | Robert Galvin, M.D.        | Professo |
| Michael Chernew               | Director                   | Yale Un  |
| Professor                     | Global HealthCare          |          |
| University of Michigan        | General Electric Company   | Kieke O  |
|                               |                            | Visiting |
| David Cutler                  | Sherry Glied               | Catholic |
| Professor                     | Professor                  |          |
| Harvard University            | Columbia University        | Mark Po  |
|                               |                            | Professo |
| Karen Davis                   | Brigitte Madrian           | Univers  |
| President                     | Associate Professor        |          |
| The Commonwealth Fund         | University of Pennsylvania | C. Euge  |
|                               |                            | Senior I |
| Alain Enthoven                | Theodore Marmor            | Urban lı |
| Professor                     | Professor                  |          |
| Stanford University           | Yale University            | Alan We  |
|                               |                            | Executiv |
|                               |                            |          |

The conference agenda and the presenters' papers and biographies can be found at www.bos.frb.org/economic/conf/conf50/index.htm David Meltzer, M.D. Associate Professor University of Chicago

> ames Mongan, M.D. resident and CEO artners Healthcare

Joseph Newhouse Professor Harvard Medical School

William Nordhaus Professor Yale University

Kieke Okma Visiting Professor Catholic University of Leuven

Mark Pauly Professor University of Pennsylvania

C. Eugene Steuerle Senior Fellow Jrban Institute

Alan Weil Executive Director National Academy for State Health Policy

dent, and reluctant (or uncertain how) to change their ways. In the end, while most observers view integrated delivery systems and "pay for performance" as likely to improve the efficiency of the U.S. health care system, no one claims that these options will keep health care expenditures from rising as a share of income. And, as Chernew points out, the more efficient the system becomes, the harder it is to avoid the painful trade-offs between quality and access.

Turning to technology, while almost everyone agrees that advancing medical technology is the primary driver of rising health care costs—"it's the technology, stupid," to quote Mark Pauly—many conference participants remain convinced that better use of information and communications technology

But while Kaiser, Mayo, and Harvard Vanguard are widely acknowledged to provide great care, integrated delivery systems are not popular outside of California and, to a lesser extent, Massachusetts and Connecticut. Why not? Chernew and Glied suggest that people fear precommitting to a narrow set of doctors before knowing what their medical needs may be and that such systems may require too much travel. But in their eyes, the major deterrent is likely to be resistance to switching doctors, a resistance that has fostered the spread of preferred provider organizations (PPOs) and other almost universally inclusive networks of independent providers. Richard Frank and David Meltzer also raise some behavioral concerns about the efficacy of practice guidelines and "pay for performance," noting that physicians tend to be over optimistic, over confiholds great promise for improving the efficiency of the complex, disjointed U.S. health care system. According to Jim Mongan and David Brailer, for example, electronic medical records will do far more than cut paperwork and reduce error; more important, they will also drive medicine toward evidence-based practice. Galvin, Brailer, Davis, and Mongan all see huge potential in a national effort to identify and spread best practices and to develop and publicize quality measures. Nevertheless, Pauly and others suspect that even with better consumer and provider incentives and improved information and communications technology, U.S. policy makers will likely need to find a graceful, politically acceptable way to slow the adoption of new or unneeded medical technology for the insured middle class.

#### EMPLOYER-BASED HEALTH INSURANCE: PROS AND CONS

In the United States, members of the middle class generally obtain their health insurance through employer-provided health benefits. Although employment-based insurance crops up in many countries, this arrangement has played an unusually dominant role in the United States. In the 1940s, U.S. employers constrained by wartime price controls were encouraged to compete for workers by offering tax-subsidized health benefits in place of higher wages; today, employerprovided benefits are the primary source of health insurance for the non-elderly. These employmentbased arrangements cover 63 percent of the non-elderly population; by contrast, public programs like Medicaid and Medicare cover just 17 percent (Figure 5). As Brigitte Madrian points out, the result is a highly fragmented system where thousands of employers define the health insurance options available to their workers and where even Medicaid comprises 50 different state programs. Does this employment-based system serve the country well?

Many conference participants, including Alain Enthoven and Henry Farber, answer no. They describe the system as "hopelessly flawed" and a "terrible idea" because it leaves millions of people without access to affordable health care, bears most heavily on low-wage workers, and makes the U.S. labor market less flexible and dynamic. To start with this last point, just 60 percent of U.S. employers offer health insurance to any part of their workforce, and that share has been declining in recent years as health benefits have grown more costly. As a result, Madrian and others find that worker demand for affordable health insurance and employer efforts to minimize the cost of offering this benefit distort labor market decisions, reducing labor market flexibility and worker productivity. On the supply side, the availability of affordable health insurance significantly affects individual decisions regarding where to work or whether to work at all. Further, because employer-provided health insurance is not portable, insurance contracts exclude pre-existing

conditions, and people hate changing their doctors, the employer-based system tends to discourage labor mobility, producing a phenomenon known as "job lock"17-even "wedlock" on occasion. More importantly perhaps, on the demand side, employers face an incentive to substitute part-time or temporary workers for full-time workers in order to avoid health insurance costs. Similarly, firms may ask existing full-time staff, who already have health benefits, to work more hours instead of hiring more full-time workers, who will add to insurance costs. Given the evidence that workers do in fact pay for their health benefits through lower wages as economic theory would suggest, such employer efforts to minimize health insurance costs may seem puzzling. But it is not clear that the wage-benefit trade-off is either immediate or one-for-one. For example, as Joseph Newhouse points out, minimum wage laws limit employers' practical ability to shift big increases in insurance costs to low-wage workers. Nor is it easy to ask current workers to pay for big increases in the cost of retiree insurance, especially since, as Farber notes, mature firms like GM now have more pensioners than active employees.

#### Figure 5



#### Health Insurance Coverage of the Non-Elderly

Source: Employee Benefit Research Institute, 2003.

Just 60 percent of U.S. employers offer health insurance to any part of their workforce, and that share has been declining in recent years as health benefits have grown more costly.



In addition, Enthoven, Farber, and Bob Galvin agree that many employers are ill-equipped to purchase health insurance for their workers. Few small employers have a good understanding of health care issues, and employer/worker interests may not coincide. For example, while employers clearly have an interest in attracting healthy, productive workers, management's interest in their workers' long-term health may have declined in recent years as average job tenures have fallen and lifetime employment has virtually disappeared.

On the other hand, as Altman, Pauly, and Galvin argue, large firms with good benefits departments deliver very responsive health care to their workers in a very efficient manner. These firms have taken the lead in promoting fitness and wellness programs, in encouraging "pay for performance," and in developing accessible information on provider quality and costs. Further, as Galvin emphasizes, in an employer-linked system, decisions regarding the use of new technologies are market-based. Without these market signals, how would the nation determine how much to invest in desirable medical innovation? Would a singlepayer system with a "politically acceptable" global budget do as well?

#### FISCAL PRESSURES

Even now, the federal government's existing responsibilities for health care are projected to create extraordinary fiscal-and political-pressures in the decades ahead. Although political and media attention has so far focused primarily on the need to address the Social Security "crisis" approaching with the retirement of the Baby Boom generation, the government's future commitments under the Medicare and Medicaid programs loom considerably larger, as Henry Aaron, Stuart Altman, and others emphasize.

To draw the comparison more precisely, the baseline, or intermediate, estimate from the Congressional Budget Office (CBO) projects that federal spending for Social Security will rise from 4.2 percent of GDP in 2005 to 6.4 percent in 2050.

By contrast, in the intermediate case, federal spending for Medicare and Medicaid, also 4.2 percent of GDP today, is projected to reach 12.6 percent of national output by mid century (Figure 6). Unfortunately, however, the CBO's intermediate projection assumes, as do the Medicare trustees, that Medicare and Medicaid spending per enrollee will exceed per capita GDP growth by just 1 percentage point per year—an unrealistic assumption judging by U.S. history and by international trends. As the CBO points out, Medicare-Medicaid spending (and health care spending more generally) has in fact grown an average of 2.5 percentage points faster than per capita GDP since 1970. Again, this gap largely reflects technological improvements, not population aging. If these trends continue, Medicare-Medicaid spending will account for 22 percent of GDP in 2050-almost 18 percentage points more than currently.<sup>18</sup> Further, as Henry Aaron points out, because the private and public sectors share responsibility for health care spending in this country, at current trends, health care will claim about half of all U.S. income and all of the increase in economic output by mid century. Valuable as health care is, is this outcome realistic?



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Tota

## **PROJECTIONS OF** FEDERAL SPENDING Percent of GDP high spending intermediate spending



Source: Congressional Budget Office, Long-Term Budget Outlook, 2005.

Confronted with these prospects, what will the U.S. electorate do? Among the alternatives Aaron posits, one course might be to continue, by default, along the current path and simply pay the bill. This option would allow increasing our nonhealth standard of living for a while, but, as health care came to claim all of the growth in economic output and then more, the situation could turn unsustainable-if the share of economic output devoted to education, research and development, and crucial infrastructure began to shrink, economic growth itself would slow. As an obvious, desirable alternative, U.S. policy makers could redouble their efforts to make the health care system more efficient, but, as already discussed, a better targeted system requires more spending in some areas and less in others, making the net savings likely not very large. To curb Medicare spending specifically, Congress could pass restrictive legislation, increasing the Medicare eligibility age to 67, for example. While this change might encourage people to work longer, it would not save much money because the young elderly are reasonably healthy. Congress could also increase Medicare deductibles, co-payments, and premiums,<sup>19</sup> but, as Aaron notes, these changes would simply shift costs to the private sector or reduce the elderly population's access to medical care. While Medicare administrators could, for example, conceivably slow the pace at which they approve Medicare coverage for new technologies, the Boomer Generation, as Stuart Altman observes, has always been a demanding, spending lot, even in their 30s and 40s; he doubts they will permit substandard care for the elderly (and poor?) to reemerge as they age.

How then is the nation going to pay this medical bill? Assuming that the current gap between the growth in health care costs and the growth in GDP continues, meeting current Medicare-Medicaid commitments, Henry Aaron calculates, will require doubling payroll and income tax revenues as a share of GDP by 2040. Even slowing the increase in health care spending to 1 percentage point above per capita GDP growth would mean raising tax revenues by 6 percent of GDP by 2040. But, according to Stuart Altman, the United States is a "tax-phobic" nation with an Eleventh Commandment proscribing tax rates above 18 percent to 19 percent of GDP, while Joseph Newhouse notes that U.S. tax revenues have exceeded 20 percent of GDP on just one occasion in the post World War II era.

The options are limited—to us collectively as a society or individually. The more we choose to emphasize individual responsibility, the more cost conscious the system will be, but the more access for the poor and the seriously ill becomes problematic. In the end, U.S. voters will have to decide what they are willing to spend for *other* people's health care, for, as Alan Weil points out, while people are willing to spend a lot for their own health care, it is less clear what they are willing to spend on the care of others. In Henry Aaron's view, resolving these issues will impose major stresses on the democratic polity of this country in coming decades.

### WANTING IT ALL, GETTING MUCH OF IT—

#### AREAS OF AGREEMENT

Most of the health care experts attending the Boston Fed's June 2005 conference appear to agree with Karen Davis, whose remarks, entitled "Getting It All," argue that we actually do know how to achieve much of what we want for the U.S. health care system, including even broader access, and we should "just go ahead and do it." Within this group of analysts, all tend to cite the same list of ways to increase the efficiency of the U.S. health care system and move it toward the production possibility frontier. In their view, good steps to take include encouraging increased use of "pay for performance" and integrated delivery systems—with ongoing efforts to understand the behavioral issues that might undermine their spread and effectiveness. They also advocate added emphasis on primary and preventive care and disease management as well as broader use of communications and information technology to identify what works. Less obviously, perhaps, most experts also support renewed efforts to improve consumer cost consciousness by eliminating If current spending trends continue, health care will claim half of U.S. income and all of the increase in output by 2050, squeezing other important areas such as education and infrastructure.



## Health Insurance Reform in Three New England States

The last several years have seen private health insurance premiums rise and the ranks of the uninsured swell, while state budgets have come under increased fiscal pressure, limiting expansion or compelling cuts in existing programs. Nevertheless, some states have managed to summon the political will to implement health reform strategies that stretch health care dollars by using a portion of state money to leverage private, federal, and additional state funds in order to expand coverage and improve program efficiency. Initiatives of the New England states include using federal Medicaid waivers and State Children's Health Insurance Program (SCHIP) waivers to expand coverage to nontraditional beneficiaries; enacting "pay or play" laws; and creating group purchasing arrangements.<sup>1</sup> The programs of three states are explored here.

Rhode Island. In 1993, Rhode Island applied for a Medicaid 1115 waiver, permitting it to conduct a demonstration project, RIte Care. RIte Care provides comprehensive coverage to families on the Family Independence Program (formerly AFDC) and eligible uninsured pregnant women, parents of children 18 and younger, and children up to age 19. The program experienced a higher-thanexpected take-up rate, resulting in fiscal pressure. In 2001, in an effort to reduce the cost burden without cutting eligibility, the state obtained a SCHIP 1115 waiver, converting the parents of children eligible for public health coverage from Medicaid to SCHIP and, in so doing, receiving a higher SCHIP federal match for these enrollees. Additionally, Rhode Island created RIte Share, a premium-assistance program for RIte Care eligible families with access to approved employer-sponsored health insurance. RIte Share leverages employer dollars, resulting in savings to the state for every

family enrolled in this plan instead of RIte Care, which has a full public subsidy. Under RIte Share, the state pays the employee's share of work-based insurance premiums (families above 150 percent of the federal poverty level make contributions according to a sliding scale), the employee's co-payments, and wraparound coverage for Medicaid benefits not in the employer's health plan.

The results of RIte Share are encouraging. The Rhode Island Department of Human Services (DHS) has determined that subsidizing a family in RIte Share plus providing wraparound services costs the state slightly more than half the expense of covering the family through the RIte Care managed-care plan. Thus far, DHS has transitioned 4 percent of the RIte Care population into RIte Share, resulting in a savings of about 2 percent of the program.

Maine. Maine's Dirigo Health Plan, created in 2003, aims to increase access to affordable health insurance coverage, slow the growth of health care costs, and improve the quality of care. One component, DirigoChoice, offers affordable health care insurance, through private carriers, to small-business employees, the self-employed, individuals without access to employer coverage, and dependents of these eligibles. The program pools employee, employer, state, and federal funding sources to be able to deliver reduced-cost health insurance.

To increase coverage for its low-income population, Maine obtained a federal waiver to extend its state Medicaid program, MaineCare, to parents with incomes under 200 percent of the federal poverty level and to childless adults with incomes up to 125 percent of the federal poverty level. For working persons who are ineligible for MaineCare and whose income is below 300 percent of the federal poverty level, the state provides assistance in purchasing DirigoChoice coverage on a sliding scale. Both the sliding scale and the MaineCare expansion are financed by redirecting a portion of the disproportionate share hospital (DSH) allocation.

In an effort to contain health care costs, the Governor's Office of Health Policy and Finance now sets explicit targets for quality, cost, and access to health care, and establishes a budget to assist in resource allocation. In a move to increase transparency, Maine requires that average charges and payments accepted for commonly performed procedures be posted at each provider site. In addition, Maine has expanded the reach of its certificate-of-need program to cover functions and expenditures regardless of the site of care and has put voluntary limits on the growth of insurance premiums and health care costs. Mandatory provider use of health care information technology has also been proposed.

In its first nine months, DirigoChoice has enrolled over 7,000 residents and achieved \$43.7 million in savings for the Maine health care system. However, enrollment has been lower than expected, and a survey of enrollees finds that only one in four was uninsured at the time they purchased state-subsidized insurance. The majority of DirigoChoice enrollees simply switched from other private insurance.

Massachusetts. In Massachusetts, April 2006 saw a bipartisan bill break political gridlock and extend health care coverage to the state's 500,000 uninsured. The new legislation combines the individual mandate championed by conservatives—that all individuals should have health insurance—with liberal measures such as large subsidies to help lowincome individuals buy insurance and a proposed employer mandate—that all firms with 11 or more employees should provide health insurance. Under the legislation, the approximately 200,000 uninsured Bay State residents who can afford to buy health insurance will be required to purchase it or face tax penalties. To help these individuals acquire coverage, the state will create a group purchasing arrangement, allowing individuals and small businesses to buy insurance as one entity.

The state's additional uninsured comprise two groups: (1) 100,000 individuals who qualify for Medicaid but are not signed up for it, and (2) 200,000 individuals who do not qualify for Medicaid but are too poor to buy health insurance on their own. Those who qualify for Medicaid will be enrolled in it, with the cost split between the state and the federal government. For the second group, those earning up to 100 percent of the federal poverty level will receive coverage at no cost, while those with incomes between 100 percent and 300 percent of the federal poverty level will pay a portion of the premium, based on a sliding scale. Funding for both groups will come from (1) state funds set aside to pay hospitals and other providers for treating the uninsured, as well as (2) \$385 million pledged by the federal government if the state can show it is on a path to reducing its number of uninsured. Funding would also come from the proposed "pay or play" provision of the new law, which requires all employers with 11 or more employees to provide health care insurance or to pay an annual penalty of \$295 per worker.

Rhode Island, Maine, and Massachusetts have implemented innovative policies to



address the rising ranks of the uninsured and control health care costs. While none of these plans to date has provided a solution to all of the challenges the health care system currently faces, they do offer innovative ideas and reinvigorate the ongoing national debate.

 The strategies employed by states include reinsurance, high risk pools, and limited benefit plans. This section only covers a subset of the New England states' utilization of federal waivers and other state health system reforms.

– Teresa M. Foy



While Americans are willing to spend a lot for their own health care, it is less clear what they are willing to spend on the care of others.

tax subsidies for employer-provided health benefits and, to a lesser extent, by additional provision of consumer-directed health plans. While the conference attendees admit that individually these measures will not save a lot of money, 10 percent here and 15 percent there begins to add up.

Importantly, moreover, these experts broadly agree that insuring the uninsured would require relatively modest amounts of additional money: less than \$100 billion a year—less than 5 percent of current health care spending, roughly the money returned to taxpayer pockets by recent below-average tax rates,<sup>20</sup> and money that could prevent 18,000 premature deaths a year among the under 65's, according to Jim Mongan. On net, the extra cost is likely to be modest because the uninsured already get some medical care, often in emergency settings, and because providing preventive care and disease management for these people would actually be more efficient over time.

Thus, once again, these analysts concur, the nation should "just do it"<sup>21</sup> and move to provide universal coverage without waiting until we figure out how to control health care costs, for, as Judy Feder argues, the uninsured minority have been held hostage to our unwillingness to slow the growth of health care spending for the well-insured majority for 50 years. Henry Aaron concludes that universal coverage may be a necessary precondition for controlling overall health care spending; others argue that universal coverage must come first because cost control without coverage would mean squeezing low-income people out of the system.

As a result, the conference participants generally advocate using any cost savings reaped from the reforms discussed above to fund broader health insurance coverage. As one example, Alan Weil suggests making employer payments for health insurance benefits taxable and using the resulting revenue gains to fund universal coverage.

#### WHERE ACHIEVING CONSENSUS BECOMES A CHALLENGE

Beyond the large areas of agreement just reviewed, two issues-the role of employer-based insurance and the most appropriate way to control the growth of U.S. health care costs-defy consensus. To start with the first issue, conference attendees clearly have differing views on the merits of this country's employment-based system, with some viewing it as a disaster and others finding it an efficient organizing mechanism and a progressive force. But whatever their views on its merits, many analysts, including Altman, Newhouse, and Feder, are convinced that the employment-based system is crumbling badly, because, as Bob Galvin notes, many employers are seeking to escape from providing health insurance. That explains why employers are responding to consumer driven health care (CDHC) with enthusiasm; they really do believe that consumers must become more cost conscious, but they are also looking for an exit strategy. Thus, Bob Galvin predicts, 20 to 30 percent of all workers will soon have health savings accounts (HSAs), which will drive out traditional health insurance just as 401Ks drove out defined benefit pensions. Employers don't want to abandon their employees, but CDHC provides them with an acceptable way out.

Unfortunately, however, CDHC and HSAs may not work well for low-income workers, who may opt to buy low-premium insurance but be unable to pay the required deductibles, co-payments, and other large, but less than "catastrophic"<sup>22</sup> expenses, or who may opt out of buying health insurance altogether. These people will swell the ranks of the uninsured or the Medicaid population because, as noted above, many states are making imaginative efforts to redefine their Medicaid programs to let them cover nontraditional beneficiaries. (See the box on page 20 for a description of recent state initiatives in New England.) But, as Alan Weil points out, the fiscal stresses at the state level are becoming enormous. As a result, the U.S. Congress passed the Deficit Reduction Act of 2005 to give the states new leeway to charge premiums and raise co-payments for Medicaid benefits. Further, this law, for the first time ever, allows states to end Medicaid coverage for people who fail to pay these new premiums and permits doctors, hospitals, and pharmacies to deny services to Medicaid recipients who cannot make required co-payments. To judge from current trends, the end result of employer efforts to avoid health care costs may be a de facto single-payer (or largely single-payer) system, but one in which impoverished people can be denied needed health care. For analysts who favor employer-based insurance, the only way to stem this tide may be to get "pay or play" laws that require all employers to provide health benefits or to contribute to a state insurance pool back on the list of live policy options.

The conference attendees also fail to reach consensus on further ways to curb the growth in health care costs beyond those that would position the U.S. health care system to operate at maximum efficiency, although most agree that such efforts would have to include limiting insured middle-class access to valuable new technologies. At one extreme, a de facto single-payer system would require a global budget. Would such a budget fund optimum investment in new technologies, Bob Galvin wonders, or would a marketbased system do a better job? Also envisioning an ongoing role for private insurance, Mark Pauly suggests that insurers develop low-cost insurance with limited access to new interventions and technology and tout these products as "prudent care" in order to slow the adoption of possibly dangerous (and clearly expensive) new technologies. By contrast, Gene Steuerle would focus on finding ways to encourage cost-saving rather than cost-increasing new technologies. But privately funded health care would set the standards for all, because, as Jim Mongan points out, while we find price rationing acceptable in the case of hotels, we naturally find it far less palatable in the case of health care. Still, non-price rationing through government or private-payer limits leads to unacceptable queues and shortages. In the same vein, Nordhaus sees some attractions in Oregon's system of ranking medical interventions by using cost-benefit analysis; and good sense would suggest then drawing a line where the health care budget is totally absorbed. Although the Oregon system has many problems and critics, and, after all, only applies to Medicaid patients, Nordhaus argues that it is logical and flexible, responding to both technological and fiscal developments.

In the end, conference participants conclude, the major challenge posed by the U.S. health care system remains summoning the *political* will to make these difficult allocational decisions in a responsible and equitable way. Failure to meet this challenge would have serious consequences for the U.S. macro economy and polity—as well as for every individual family's well-being.

#### Endnotes

- See Theodore Marmor. 1994. "The Politics of Universal Health Insurance: Lessons from Past Administrations?" *Political Science and Politics*, vol. 27, 194-198.
- 2. "Special Report: America's Health-Care Crisis," *The Economist*, January 28, 2006, 24-26.
- 3. Population aging will contribute modestly to this trend as well.
- 4. See Council of Economic Advisers. 2006 Economic Report of the President.
- 5. Many health economists argue that it is foolish to expect the income elasticity of health care spending to be similar across countries and particularly foolish to expect the relationship to be linear. Further, this country's "outlier" status largely reflects the fact that the United States pays its health professionals relatively well, not that the U.S. system is inefficient. However, GDP does provide one constraint on health care spending, and one might ask why U.S. health professionals earn relatively high wages.
- 6. Looking beyond the healthy life expectancy data shown in the chart, the United States also uses more cardiovascular procedures per capita than Australia and Canada with less effect in terms of reduced mortality from heart disease. The United States also ranks near the bottom of OECD countries in terms of infant mortality and years lost to premature death, in part reflecting the uneven distribution of health care resources in this country.
- See William J. Wiatrowski. 2004. "Medical and Retirement Plan Coverage: Explaining the Decrease in Recent Years," *Monthly Labor Review*, vol. 127, 29-36.
- Tax-financed" includes Medicare and Medicaid, health care spending for the military and their dependents, health benefits for government employees, and the value of tax subsidies for employerprovided health benefits. Steffie Woolhandler and David U. Himmelstein. "Paying for National Health Insurance—And Not Getting It," *Health Affairs*, July/August 2002, 88-98.
- 9. However, Okma argues that some single-payer systems are quite good at prevention. She notes that the Germans are good at disease management—for instance, by sending cardiac patients to spas to learn how to change their lifestyle by exercising and losing weight.

- 10. Specific egalitarianism is the belief that a program or service should be distributed equally across all people, as with voting, the wartime draft, and primary and secondary education.
- Even worse, a study by the Institute of Medicine finds that medical error is the eighth largest cause of death in the United States. John E. Wennberg, Elliott S. Fisher, and Jonathan S. Skinner. "Geography and the Debate over Medicare Reform," *Health Affairs*, Project Hope, January/February 2002.
- 12. See Council of Economic Advisers. 2006 Economic Report of the President.
- 13. This subsidized system also places low-wage workers at a comparative disadvantage because health insurance premiums loom larger relative to their wages than they do for highly compensated workers.
- 14. Gene Steuerle points out that most people, including health economists, have no idea that total health care spending per household averaged \$16,000 in 2003.
- 15. Further, 42 percent of those with highdeductible plans spent 5 percent or more of their income on health care (premiums and out-of-pocket items) compared with 12 percent of those with more comprehensive plans. Paul Frontsin and Sara R. Collins. "Early Experience with High-Deductible and Consumer-Driven Health Plans: Findings from the EBRI/ Commonwealth Fund Consumerism in Health Care Survey," EBRI Issue Brief 288, December 2005.
- 16. In a somewhat narrower setting, David Meltzer also notes how the develop ment of "hospitalists," physicians who specialize in providing inpatient care, has cut costs and improved the quality of hospital care delivered both by the hospitalists and by other physicians who work with them.
- 17. However, because most workers are relatively healthy, Mark Pauly suspects that job lock is unlikely to be a major concern. The growing number of twoworker households also helps alleviate this problem.
- According to the CBO long-term outlook, the intermediate path would result in primary spending (defense, Social Security, Medicare and Medicaid, and other non-interest expenditures) rising

from 17.5 percent of GDP in 2005 to 25 percent in 2050. The higher path would see primary spending soar from 17.5 percent of GDP to 34 percent. (U.S. Congressional Budget Office, "CBO Study: The Long-Term Budget Outlook," December 2005.)

19. Making a dent would require some really big changes. According to Aaron, just to keep Medicare costs from rising faster than GDP would require boosting the eligibility age for Medicare to 83 in 2040 or reducing Medicare's share of health care spending by the elderly from 60 percent now to 23 percent in 2040. 20. Federal tax revenues have averaged 18.3 percent of GDP over the past 30 years but were just 17.5 percent of GDP in 2005.

- 21. The mechanisms for doing so vary and could include broadening eligibility criteria for Medicare, Medicaid, the Federal Employees Health Benefits Plan, and other health plan purchasing organizations, instituting an employer or individual mandate, or shifting to a single-payer system.
- 22. Low-premium, high-deductible health insurance plans do tend to cover catastrophic medical expenses.



## Bank Highlights Our Role in New England and the Nation 2005

The Federal Reserve Bank of Boston, as the New England arm of the nation's central bank, focuses its activities in four major areas:

- maintaining a safe, efficient, and cost-effective payments system,
- conducting economic research to support monetary policy and advance economic understanding,
- maintaining a safe and sound banking system, and
- sharing our expertise to benefit the public.

#### PAYMENTS SERVICES TODAY

The nation's payments system is changing rapidly. At the Federal Reserve Bank of Boston, this means we are constantly operating on two fronts—not only must we strive to see that the current payments system continues to operate flawlessly, but also we must lead efforts to develop newer payments approaches and bring them to reality.

It is clear that retail electronic transfers are coming to dominate paper checks in the U.S. payments system. Many paper checks are now being converted to some type of electronic transaction, eliminating the need to transport and process paper. For the Reserve Banks, this shift to electronic payments has meant that we need to reduce the scale of our check processing operations in order to keep them efficient and cost-effective. In 2005, we in Boston prepared for the consolidation of our Boston check processing operations into our facility in Windsor Locks, Connecticut—a consolidation successfully executed in February 2006. This was a major undertaking, involving renovations and new equipment at the Windsor Locks facility and extensive communication with First District banks about the change. We also provided as much assistance as we could to Boston staff in the form of access to retraining and other job opportunities within the Bank and elsewhere as that staff prepared for the transition. Our excellent operational data for the year are testimony to the dedication of that staff.

The year was the first full year of operation of "Check 21," federal legislation that permits the payments system to clear an electronic image of a check, with the creation of a "substitute check" if that is necessary for clearing purposes. Not having to transport the physical paper check reduces costs and shortens the check clearing and settlement process. The Federal Reserve Bank of Boston was active in 2005 both in New England and nationally in promoting Check 21 services.



#### PAYMENTS SERVICES TOMORROW

The Boston Bank has long been a leader in the research and development of new payments services. We made notable progress in 2005 in two initiatives, both undertaken on behalf of the U.S. Treasury:

- The Internet Payment Platform project will provide federal agencies and their suppliers with a means to take the paperwork out of procurement transactions—by converting purchase orders, invoices, and payments to electronic form. In 2005, we researched, selected, and installed for testing a commercial software package that provides the basis for this new system. It is expected to be in production in late 2006, with the Bank providing continuing operational and software development support.
- An initiative that has been ongoing for several years is the Stored Value Card (SVC) program for U.S. military personnel, who can use these cards to pay for goods and services at overseas Army bases, eliminating the need for the military to keep stores of cash overseas. In 2005, we introduced a new self-service SVC kiosk. This kiosk allows overseas Army personnel to transfer money from their U.S.-based account to their stored value card. We arranged the installation of kiosks in Saudi Arabia, Honduras, Afghanistan, Bosnia, Kosovo, Qatar, and Germany. We expect to extend the SVC program to other countries in 2006.

The Bank also has key responsibilities for electronic transactions in U.S. Treasury securities and highdollar-value Federal Reserve payments services. In 2005, the Bank's Internet and Directory Services Group (IDSG) led the design of a new Internet connectivity option that improves the flexibility and resiliency of Open Market operations. IDSG also played a leadership role in developing the security policy for large financial institutions executing high-dollar transactions through the System's new web-based payments technology.



A new initiative launched in 2005 is our Emerging Payments Research Group, a crossdepartmental research center created to further the Federal Reserve System's understanding of emerging payments trends, especially consumer behavior. The group helped shape a national survey of consumer payment behavior, contributed to Systemsponsored studies, and organized a highly successful conference exploring why consumers choose the payment methods they do.

#### ECONOMIC RESEARCH AND MONETARY POLICY

In 2005, rising energy prices and diminishing excess capacity raised concerns, on the one side, about a possible acceleration in inflation. On the other side, the economic devastation caused by severe hurricanes and the increasing potential for a slowdown in the housing market raised concerns about a weakening economy. Balancing the risks posed on both sides, the Federal Open Market Committee (FOMC) voted to raise interest rates at each of its eight meetings, bringing the federal funds



rate from 2.25 percent at the beginning of the year to 4.25 percent at the end. The resulting outcome low and well-contained inflation accompanied by sustainable growth—was as favorable a result as policy makers could hope to see.

The Bank's economists and visiting scholars produced a sizable volume of papers that spanned a wide array of topics. Many of the papers were, or will be, published in top-flight economic journals. Macro research examined the sources of inflation persistence in New Keynesian Phillips curves; the contribution to the evolution of inflation of gradual shifts in the Federal Reserve's implicit inflation goal; the contribution to the decrease in economic volatility since the early 1980s of a decline in the covariance between sales and inventories; and the sources of, and uncertainty surrounding, longer-term trends in labor force participation. Finance-related research identified elusive supply effects on prices in asset markets; incorporated a more realistic borrowing environment to explain why more people do not invest in equities; and examined the link between properly measured cash flow and firm value.

The year 2005 was also the first full year of operation for the Bank's new Center for Behavioral Economics and Decision-Making, established to gain a better understanding of how economic decisions are made with the ultimate aim of improving policy making. Behavioral economics seeks to understand economic decision-making through controlled experiments designed to observe behavior under specific conditions. A variety of papers were produced by the center in 2005, including one, "Tom Sawyer and the Construction of Value," that examines the importance of context in how people perceive the value of compensation.



The Bank's 50th annual economic conference, held in June, addressed a topic widely recognized as critical to our nation—how to deliver, value, and pay for health care. "Wanting It All: The Challenge of Reforming the U.S. Health Care System" brought together economists, health practitioners, and policy makers to explore the best ways to measure, finance, and distribute the benefits of modern health care. A summary of the conference proceedings forms the essay featured in this Annual Report. The conference served to highlight areas of consensus and disagreement in this complex field.

#### A SAFE AND SOUND BANKING SYSTEM

New England banks recorded strong profits in 2005, as was also true for banks nationwide. Credit concerns were minimal, but interest margins narrowed as short-term rates rose by more than did long-term rates.

The Bank's Supervision, Regulation and Credit staff examined and supervised some 121 bank holding companies in 2005, as well as 11 state member banks. While fulfilling this basic responsibility, the Bank also took a leadership role in System work relating to the development of new regulatory policies and supervisory approaches. Our System contributions draw heavily on the expertise we have built up in how to assess, measure, and reserve for the operational risk that banks face. Operational risk is the risk of loss from inadequate or failed internal processes, people, and systems or from external events. In a new initiative, the Bank was chosen, along with three other Reserve Banks, to work on a program to achieve greater quality and consistency in the System's supervision of large financial institutions.

The Bank's Supervision group continued in 2005 to conduct research designed to address and clarify issues relating to international capital standards for large banks, standards commonly referred to as Basel II. Boston led two inter-agency work groups that examined aspects of the capital charges under the proposed new system, and we prepared a white paper on the competitive impact of the Basel II operational-risk charge that we presented to Congressional staff.

In May, the Bank hosted an international conference on the operational risk aspects of Basel II. With over 300 attendees, "Implementing an Advanced Management Approach for Operational Risk" called to attention a mix of research, policy, and implementation considerations.

#### **REGIONAL OUTREACH**

A particular focus of the Bank is serving New England. We do so by providing economic and consumer education, working with community organizations and financial institutions to foster community development and insure broad and equitable access to credit and financial services, and providing high-quality analysis of policy issues important to the region.

The Bank was pleased to see increased use in 2005 of virtually all of its economic education programs. Some 11,300 persons visited our New England Economic Adventure and our other in-Bank economic education programs, a 7 percent increase over 2004. In particular, we were pleased that these programs reached more groups from low and moderate income communities. The Economic Adventure, a

combination of interactive games and exhibits, continues to be very effective in using New England as an example to teach about the process of economic growth.

The Bank successfully piloted a college version of Fed Challenge, our high school competition simulating the deliberations of Federal Reserve monetary policy makers. A variety of schools participated, and the quality of the competition was excellent. We look forward to offering this program on a larger scale in 2006.

A new consumer initiative of 2005 was the establishment of the New England Consumer Advisory Group (NECAG), consisting of regulators, industry professionals, attorneys, consumer advocates, and leaders of nonprofit groups. The goal of the Advisory Group is to identify and address emerging consumer issues, and a major activity was a conference on alternative mortgages (the pitfalls, as well as opportunities, they present for





borrowers). The Bank also provided information on how consumers may protect themselves against such fraudulent schemes as "phishing" and "pharming." The Bank's consumer pamphlet on identity theft, first produced in 2003, continued to be extremely popular and was the most frequently downloaded publication on the Bank's public web site.

In the area of community development, a focus in 2005 was gaining a better understanding about New England's immigrant population and its financial services needs. The Bank produced a discussion paper on international remittances-a funds-transfer mechanism important to the region's immigrant population—that has attracted significant attention. The Bank's Communities & Banking publication included an article on immigrant entrepreneurs; and the contributions of immigrants were also featured on our web site and in an exhibit displaying furniture and craftwork from the North Bennet Street School, which was founded over 100 years ago to serve Boston's immigrant population.

A major new regional outreach initiative of the Bank came into being in 2005. The New

England Public Policy Center was formed to serve policy makers, policy analysts, and the public by conducting high-quality research on major policy issues that affect the region and by facilitating information

sharing. While the Bank has a long history of research and analysis of regional economic issues, the Policy Center represents a new approach in its focus on topical issues and in responding to requests. The new research unit is leveraging its capabilities by reaching out to policy analysts throughout the region to develop a network of expertise in regional policy analysis. Among the topics addressed by working papers and conferences in 2005 were New England water supply issues, the pros and cons of mandating nurse-patient ratios, housing issues, and, in a major conference, New England's energy situation.



# THE BANK IN THE COMMUNITY

As part of the nation's central bank, the Federal Reserve Bank of Boston promotes sound growth and financial stability in New England and the nation. The Bank contributes to local communities, the region, and the nation through its high-quality research, regulatory oversight, and financial services, and through its commitment to leadership and innovation. Each year, Bank staff work and volunteer in many community projects and initiatives including the following:

- We Care About Kids
- Community Care Day
- Homeless Children's Holiday Party
- Books and Kids Program
- FinTech Scholars Program
- United Way
- Boston Summer Jobs Program
- Boston Private Industry Council

- Dearborn Middle School Mentoring Program
- Classroom at the Workplace
- Boston After School Jobs Program
- Job Shadow Day
- School-to-Career Project
- Workforce Development
- Excel High School Partnership



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# New England Advişory Çouncil



Seated from left to right: Nancy Connolly, William Gurley, Deborah Besemer, Paul Connolly Standing from left to right: Craig Moore, Dwight Sargent, Cathy Minehan, Leslie Kenney, James Brett, Gregory Howey, Amar Kapur, Kathy Weare

Kathy Weare (Chairman) Chief Executive Officer The Cliff House Resort & Spa

**Deborah Besemer** President and Chief Executive Officer BrassRing

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Nancy J. Connolly President Lasertone Corporation

William D. Gurley Former President and Chief Executive Officer Stanadyne Corporation **Gregory B. Howey** President Okay Industries

**Keith Hutchins** Partner The Flower Hutch

Amar Kapur President and Chief Executive Officer Aimtek, Inc.

**Leslie Kenney** Chief Executive Officer Kenney Manufacturing Corporation

**Ted Krantz** President Airmar Technology Corporation

Merritt Mayher Former President and Chief Executive Officer Shreve, Crump & Low **Craig Moore** Chief Operating Officer Marox Corporation

**Dwight Sargent** President Pompanoosuc Mills Corporation

**Kirk Sykes** President and Founder The Primary Group, Inc.

**Jeffrey C. Taylor** Founder Monster.com

James Brett (Advisor) President and Chief Executive Officer The New England Council

## COMMUNITY DEVELOPMENT Advisory Council



Seated from left to right: Cynthia Russell, Raymond Tung, Elizabeth Humstone Standing from left to right: Peter Walsh, William Fenton, Cathy Minehan, Dennis Lagueux, Darnell Williams, Christopher Miller, Charles Newton, Richard Walker

**Richard C. Walker III** (Chairman) Vice President Federal Reserve Bank of Boston

William Armitage II Executive Director Biddeford-Saco Area Economic Development Corporation

**Brenda Clement** Executive Director Housing Network of Rhode Island

**William Fenton** Senior Vice President and Market Manager Bank of America

**Peter Gagliardi** Executive Director Hamden Hampshire Housing Partnership **Elizabeth Humstone** Director, U.S. Programs Institute for Sustainable Communities

**Dennis P. Lagueux** Vice President and Director of Community Development Banknorth Group

**Christopher R. Miller** Director, Management & Development New Hampshire Housing Finance Authority

**Charles Newton** Executive Director Penquis Community Action Program, Inc.

Marc Reich President Ironwood Capital Management, LLC Mayte Rivera Director, HUD/NECC Community Enterprise Development Center Northern Essex Community College

**Cynthia Russell** President and Chief Executive Officer Connecticut Housing Investment Fund

Raymond Tung President and Chief Executive Officer Asian American Bank & Trust Company

**Peter Walsh** Senior Vice President Bank Rhode Island

Darnell Williams President and Chief Executive Officer The Urban League of Eastern Massachusetts

### OFFICERS

As of December 31, 2005

Executive Office Cathy E. Minehan President Chief Executive Officer

**Paul M. Connolly** First Vice President Chief Operating Officer

Audit Roland H. Marx, Jr. Vice President General Auditor

Anna M. Wong Assistant Vice President Assistant General Auditor

National Financial and Accounting Services Alan W. Bloom Vice President

Ronald E. Mitchell, Jr. Vice President

Carl S. Madsen Assistant Vice President

David F. Tremblay Assistant Vice President

Kristine M. Van Amsterdam Assistant Vice President

Administrative and Legal Services Group William N. McDonough Executive Vice President General Counsel

Mary E. Fothergill Vice President

David K. Park Vice President Associate General Counsel

Patricia Allouise Assistant Vice President Assistant General Counsel

Mary Hughes Bickerton Assistant Vice President Assistant General Counsel

**Brian L. Donovan** Assistant Vice President

Barry Maddix Assistant Vice President Assistant General Counsel

H. Colby Rottler Assistant Vice President Regional Outreach and Communications Group Lynn E. Browne Executive Vice President Economic Advisor

**Stephen G. Trebino** Vice President Secretary

**Richard C. Walker III** Vice President

**Thomas L. Lavelle** Assistant Vice President Public Information Officer

**Robert Tannenwald** Assistant Vice President Economist

Elaine Zetes Assistant Vice President Assistant Secretary

Research Group Jeffrey C. Fuhrer Senior Vice President Director of Research

**Jane S. Little** Vice President Economist

**Geoffrey M. B. Tootell** Vice President Economist

Supervision, Regulation and Credit Group Eric S. Rosengren Senior Vice President

**Robert Augusta, Jr.** Vice President

Robert M. Brady Vice President

**Richard M. Burns** Vice President

Michael P. Malone Vice President

James T. Nolan Vice President

**Patrick Y. de Fontnouvelle** Assistant Vice President

**Peter F. Genevich** Assistant Vice President

**Christopher J. Haley** Assistant Vice President

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Judith S. Quenzel Assistant Vice President

**Preston S. Thompson** Assistant Vice President Payments, Technology, and Resource Management Group Sarah G. Green Executive Vice President

Resource Planning and Management Cynthia A. Conley Vice President Associate General Counsel

**Linda J. Mahon** Vice President

**Stephen J. Bernard** Assistant Vice President

Krista M. Blair Assistant Vice President

**Jon D. Colvin** Assistant Vice President

Mary L. Cottman Assistant Vice President

**John J. Kroen** Assistant Vice President

Payments and Technology Services and Innovation Steven M. Whitney Senior Vice President

James S. Cunha Vice President

Christopher J. Gale Vice President

Dexter S. Holt Vice President

**Linda K. Kopec** Vice President

Leah A. Maurer Vice President

James McEneaney Vice President

Marianne D. Crowe Assistant Vice President

Amina P. Derbali Assistant Vice President

Paul J. Malloy Assistant Vice President

**John E. McKinnon** Assistant Vice President

David L. Plasse Assistant Vice President

**James R. Rigoli** Assistant Vice President

Christopher H. Ritchie Assistant Vice President

Amy O. Ross Assistant Vice President

**Joyce L. Sandvik** Assistant Vice President



### MANAGEMENT ASSERTION

March 2, 2006 To the Board of Directors:

The management of the Federal Reserve Bank of Boston ("FRB Boston") is responsible for the preparation and fair presentation of the Statement of Financial Condition, Statement of Income, and Statement of Changes in Capital as of December 31, 2005 (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 judgments and estimates of management. 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 Boston is responsible for maintaining an effective process of internal controls over financial reporting including the safeguarding of assets as they relate to the Financial Statements. Such internal controls are designed to provide reasonable assurance to management and to the Board of Directors regarding the preparation of reliable Financial Statements. This process of internal controls contains self-monitoring mechanisms, including, but not limited to, divisions of responsibility and a code of conduct. Once identified, any material deficiencies in the process of internal controls are reported to management, and appropriate corrective measures are implemented.

Even an effective process of internal controls, 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.

The management of the FRB Boston assessed its process of internal controls over financial reporting including the safeguarding of assets 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 (COSO). Based on this assessment, we believe that the FRB Boston maintained an effective process of internal controls over financial reporting including the safeguarding of assets as they relate to the Financial Statements.

Federal Reserve Bank of Boston

Cathy E. Minehan, President

Jathy E. Wearlow

Linda Mahon, Principal Accounting Officer

Ginda J. Mahm

Paul M. Connolly, First Vice President

Paul M. Connelly

# PRICEW/ATERHOUSE COPERS 🕅

To the Board of Directors of the Federal Reserve Bank of Boston

We have examined management's assertion, included in the accompanying Management Assertion, that the Federal Reserve Bank of Boston ("FRB Boston") maintained effective internal control over financial reporting and the safeguarding of assets as they relate to the financial statements as of December 31, 2005, based on criteria established in *Internal Control–Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. FRB Boston's management is responsible for maintaining effective internal control over financial reporting and safeguarding of assets as they relate to the financial statements of assets as they relate to over financial reporting and safeguarding of assets as they relate to the financial statements. Our responsibility is to express an opinion on management's assertion based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants and, accordingly, included obtaining an understanding of internal control over financial reporting, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion.

Because of inherent limitations in any internal control, misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of internal control over financial reporting to future periods are subject to the risk that the internal control may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, management's assertion that FRB Boston maintained effective internal control over financial reporting and over the safeguarding of assets as they relate to the financial statements as of December 31, 2005, is fairly stated, in all material respects, based on criteria established in *Internal Control–Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

This report is intended solely for the information and use of management and the Board of Directors and Audit Committee of FRB Boston, and any organization with legally defined oversight responsibilities and is not intended to be and should not be used by anyone other than these specified parties.

PRICE WATERHOUSE COPERS LLP

March 8, 2006

### **Report of Independent Auditors**

# PRICEWATERHOUSE COPERS 1

To the Board of Governors of the Federal Reserve System and the Board of Directors of the Federal Reserve Bank of Boston

We have audited the accompanying statements of condition of the Federal Reserve Bank of Boston (the "Bank") as of December 31, 2005 and 2004, and the related statements of income and changes in capital for the years 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 audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. 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. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide 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 and constitute 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, 2005 and 2004, and results of its operations for the years then ended, on the basis of accounting described in Note 3.

TREEWATERHOSE COPERS LLP

March 8, 2006

## STATEMENTS OF CONDITION

as of December 31, 2005 and 2004 (in millions)

|  | 2005     | 2004     |
|--|----------|----------|
| Assets   |          |          |
| Gold certificates  | \$510    | \$494    |
| Special drawing rights certificates                      | 115      | 115      |
| Coin   | 31       | 19       |
| Items in process of collection                           | 368      | 457      |
| Loans to depository institutions                         | 2        | 1        |
| U.S. government securities, net                          | 38,383   | 34,072   |
| Investments denominated in foreign currencies            | 2,405    | 1,083    |
| Accrued interest receivable                              | 298      | 239      |
| Interdistrict settlement account                         | -        | 2,979    |
| Bank premises and equipment, net                         | 131      | 118      |
| Interest on Federal Reserve notes due from U.S. Treasury | -        | 460      |
| Other assets   | 24       | 22       |
| Total assets   | \$42,267 | \$40,059 |
| LIABILITIES AND CAPITAL<br>Liabilities:                  |          |          |
| Federal Reserve notes outstanding, net                   | \$34,548 | \$33,917 |
| Securities sold under agreements to repurchase Deposits: | 1,561    | 1,446    |
| Depository institutions                                  | 621      | 1,050    |
| Other deposits   | 5        | 4        |
| Deferred credit items                                    | 488      | 578      |
| Interest on Federal Reserve notes due U.S. Treasury      | 1,068    | -        |
| Interdistrict settlement account                         | 3,268    | -        |
| Accrued benefit costs                                    | 58       | 60       |
| Other liabilities  | 16       | 13       |
| Total liabilities  | 41,633   | 37,068   |
| Capital:   |          |          |
| Capital paid-in  | 317      | 1,638    |
| Surplus  | 317      | 1,353    |
| Total capital  | 634      | 2,991    |
| Total liabilities and capital                            | \$42,267 | \$40,059 |

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

## STATEMENTS OF INCOME

for the years ended December 31, 2005 and 2004 (in millions)

|   | 2005    | 2004    |
|---|---------|---------|
| Interest income:  |         |         |
| Interest on U.S. government securities                    | \$1,410 | \$1,040 |
| Interest on investments denominated in foreign currencies | 34      | 14      |
| Total interest income                                     | 1,444   | 1,054   |
| Interest expense:   |         |         |
| Interest expense on securities sold under agreements      |         |         |
| to repurchase   | 41      | 14      |
| Net interest income                                       | 1,403   | 1,040   |
| Other operating (loss) income:                            |         |         |
| Income from services                                      | -       | 38      |
| Compensation received for check services provided         | 45      | -       |
| Reimbursable services to government agencies              | 20      | 23      |
| Foreign currency (losses) gains, net                      | (313)   | 62      |
| Other income  | 15      | 12      |
| Total other operating (loss) income                       | (233)   | 135     |
| Operating expenses:                                       |         |         |
| Salaries and other benefits                               | 88      | 91      |
| Occupancy expense   | 15      | 14      |
| Equipment expense   | 10      | 13      |
| Assessments by the Board of Governors                     | 53      | 48      |
| Other expenses  | 52      | 51      |
| Total operating expenses                                  | 218     | 217     |
| Net income prior to distribution                          | \$952   | \$958   |
| Distribution of net income:                               |         |         |
| Dividends paid to member banks                            | \$51    | \$53    |
| Transferred (from) to surplus                             | (1,036) | 905     |
| Payments to U.S. Treasury as interest on                  |         |         |
| Federal Reserve notes                                     | 1,937   | -       |
| Total distribution  | \$952   | \$958   |

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

### STATEMENTS OF CHANGES IN CAPITAL

for the years ended December 31, 2005 and 2004 (in millions)

|                                      | Capital |         | Total   |
|--------------------------------------|---------|---------|---------|
|                                      | Paid-in | Surplus | Capital |
| Balance at January 1, 2004           |         |         |         |
| (9.0 million shares)                 | \$448   | \$448   | \$896   |
| Transferred to surplus               | -       | 905     | 905     |
| Net change in capital stock issued   |         |         |         |
| (23.8 million shares)                | 1,190   | -       | 1,190   |
| Balance at December 31, 2004         |         |         |         |
| (32.8 million shares)                | 1,638   | 1,353   | 2,991   |
| Transferred from surplus             | -       | (1,036) | (1,036) |
| Net change in capital stock redeemed |         |         |         |
| (26.4 million shares)                | (1,321) | -       | (1,321) |
| Balance at December 31, 2005         |         |         |         |
| (6.4 million shares)                 | \$317   | \$317   | \$634   |

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

### NOTES TO FINANCIAL STATEMENTS

#### 1. Structure

The Federal Reserve Bank of Boston ("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 serves the First Federal Reserve District, which includes Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and a portion of Connecticut.

In accordance with the Federal Reserve Act, supervision and control of the Bank are 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, 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 of the Federal Reserve System ("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 System performs a variety of services and operations. Functions include formulating and conducting monetary policy; participating actively in the payments system including large-dollar transfers of funds, automated clearinghouse ("ACH") operations, and check processing; distributing coin and currency; performing fiscal agency functions for the U.S. Treasury and certain federal agencies; serving as the federal government's bank; providing short-term loans to depository institutions; serving the consumer and the community by providing educational materials and information regarding consumer laws; supervising bank holding companies, state member banks, and U.S. offices of foreign banking organizations; and administering other regulations of the Board of Governors. The System also provides certain services to foreign central banks, governments, and international official institutions.

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. FRBNY is authorized to conduct operations in domestic markets, including 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, with the exception of securities purchased under agreements to resell, 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 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 ("F/X") and securities contracts for nine foreign currencies and to invest such foreign currency holdings ensuring adequate liquidity is maintained. In addition, FRBNY is authorized to maintain reciprocal currency arrangements ("F/X swaps") with two 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, FRBNY may enter into contracts that contain varying degrees of off-balance-sheet market risk, because they represent contractual commitments involving 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 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 competency centers, operations sites, and product or service 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 other Reserve Banks are not shared; in other cases, 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: Internet and Directory Services, National Check Image Archive Services, Financial Support Office, and Centralized Accounting Technology Services.

Beginning in 2005, the Reserve Banks adopted a new management model for providing check services to depository institutions. Under this new model, the Federal Reserve Bank of Atlanta ("FRBA") has the overall responsibility for managing the Reserve Banks' provision of check services and recognizes total System check revenue on its Statements of Income. FRBA compensates the other eleven Banks for the costs incurred to provide check services. This compensation is reported as "Compensation received for check services provided" in the Statements of Income. If the management model had been in place in 2004, the Bank would have reported \$54 million as compensation received for check services provided and \$38 million in check revenue would have been reported by FRB Atlanta rather than the Bank.

#### **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 the various accounting standard-setting bodies. The Board of Governors has developed specialized accounting principles and practices that it believes are appropriate for the significantly different nature and function of a central bank as compared with 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 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 those generally accepted 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 security holdings at amortized cost, rather than using the fair value presentation requirements in accordance with GAAP. Amortized cost more appropriately reflects the Bank's security holdings given its 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 security 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 its activities or policy decisions.

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 Bank's unique powers and responsibilities. A Statement of Cash Flows, therefore, would not provide any additional meaningful information. Other information regarding the Bank's activities is provided in, or may be derived from, the Statements of Condition, 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, 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. These 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 lowered. The value of gold for purposes of backing the gold certificates is set by law at \$42 <sup>2</sup>/<sub>9</sub> 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.

Special drawing rights ("SDRs") 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. SDRs serve as a supplement to international monetary reserves and may be transferred from one national monetary authority to another. Under the law providing for 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. At such time, 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 Federal Reserve notes outstanding in each District at the end of the preceding year. There were no SDR transactions in 2005 or 2004.

#### b. Loans to Depository Institutions

All 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. 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. 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 by the Board of Governors.

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

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. Interest income 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."

Activity related to U.S. government securities, including the related 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 interdistrict clearings that occurs in April of each year. The settlement equalizes Reserve Bank gold certificate holdings to Federal Reserve notes outstanding in each District. Activity related to investments in foreign-currency-denominated assets 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. U.S. Government Securities Sold Under Agreements to Repurchase and Securities Lending

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 carried in the Statements of Condition at their contractual amounts and the related accrued interest is reported as a component of "Other Liabilities".

U.S. government securities held in the SOMA are lent to U.S. government securities dealers and to banks participating in U.S. government securities clearing arrangements in order to facilitate the effective functioning of the domestic securities market. Securities-lending 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 or bank a fee for borrowing securities and the fees are reported as a component of "Other Income" in the Statements of Income.

Activity related to U.S. government securities sold under agreements to repurchase and securities lending is allocated to each Reserve Bank on a percentage basis derived from the annual settlement of interdistrict clearings. Securities purchased under agreements to resell are allocated to FRBNY and not to the other Banks.

#### e. Foreign Currency Swaps and Warehousing

F/X swap arrangements are contractual agreements between two parties to exchange specified currencies, at a specified price, on a specified date. The parties agree to exchange their currencies up to a pre-arranged 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 intervene to support the dollar and give the counterparty temporary access to dollars it may need to support its own currency. Drawings under the F/X swap arrangements can be initiated by either FRBNY or the counterparty (the drawer) and must be agreed to by the drawee. The F/X swaps are structured so that the party initiating the transaction bears the exchange rate risk upon maturity. FRBNY will generally invest the foreign currency received under an F/X swap in interest-bearing instruments.

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.

Foreign currency swaps 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 allocated to FRBNY and not 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 estimated useful lives of assets ranging from two to fifty years. Major alterations, renovations, and improvements are capitalized at cost as additions to the asset accounts and are amortized over the remaining useful life of the asset. Maintenance, repairs, and minor replacements are charged to operating expense in the year incurred. Capitalized assets including software, building, leasehold improvements, furniture, and equipment are impaired when it is determined that the net realizable value is significantly less than book value and is not recoverable.

Costs incurred for software, either developed internally or acquired for internal use, during the application development stage 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.

#### g. Interdistrict Settlement Account

At the close of business each day, each Reserve Bank assembles the payments due to or from other Reserve Banks as a result of the day's transactions that involve depository institution accounts held by other Districts. Such transactions may include funds settlement, check clearing, and ACH operations.

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) to the Reserve Banks upon deposit with such agents of certain 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 equal to the sum of the notes applied for by such Reserve Bank.

Assets eligible to be pledged as collateral security include all Bank assets. The collateral value is equal to the book value of the collateral tendered, with the exception of securities, whose 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 of 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, as obligations of the United States, Federal Reserve notes are backed by the full faith and credit of the United States government.

The "Federal Reserve notes outstanding, net" account represents the Bank's Federal Reserve notes outstanding, reduced by the currency issued to the Bank but not in circulation, of \$4,424 million, and \$4,137 million at December 31, 2005 and 2004, respectively.

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

The balance in the "Items in process of collection" line in the Statements of Condition primarily represents amounts attributable to checks that have been deposited for collection by the payee depository institution and, as of the balance sheet date, have not yet been collected from the payor depository institution. 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 fluctuate and vary significantly from day to day.

#### 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 nonvoting 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. By law, each 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. A member bank is liable for Reserve Bank liabilities up to twice the par value of stock subscribed by it.

#### k. Surplus

The Board of Governors requires Reserve Banks to maintain a surplus equal to the amount of capital paid-in as of December 31. 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. Pursuant to Section 16 of the Federal Reserve Act, Reserve Banks are required by the Board of Governors to transfer to the U.S. Treasury as interest on Federal Reserve notes excess earnings, after providing for the costs of operations, payment of dividends, and reservation of an amount necessary to equate surplus with capital paid-in.

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. Weekly payments to the U.S. Treasury may vary significantly.

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. This amount is reported as a component of "Payments to U.S. Treasury as interest on Federal Reserve notes".

Due to the substantial increase in capital paid-in and the transfer of surplus, surplus was not equated to capital at December 31, 2004. The amount of additional surplus required due to these events exceeded the Bank's net income in 2004.

#### I. 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.

#### m. 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. The Board of Governors also assesses each Reserve Bank for the expenses incurred for the U.S. Treasury to issue 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 previous year.

#### n. 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 \$5 million for each of the years ended December 31, 2005 and 2004, and are reported as a component of "Occupancy expense."

#### o. Restructuring Charges

In 2003, the System began the restructuring of several operations, primarily check, cash, and U.S. Treasury services. The restructuring included streamlining the management and support structures, reducing staff, decreasing the number of processing locations, and increasing processing capacity in the remaining locations. These restructuring activities continued in 2004 and 2005.

Footnote 10 describes the restructuring and provides information about the Bank's costs and liabilities associated with employee separations and contract terminations. The costs associated with the writedown of certain Bank assets are discussed in footnote 6. Costs and liabilities associated with enhanced pension benefits in connection with the restructuring activities for all Reserve Banks are recorded on the books of the FRBNY and those associated with enhanced post-retirement benefits are discussed in footnote 9.

### 4. U.S. GOVERNMENT SECURITIES, 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 5.116 percent and 4.696 percent at December 31, 2005 and 2004, respectively.

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

|                         | 2005     | 2004     |
|-------------------------|----------|----------|
| Par value:              |          |          |
| U.S. government:        |          |          |
| Bills                   | \$13,879 | \$12,348 |
| Notes                   | 19,448   | 16,944   |
| Bonds                   | 4,749    | 4,415    |
| Total par value         | 38,076   | 33,707   |
| Unamortized premiums    | 451      | 442      |
| Unaccreted discounts    | (144)    | (77)     |
| Total allocated to Bank | \$38,383 | \$34,072 |

The total of the U.S. government securities, net held in the SOMA was \$750,202 million and \$725,584 million at December 31, 2005 and 2004, respectively.

At December 31, 2005 and 2004, the total contract amount of securities sold under agreements to repurchase was \$30,505 million and \$30,783 million, respectively, of which \$1,561 million and \$1,446 million, were allocated to the Bank. The total par value of the SOMA securities pledged for securities sold under agreements to repurchase at December 31, 2005 and 2004 was \$30,559 million and \$30,808 million, respectively, of which \$1,563 million and \$1,447 million was allocated to the Bank.

The maturity distribution of U.S. government securities bought outright and securities sold under agreements to repurchase, that were allocated to the Bank at December 31, 2005, was as follows (in millions):

|                               |                 | Securities Sold   |
|-------------------------------|-----------------|-------------------|
|                               | U.S. Government | Under Agreements  |
|                               | Securities      | to Repurchase     |
|                               | (Par value)     | (Contract amount) |
| Maturities of Securities Held |                 |                   |
| Within 15 days                | \$2,098         | \$1,561           |
| 16 days to 90 days            | 8,813           | -                 |
| 91 days to 1 year             | 9,531           | -                 |
| Over 1 year to 5 years        | 10,782          | -                 |
| Over 5 years to 10 years      | 2,901           | -                 |
| Over 10 years                 | 3,951           | -                 |
| Total                         | \$38,076        | \$1,561           |

At December 31, 2005 and 2004, U.S. government securities with par values of \$3,776 million and \$6,609 million, respectively, were loaned from the SOMA, of which \$193 million and \$310 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 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 foreign governments.

The Bank's allocated share of investments denominated in foreign currencies was approximately 12.706 percent and 5.069 percent at December 31, 2005 and 2004, respectively.

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

| 2005    | 2004                              |
|---------|-----------------------------------|
|         |                                   |
| \$689   | \$308                             |
| 245     | 109                               |
| 452     | 200                               |
|         |                                   |
| 333     | 78                                |
| 686     | 388                               |
| \$2,405 | \$1,083                           |
|         | \$689<br>245<br>452<br>333<br>686 |

Total System investments denominated in foreign currencies were \$18,928 million and \$21,368 million at December 31, 2005 and 2004, respectively.

The maturity distribution of investments denominated in foreign currencies which were allocated to the Bank at December 31, 2005, was as follows (in millions):

| European | Japanese                                       |   |
|----------|--|---|
| Euro     | Yen  | Total   |
|          |  |   |
|          |  |   |
| \$429    | \$333  | \$762   |
| 327      | 86   | 413   |
| 265      | 128  | 393   |
| 363      | 472  | 835   |
| 2        | -  | 2   |
| -        | -  | -   |
| \$1,386  | \$1,019  | \$2,405   |
|          | <b>Euro</b><br>\$429<br>327<br>265<br>363<br>2 | Euro Yen   \$429 \$333   327 86   265 128   363 472   2 -   - - |

At December 31, 2005 and 2004, there were no material open foreign exchange contracts.

At December 31, 2005 and 2004, the warehousing facility was \$5,000 million, with no balance outstanding.

#### 6. BANK PREMISES, EQUIPMENT, AND SOFTWARE

A summary of bank premises and equipment at December 31 is as follows (in millions):

|   | Useful Life      |       |       |
|---|------------------|-------|-------|
|   | Range (in Years) | 2005  | 2004  |
| Bank premises and equipment:            |                  |       |       |
| Land                                    | n/a              | \$27  | \$22  |
| Buildings                               | 1-50             | 119   | 108   |
| Building machinery and equipment        | 1-18             | 27    | 20    |
| Construction in progress                | n/a              | 3     | 8     |
| Furniture and equipment                 | 1-10             | 63    | 61    |
| Subtotal                                |                  | \$239 | \$219 |
| Accumulated depreciation                |                  | (108) | (102) |
| Bank premises and equipment, r          | net              | \$131 | \$117 |
| Depreciation expense, for the years end | led              | \$9   | \$10  |

The Bank leases space to outside tenants with lease terms ranging from one to 11 years. Rental income from such leases was \$11 million and \$10 million for the years ended December 31, 2005 and 2004, respectively. Future minimum lease payments under noncancelable agreements in existence at December 31, 2005, were (in millions):

| 2006       | \$8  |
|------------|------|
| 2007       | 8    |
| 2008       | 8    |
| 2009       | 7    |
| 2010       | 7    |
| Thereafter | 26   |
|            | \$64 |

The Bank has capitalized software assets, net of amortization, of \$3 million at December 31, 2005 and 2004. Amortization expense was \$2 million for each of the years ended December 31, 2005 and 2004. Capitalized software assets are reported as a component of "Other assets" and related amortization is reported as a component of "Other expenses."

Assets impaired as a result of the Bank's restructuring plan, as discussed in footnote 10, include software, building, and equipment. Asset impairment losses of \$148 thousand and \$1.3 million for the periods ending December 31, 2005 and 2004, respectively, were determined using fair values based on quoted market values or other valuation techniques and are reported as a component of "Other expenses."

#### 7. Commitments and Contingencies

At December 31, 2005, the Bank was obligated under noncancelable leases for premises and equipment with terms ranging from one to approximately 7 years. These leases provide for increased rental payments based upon increases in real estate taxes, operating costs, or selected price indices.

Rental expense under operating leases for certain operating facilities, warehouses, and data processing and office equipment (including taxes, insurance and maintenance when included in rent), net of sublease rentals, was \$1 million and \$3 million for the years ended December 31, 2005 and 2004, respectively. Certain of the Bank's leases have options to renew.

Future minimum rental payments under noncancelable operating leases, net of sublease rentals, with terms of one year or more, at December 31, 2005, were (in millions):

|            | Operating |
|------------|-----------|
| 2006       | \$530     |
| 2007       | 530       |
| 2008       | 530       |
| 2009       | 530       |
| 2010       | 530       |
| Thereafter | 928       |
|            | \$3,578   |

At December 31, 2005, there were no other material commitments and long-term obligations in excess of one year.

Under the Insurance Agreement of the Federal Reserve Banks, each Reserve Bank 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 that a Reserve Bank's capital paid-in bears 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 such agreement at December 31, 2005 or 2004.

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 Bank officers participate in the Supplemental Employee Retirement Plan ("SERP").

The System Plan is a multi-employer plan with contributions fully funded by participating employers. Participating employers are the Federal Reserve Banks, the Board of Governors of the Federal Reserve System, and the Office of Employee Benefits of the Federal Reserve System. No separate accounting is maintained of assets contributed by the participating employers. The FRBNY acts as a sponsor of the System Plan and the costs associated with the Plan are not redistributed to other participating employers. The Bank's benefit obligation and net pension costs for the BEP and the SERP at December 31, 2005 and 2004, and for the years then ended, are 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 \$4 million for each of the years ended December 31, 2005 and 2004, and are reported as a component of "Salaries and other benefits." The Bank matches employee contributions based on a specified formula. For the years ended December 31, 2005 and 2004, 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.

|  | 2005   | 2004   |
|--|--------|--------|
| Accumulated postretirement benefit obligation at January 1   | \$42.6 | \$49.7 |
| Service cost-benefits earned during the period               | 0.9    | 0.8    |
| Interest cost of accumulated benefit obligation              | 2.7    | 2.6    |
| Actuarial loss (gain)  | 7.2    | (3.5)  |
| Curtailment (gain)   | -      | (0.4)  |
| Special termination loss                                     | -      | 0.4    |
| Contributions by plan participants                           | 1.2    | 0.8    |
| Benefits paid  | (4.0)  | (3.3)  |
| Plan amendments  | -      | (4.5)  |
| Accumulated postretirement benefit obligation at December 31 | \$50.6 | \$42.6 |

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

At December 31, 2005 and 2004, the weighted-average discount rate assumptions used in developing the postretirement benefit obligation were 5.5 percent and 5.75 percent, respectively.

Discount rates reflects 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):

|  | 2005   | 2004   |
|--|--------|--------|
| Fair value of plan assets at January 1     | \$ -   | \$ -   |
| Actual return on plan assets               | -      | -      |
| Contributions by the employer              | 2.8    | 2.5    |
| Contributions by plan participants         | 1.2    | 0.8    |
| Benefits paid                              | (4.0)  | (3.3)  |
| Fair value of plan assets at December 31   | \$ -   | \$ -   |
| Unfunded postretirement benefit obligation | \$50.6 | \$42.7 |
| Unrecognized net curtailment gain          | -      | 1.7    |
| Unrecognized prior service cost            | 3.8    | 4.7    |
| Unrecognized net actuarial (loss) gain     | (3.2)  | 4.0    |
| Accrued postretirement benefit costs       | \$51.2 | \$53.1 |

Accrued postretirement benefit costs are reported as a component of "Accrued benefit costs."

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

|   | 2005  | 2004  |
|---|-------|-------|
| Health care cost trend rate assumed for next year       | 9.00% | 9.00% |
| Rate to which the cost trend rate is assumed to decline |       |       |
| (the ultimate trend rate)                               | 5.00% | 4.75% |
| Year that the rate reaches the ultimate trend rate      | 2011  | 2011  |

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, 2005 (in millions):

|   | One Percentage | One Percentage |
|---|----------------|----------------|
|   | Point Increase | Point Decrease |
| Effect on aggregate of service and interest cost        |                |                |
| components of net periodic postretirement benefit costs | \$0.5          | \$(0.4)        |
| Effect on accumulated postretirement benefit obligation | 5.7            | (4.8)          |

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

|  | 2005  | 2004    |
|--|-------|---------|
| Service cost-benefits earned during the period     | \$0.9 | \$0.9   |
| Interest cost of accumulated benefit obligation    | 2.7   | 2.6     |
| Amortization of prior service cost                 | (1.0) | (1.1)   |
| Recognized net actuarial (gain)                    | -     | (0.2)   |
| Total periodic expense                             | \$2.6 | \$2.2   |
| Curtailment (gain)                                 | (1.7) | (4.7)   |
| Special termination loss                           | -     | 0.4     |
| Net periodic postretirement benefit costs (credit) | \$0.9 | \$(2.1) |

Net postretirement benefit costs are actuarially determined using a January 1 measurement date. At January 1, 2005 and 2004, the weighted-average discount rate assumptions used to determine net periodic postretirement benefit costs were 5.75 percent and 6.25 percent, respectively.

Net periodic postretirement benefit costs are reported as a component of "Salaries and other benefits."

A plan amendment that modified the credited service period eligibility requirements created curtailment gains. The recognition of special termination losses is primarily the result of enhanced retirement benefits provided to employees during the restructuring described in footnote 10. The curtailment gain associated with restructuring programs announced in 2003 was recognized when employees left the Bank in 2004. The curtailment gain associated with restructuring programs announced actuarial losses and prior service gains. As a result, an unrecognized net curtailment gain was recorded in 2005 when the affected employees terminated 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 by 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 gain in the accumulated postretirement benefit obligation and net periodic postretirement benefit costs.

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

|                            | Without Subsidy | With Subsidy |  |
|----------------------------|-----------------|--------------|--|
| Expected benefit payments: |                 |              |  |
| 2006                       | \$3.3           | \$3.0        |  |
| 2007                       | 3.5             | 3.2          |  |
| 2008                       | 3.6             | 3.3          |  |
| 2009                       | 3.7             | 3.3          |  |
| 2010                       | 3.8             | 3.3          |  |
| 2011-2015                  | 19.5            | 16.9         |  |
| Total                      | \$37.4          | \$33.0       |  |

#### **Postemployment Benefits**

The Bank offers benefits to former or inactive employees. Postemployment benefit costs are actuarially determined using a December 31, 2005 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, 2005 and 2004, were \$6 million and \$7 million, respectively. This cost is included as a component of "Accrued benefit costs." Net periodic postemployment benefit costs include ed in 2005 and 2004 operating expenses were \$27 thousand and \$63 thousand, respectively and are recorded as a component of "Salaries and other benefits."

#### **10. BUSINESS RESTRUCTURING CHARGES**

In 2003, the Bank announced plans for restructuring to streamline operations and reduce costs, including consolidation of check operations and staff reductions in various functions of the Bank. In 2004 and 2005, additional consolidation and restructuring initiatives were announced in the Check, Treasury Direct, System Purchasing Services (SPS) and FedImage operations. These actions resulted in the following business restructuring charges (in millions):

|                     | Total     | Accrued    |         |       | Accrued    |
|---------------------|-----------|------------|---------|-------|------------|
|                     | Estimated | Liability  | Total   | Total | Liability  |
|                     | Costs     | 12/31/2004 | Charges | Paid  | 12/31/2005 |
| Employee separation | \$3.4     | \$2.7      | \$(0.5) | \$0.5 | \$1.7      |

Adjustments due to unrecognized accrued liabilities were offset against total charges. Without these offsets, total charges would have been \$109 thousand in 2005.

Employee separation costs are primarily severance costs related to identified staff reductions of approximately 207, including 2 and 121 staff reductions related to restructuring announced in 2005 and 2004, respectively. These costs are reported as a component of "Salaries and other benefits."

Restructuring costs associated with the write-downs 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. Costs associated with enhanced postretirement benefits are disclosed in Note 9.

Future costs associated with the announced restructuring plans are estimated at \$3.2 million These costs, which accommodate the transfer of check operations from one office to another, primarily represent leasehold improvements that will be amortized over six years. The Bank anticipates substantially completing its announced plans in 2006.

# BANK MISSION

As part of the nation's central bank, the Federal Reserve Bank of Boston promotes sound growth and financial stability in New England and the nation. The Bank contributes to local communities, the region, and the nation through its high-quality research, regulatory oversight, and financial services, and through its commitment to leadership and innovation.



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