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FEDERAL RESERVE'S SECOND MONETARY POLICY REPORT FOR 2002

HEARING

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

ONE HUNDRED SEVENTH CONGRESS

SECOND SESSION

ON

OVERSIGHT ON THE MONETARY POLICY REPORT TO CONGRESS PURSUANT TO THE FULL EMPLOYMENT AND BALANCED GROWTH ACT OF 1978

JULY 16, 2002

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FEDERAL RESERVE'S SECOND MONETARY POLICY REPORT FOR 2002

TUESDAY, JULY 16, 2002

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Committee met at 10:05 a.m., in room SH–216 of the Hart Senate Office Building, Senator Paul S. Sarbanes (Chairman of the Committee) presiding.

OPENING COMMENTS OF CHAIRMAN PAUL S. SARBANES

Chairman SARBANES. The hearing will come to order.

We are very pleased this morning to welcome back before the Committee Chairman Alan Greenspan to testify on the Federal Reserve's Semi-Annual Monetary Policy Report to the Congress.

This is a time of significant uncertainty for the U.S. economy and a time of considerable stress. Just a few months ago, it appeared that the economy might emerge strongly from last year's recession. Economic growth in the first quarter this year was 6.1 percent and there were some Fed watchers who were even predicting that the Fed would have to raise rates by the middle of this year.

That outlook has clearly changed. The economic growth in the first quarter was largely influenced by a one-time swing in inventories as the FMOC noted in the statement it released after its most recent meeting on June 26. And the blue chip consensus now calls for second-quarter growth of about 2½ percent.

We have seen a significant decline in jobs in the private sector, more than in the previous recession, and we have a worrisome job situation, resembling in some respects the jobless recovery period after the last recession in 1990 and 1991.

I was going to go through the various indicatorsm, but rather than using the Committee and the Chairman's time in order to do that, I will forgo that exercise and I may come back and address it to the Chairman when we get to the question and answer period.

Actually, I am anxious to get to the Chairman and have an opportunity to hear from him this morning. And with that, I will yield to my colleagues.

Senator Gramm.

COMMENTS OF SENATOR PHIL GRAMM

Senator GRAMM. Mr. Chairman, thank you very much.

I just want to make a personal comment. This will be the last of these hearings that I will have with Chairman Greenspan. I

have had the privilege over an extended period of time as a Member, as Chairman, as Ranking Member, to work with Alan Greenspan in his capacity as Chairman of the Board of Governors, and it is something that I will always be proud of. I will always be proud to be able to say that I worked with the greatest central banker of the era.

I want to thank you, Mr. Chairman, for your great work in this period during which I have had an opportunity to serve in the Senate. We have seen many issues come and go, but we have had a stable monetary policy.

When I was a boy in graduate school, we had a lot of focus on what the money supply was. One was a monetarist or a Keynesian. Now, we can hardly define the money supply. And yet, under your leadership, we have had a monetary policy which has been the envy of the world. It has been the foundation of our economic stability, and I want to thank you for your leadership.

I also want to thank you for one additional thing. It is so easy to duck tough issues. It is so easy when you have massive swings in public opinion, to simply not be available for comment or to not have an opinion on a subject.

I think one of the great services you provided to this country has been the wisdom of your views and the credibility that they contain when you have been willing to speak out on issues like energy derivatives, a complicated subject that very few people know anything about, but a critically important subject. And your willingness, when asked, to state your opinion on an issue like that, in an era such as the one we currently are operating in, has been critically important and has had a profound effect on the policy of the Government and the country.

And so, I just want to take this opportunity to thank you for the great job you have done.

Chairman GREENSPAN. Thank you, Senator.

Chairman SARBANES. I just want to observe that Senator Gramm is being very restrained in his praise this morning, Mr. Chairman. He said you were the greatest central banker of the era. I remember one hearing when he said you were the greatest central banker in the history of the world. I think that is the way it was put.

Senator GRAMM. Well, it is true.

[Laughter.]

I would say, Mr. Chairman, the problem is, when I say it, people do not know that one of my areas of specialization in economics was monetary theory and history. In reviewing the great bankers in world history, I think Alan Greenspan qualifies as the greatest central banker in the history of the world.

People not knowing my background think that that is some blowhard making an overstatement. So, I simply stated it in a form where no living person that has any knowledge would disagree.

[Laughter.]

Chairman SARBANES. Senator Dodd.

COMMENTS OF SENATOR CHRISTOPHER J. DODD

Senator DODD. How do you follow that?

[Laughter.]

Welcome, Mr. Chairman. It is always a pleasure to have you before the Committee.

Chairman GREENSPAN. Thank you, Senator.

Senator DODD. I am sure you are going to get to this, but there are some very conflicting indicators out there, at least it seems to me conflicting.

Consumer confidence is down, yet consumer spending is up, and we see problems obviously related to the events of the last number of months in terms of people's trust and confidence in the markets.

Integrity has always been, I think, one of the marketing points of our Nation. The world has come here for many reasons, not the least of which has been the integrity of our markets and that there is a tremendous sense of fairness and transparency about them.

I am concerned about the capital flight. We have seen foreign capital not coming here, going elsewhere, specifically, the Pacific Rim, and what observations you may have about that.

I know it has been said, and repeated here this morning, the Senate did itself proud by supporting the bill dealing with the accounting reforms, 97 to 0.

While it may not be perfect, and while we may find in time there are some additional changes that may be necessary, I think it was the right step for the Senate to take.

I would be interested in any observations you may have generally about these steps, or additional steps that you think we could take in the remaining weeks of this Congress that would be our form of participation in restoration of investor confidence.

Thank you, Mr. Chairman.

Chairman SARBANES. Thank you.

Senator Shelby.

STATEMENT OF SENATOR RICHARD C. SHELBY

Senator SHELBY. Thank you, Mr. Chairman.

Chairman Greenspan, I want to thank you for coming here today. Senator Gramm has already talked for us all this morning in praise, and praise that I think is deserved. But it is very important, Chairman Greenspan, important to the Committee and for the country, to be hearing from you today at this particular time.

Obviously, Mr. Chairman, there are some very strong, very real concerns about the conditions in our markets today. Perhaps the phrase, irrational exuberance, that you accurately commented on a few years ago led to irrational expectations. For whatever reason, numerous publicly traded corporations began misstating their financial condition. The professionals' charge was sifting through that information and I believe they failed to properly perform their role as gatekeepers. Ultimately, bad information, information that obscured economic reality, was admitted into the marketplace. American investors then relied upon it when making billions of dollars of investment decisions.

As you well know, Mr. Chairman, Congress and the Bush Administration are now addressing the systemic weaknesses that allowed this to occur. There are, however, other areas, I believe outside the direct influence of Congress that require reform. Principally, the accounting rules need to be changed, I believe, so that stock options

are treated as an expense on the balance sheets. You have spoken to this before, Mr. Chairman.

Stock options provide material value to recipients, dilute shareholder ownership, and can be deducted, as we all know, by the granting company on their tax returns. Keeping their costs off the books does not provide a firm with tangible value. It only contributes, I believe, to an illusion of profitability. Allowing a firm to take tax deductions without expensing defines the expression—having one's cake and eating it, too.

For the sake of investors, it is my hope that the Financial Accounting Standards Board, provided greater independence under the bill that Senator Sarbanes has sponsored and we passed last night, I hope will revisit this rule and develop a new standard that requires companies, Mr. Chairman, to provide information that affords investors the most reliable picture of economic reality. In other words, the truth.

Chairman Greenspan, while an element of uncertainty remains in investors' minds because of their lack of confidence in financial information, I believe we would be wrong if we failed to point out that there are significant positive factors in place in our economy right now. Strong fundamentals provide the underpinnings of strong economic growth. Inflation, under your stewardship, Mr. Chairman, I might add, has been kept in check, and productivity has advanced to never-beforeseen levels. We have a great economy, but we have some problems, and I hope you will speak to that and continue to do that.

Thank you.

Chairman SARBANES. Thank you, Senator Shelby.

Senator Akaka.

COMMENTS OF SENATOR DANIEL K. AKAKA

Senator AKAKA. Thank you very much, Mr. Chairman.

I join you and the Committee in welcoming Chairman Greenspan. I look forward to his presentation of the Federal Reserve's Semi-Annual Monetary Policy Report.

It appears that the economic recovery is continuing. This growth can be partially attributed to substantial inventory adjustment, large increases in work productivity and housing construction, which is approaching record levels, even in Hawaii.

However, despite the continuing economic recovery, the stock markets have lost significant amounts of their value. And if I had a question to ask you now, I would certainly ask about what your impression was of the vote yesterday on the accounting bill when the vote came out 97 to 0. It was quite outstanding. I think that reflects what has happened recently. Accounting fears, corporate misdeeds, and concerns about earnings have all contributed to the current equity price levels.

Chairman Greenspan, I look forward to hearing your thoughts on the economy and monetary policy.

Thank you.

Chairman SARBANES. Thank you, Senator Akaka.

Senator Allard.

COMMENTS OF SENATOR WAYNE ALLARD

Senator ALLARD. Mr. Chairman, thank you.

Chairman Greenspan, I always look forward to your comments and views on the economy and I am under the impression that the country is in pretty good shape right now. I am here today to listen to what you are going to say on the economic and monetary policy issues.

I do not know what we can do as a Congress to help this recovery. My thought is that we need to deal with the problems in Medicare and Social Security, but more importantly, as that applies to making sure that we do not allow our public debt to get out of hand and to get deficit spending under control. And if you have an opportunity to comment on that, I would be anxious to hear what your have to say.

Thank you, and I look forward to hearing your testimony.

Chairman SARBANES. Senator Corzine.

COMMENTS OF SENATOR JON S. CORZINE

Senator CORZINE. Thank you. Mr. Chairman, I would just echo what I presume most of my colleagues have said. Congratulations on your extraordinary leadership in passing the Accounting Investor Protection Act yesterday. I very much am anxious to hear Chairman Greenspan's remarks with regard to that as well. As always, I welcome him and thank him for the service he gives our Nation.

I think that we have all had concern about the dissonance of what we see in markets, not only equity markets, but the dollar as well, with regard to this expansion that seems to be in place and taking hold, at least by macroeconomic statistics. I think we have an unprecedented situation here, certainly in post-World War II, where you are well into an expansion and we get reinforcement of that by data, and seeing the decline in markets. Is that simply a reflection of the corporate malfeasance or earnings restatements that maybe are not reflective of malfeasance, but aggressive accounting? Or is there something else here?

I note that the Board asked for a staff study of some of the issues that surrounded the decline of the Japanese economy in the late 1980's and early 1990's, and whether there is anything to be learned from that, are there any parallels? Certainly, I would like to hear your views on that.

And more broadly, our erosion of debt or our fiscal stability is certainly something that is of concern to me. So, I am anxious to hear your remarks on a number of these issues and I appreciate you joining us.

Again, I thank you for your service.

Chairman SARBANES. Thank you very much, Senator Corzine.

Senator Enzi.

COMMENT OF SENATOR MICHAEL B. ENZI

Senator ENZI. Thank you, Mr. Chairman.

As with everyone else on the panel, I am anxious to hear and anxious about the comments that Chairman Greenspan will make.

Chairman SARBANES. Senator Bayh.

COMMENT OF SENATOR EVAN BAYH

Senator BAYH. Thank you, Mr. Chairman.

I believe we are here to listen to Chairman Greenspan, not to me. So, I will defer to him.

Chairman SARBANES. Senator Bunning.

STATEMENT OF SENATOR JIM BUNNING

Senator BUNNING. Thank you, Mr. Chairman, for holding this hearing and I would like to thank Chairman Greenspan for coming before this Committee today.

We have a crisis in our economy, a crisis of confidence. We have all seen it. The majority of Americans have felt it. Whether they own stock, have a 401(k) plan, or any other type of pension plan, millions have been personally hit very hard by the recent market dips.

Since you visited us 2 years ago, over $10 trillion has been taken out of the markets—$10 trillion. It may at this point only be paper losses, but we all know how to add and subtract, and the sheer drop of the Dow, Nasdaq, and the S&P in the last few weeks obviously has people on edge.

To make things worse, the markets are dropping at a time when most of us think that the overall economic news is pretty good. The economy grew at a little better than 6 percent in the first quarter. Retail sales were up in June, and inflation is almost nonexistent. But the last I heard, over one thousand companies—over one thousand companies—have restated their earnings.

The stock markets are in the tank. Investors keep waiting for the other shoe to drop—again. They are waiting to see if there will be another Enron or Global Crossing or Worldcom.

To be fair, the retail investor seems to be more willing to ride out the market and sit on their hands. It would be nice if the institutional investors would do the same. But the bottom line is that investors large and small are going to do what is right for them. No one can blame them.

We must restore confidence in our markets. And I am very glad that yesterday, we passed, I hope, a first step, 97 to 0, to help to restore some of that confidence. But it is going to take more than enacting a bill to restore the confidence. The President has taken some good steps, too, and I think his ideas will help greatly.

I think it would be nice if some of the political opponents would stop taking potshots at the President for things that started long before he came into office. Some of the rhetoric that has been flying around the past few days has been dangerous and irresponsible. Clearly, it has been more about political agendas than the overall economic mood of the country. But those who try to use recent problems for political gain, whether they be Republican or Democrat, are playing with fire. Markets can go up just as fast as they go down.

I think that one way we could restore some confidence in the market would be for the public to see some of the executives who have committed fraud to walk around in handcuffs and orange jumpsuits. When the American people see that the system works and those who have committed crimes pay the piper, they will feel a lot more sincere about their investments and security.

I would like to figure out a legal constitutional way to expedite the prosecution of those who have committed crimes and get them in jail right away. I know that is a little far afield from this hearing, but I really believe that it is one of the real, tangible things that could be done that would send out the right signal to investors, markets, and businesses.

I look forward to hearing from Chairman Greenspan about our economy. I would hope to hear any suggestions on what else he thinks can be done to restore confidence in our markets. And I look forward to talking with you during the question and answer period.

Thank you very much, Mr. Chairman.

Chairman SARBANES. Thank you, Senator Bunning.

Senator Miller.

COMMENTS OF SENATOR ZELL MILLER

Senator MILLER. Mr. Chairman, I do not have any opening remarks, except to thank you again for all that you did to make sure that we got that needed bill through the Senate, and I am looking forward to hearing Chairman Greenspan's remarks especially on the current market situation.

Chairman SARBANES. Thank you.

Senator Hagel.

COMMENT OF SENATOR CHUCK HAGEL

Senator HAGEL. I have no statement. Thank you.

Chairman SARBANES. Senator Ensign.

COMMENT OF SENATOR JOHN ENSIGN

Senator ENSIGN. Pass.

Chairman SARBANES. Chairman Greenspan, we would be very happy to hear from you.

Chairman GREENSPAN. Thank you very much.

Chairman SARBANES. Let me just note that we have received from the President two nominees to the Federal Reserve Board: Donald Kohn and Ben Bernanke. Their nominations have been received. Their papers are not yet fully in order. So, we are waiting for all of the papers, and once that is in place, we intend to move promptly to hold their hearings and to consider the nominees, so that we can have a fully nominated and confirmed board at the Federal Reserve.

Chairman GREENSPAN. We would appreciate that, Mr. Chairman.

Mr. Chairman, I will excerpt from fairly extended written remarks and request that the full text be included for the record.

Chairman SARBANES. The full text will be included in the record, without objection.

STATEMENT OF ALAN GREENSPAN, CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Chairman GREENSPAN. Over the four and one-half months since I last testified before this Committee on monetary policy, the economy has continued to expand largely along the broad contours we had anticipated at that time. Although the uncertainties of earlier this year are as yet not fully resolved, the U.S. economy appears

to have withstood a set of blows—major declines in equity markets, a sharp retrenchment in investing spending, and the tragic terrorist attacks of last September—that in previous business cycles almost surely would have induced a severe contraction. The mildness and brevity of the downturn, as I indicated earlier this year, are a testament to the notable improvement in the resilience and flexibility of the U.S. economy.

But while the economy has held up remarkably well, not surprisingly, the depressing effects of recent events linger. Spending will continue to adjust for some time to the declines that have occurred in equity prices. In recent weeks, those prices have fallen further on net, in part under the influence of growing concerns about corporate governance and business transparency problems that evidently accumulated during the earlier run-up in these markets. Considerable uncertainties—about the progress of the adjustment of capital spending and the rebound in profitability, about the potential for additional revelations of corporate malfeasance, and about possible risks from global political events and terrorism—still confront us.

Nevertheless, the fundamentals are in place for a return to sustained healthy growth: Imbalances in inventories and capital goods appear largely to have been worked off; inflation is quite low and is expected to remain so; and productivity growth has been remarkably strong, implying considerable underlying support to household and business spending as well as potential relief from cost and price pressures. In considering policy actions this year, the Federal Open Market Committee has recognized that the accommodative stance of policy adopted last year in response to the substantial forces restraining the economy likely will not prove compatible over time with maximum sustainable growth and price stability. But, with inflation currently contained and with few signs that upward pressures are likely to develop any time soon, we have chosen to maintain that stance pending evidence that the forces inhibiting economic growth are dissipating enough to allow the strong fundamentals to show through more fully.

As has often been the case in the past, the behavior of inventories provided substantial impetus for the initial strengthening of the economy. However, as inventories start to grow more in line with sales in coming quarters, the contribution of inventory investment to real GDP growth should lessen. As a result, the strength of final demand will play its usual central role in determining the vigor of the expansion. While final demand has been increasing, the pace of forward momentum remains uncertain.

Household spending held up quite well during the downturn and through recent months, and thus served as an important stabilizing force for the overall economy. Spending was boosted by ongoing increases in incomes, which were spurred by strong advances in productivity as well as by legislated tax reductions and, in recent months, by extended unemployment insurance benefits.

Monetary policy also played a role in cutting short-term interest rates, which helped lower household borrowing costs. Particularly important in buoying spending were the very low levels of mortgage interest rates, which encouraged households to purchase homes, refinance debt and lower debt service burdens, and extract

equity from homes to finance expenditures. Fixed mortgage rates remain at historically low levels and thus should continue to fuel reasonably strong housing demand and, through equity extraction, to support consumer spending as well.

But those sources of strength probably will be tempered by other influences. As we noted in February, because consumer and residential expenditures did not decline during the overall downturn, there is little pent-up demand to be satisfied. Consequently, a surge in household spending early in this recovery is unlikely. Moreover, the declines in household wealth that have occurred over the past couple of years should continue to restrain spending in the period ahead. Still, despite concerns about economic prospects, equity valuations, terrorism, and geopolitical conflicts, consumers do not appear to have retrenched in retail markets. Indeed, consumers responded strongly to the new interest rate incentives of motor vehicle manufacturers this month. Early reports indicate a significant improvement in sales over June.

By contrast, business spending has been depressed. The recent downturn was driven, in large measure, by the sharp falloff in the demand for capital goods that occurred when firms suddenly realized that stocks of such goods were excessive. Overall, the level of real business fixed investment plunged about 11 percent between its quarterly peak in the final months of 2000 and the first quarter of this year.

With the adjustment of the capital stock to desired levels now evidently well advanced, business fixed investment may be set to improve. A recovery in this category of spending is likely to be gradual by historical standards and uneven across sectors. Still, firms should respond increasingly to the expected improvement in the outlook for sales and profits, low debt financing costs, the heightened incentives resulting from the partial expensing tax provisions legislated earlier this year, and especially the productivity enhancements offered by continuing advances in technology.

Indeed, despite the recent depressed level of investment expenditures, the productivity of the U.S. economy has continued to rise at a remarkably strong pace. The magnitude of the recent gains would not have been possible without ongoing benefits from the rapid pace of technological advance and from the heavy investment over the latter half of the 1990's in capital equipment incorporating such advances.

Despite these encouraging developments regarding longer-term prospects for the economy, financial markets have been notably skittish of late, and business managers remain decidedly cautious. In part, these attitudes reflect the lingering effects of the shocks that our economy endured in 2000 and 2001.

Also contributing to the dispirited attitudes among many corporate executives is the intensely competitive business environment facing their firms. Increased competition, while producing manifold benefits for consumers and for the economy as a whole, clearly makes individual firms' operations more difficult.

Those businesses where heightened competition has engendered a loss of pricing power have sought ways to raise profit margins by employing technology to lower costs and improve efficiency. In the United States, as a consequence of the interaction of monetary pol-

icy, globalization, and cost-reducing productivity advances, price inflation has fallen in recent years to its lowest level in four decades, as has the recent growth rate of nominal GDP and consolidated corporate revenues.

In part because nominal corporate revenues, although no longer declining, are growing only tepidly, managers seem to remain skeptical of the evidence of an emerging upturn. Profit margins do appear to be coming off their lows registered late last year, but, unsurprisingly, the recovery in economic activity from a shallow decline appears less vigorous than in the past. The lowest sustained rates of inflation in 40 years imply that nominal growth in sales and profits looks particularly anemic. Reflecting concerns about the strength of the recovery, managers continue to limit capital spending to only the most pressing needs.

Given the key role of perceptions of subdued profitability in the current period, it is ironic that the practice of not expensing stock option grants, which contributed to the surge in earnings reported to shareholders from 1997 to 2000, has imparted a deceptive weakness to the growth of earnings reported to shareholders in recent quarters. According to estimates by Federal Reserve staff, the value of stock option grants for S&P 500 corporations fell about 15 percent from 2000 to 2001, and grant values have likely declined still further this year. Moreover, options grants are presumably being replaced over time by cash or other forms of compensation, which are expensed, contributing further to less robust growth in earnings reported to shareholders from its trough last year.

In contrast, the measure of profits calculated by the Department of Commerce for the National Income and Products Accounts is designed to gauge the economic profitability of current operations. It excludes a number of one-time charges that appear in shareholder reports, and, importantly, records options as an expense, albeit at the time of exercise. Although this treatment of the cost of options is not ideal, it is arguably superior to their treatment in shareholder reports, where options are generally not expensed at all. NIPA profits closely approximate those obtained from reports submitted for tax purposes, and, for obvious reasons, corporations tend not to inflate taxable earnings. Consequently, NIPA profits have been far less subject to the spin evident in reports to shareholders in recent years. NIPA profits have increased sharply since the third quarter of last year, partly reflecting the dramatic jump in productivity and decline in unit labor costs.

The difficulties of judging earnings trends have been intensified by revelations of misleading accounting practices at some prominent businesses. The resulting investor skepticism about earnings reports has not only depressed the valuation of equity shares, but it also has been reportedly a factor in the rising risk spreads on corporate debt issued by the lower rung of investment-grade and below-investment grade firms, further elevating the cost of capital for these borrowers.

The recent impressive advances in productivity suggest that to date any impairment of efficiency of U.S. corporations overall has been small. Nonetheless, the danger that breakdowns in governance could at some point significantly erode business efficiency remains worrisome. Well-functioning markets require accurate in-

formation to allocate capital and other resources, and market participants must have confidence that our predominantly voluntary system of exchange is transparent and fair. Although business transactions are governed by laws and contracts, if even a modest fraction of those transactions had to be adjudicated, our courts would be swamped into immobility. Thus, our market system depends critically on trust—trust in the word of our colleagues and trust in the word of those with whom we do business.

In recent years, shareholders and potential investors would have been protected from widespread misinformation if any one of the many bulwarks safeguarding appropriate corporate evaluation had held. In too many instances, none did.

Why did corporate governance checks and balances that served us reasonably well in the past break down? At root was the rapid enlargement of stock market capitalizations in the latter part of the 1990's that arguably engendered an outsized increase in opportunities for avarice. An infectious greed seemed to grip much of our business community. Our historical guardians of financial information were overwhelmed. Too many corporate executives sought ways to harvest some of those stock market gains. As a result, the highly desirable spread of shareholding and options among business managers perversely created incentives to artificially inflate reported earnings in order to keep stock prices high and rising. This outcome suggests that the options were poorly structured, and, consequently, they failed to properly align the long-term interests of shareholders and managers, the paradigm so essential for effective corporate governance. The incentives they created overcame the good judgment of too many corporate managers. It is not that humans have become any more greedy than in generations past. It is the avenues to express greed had grown so enormously.

Perhaps the recent breakdown of protective barriers resulted from a once-in-a-generation frenzy of speculation that is now over. With profitable opportunities for malfeasance markedly diminished, far fewer questionable practices are likely to be initiated in the immediate future. To be sure, previously undiscovered misdeeds will no doubt continue to surface in the weeks ahead as chastened CEO's restate earnings. But even if the worst is over, history cautions us that memories fade. Thus, it is encumbent upon us to apply the lessons of this recent period to inhibit any recurrence in the future.

A major focus of reform of corporate governance, of course, should be an improved functioning of our economy. A related, but separate, issue is that shareholders must perceive that corporate governance is properly structured so that financial gains are fairly negotiated between existing shareholders and corporate officeholders. Shareholding is now predominantly for investment, not corporate control. This has placed *de facto* control in the hands of the chief executive officer. Generally, problems need to become quite large before CEO's are dislodged by dissenting shareholders or hostile takeovers.

Manifestations of lax corporate governance, in my judgment, are largely a symptom of a failed CEO. Having independent directors, whose votes are not controlled by the CEO, is essential, of course, for any effective board of directors. However, we need to be careful

that in the process, we do not create a competing set of directors and conflicting sources of power that are likely to impair a corporation's effectiveness. The functioning of any business requires a central point of authority.

In the end, a CEO must be afforded full authority to implement corporate strategies, but also must bear the responsibility to accurately report the resulting condition of the corporation to shareholders and potential investors. Unless such responsibilities are enforced with very stiff penalties for noncompliance, as many now recommend, our accounting systems and other elements of corporate governance will function in a less than optimum manner.

Already existing statutes, of course, prohibit corporate fraud and misrepresentation. But even a small increase in the likelihood of large, possibly criminal penalties for egregious behavior of CEO's can have profoundly important effects on all aspects of corporate governance because the fulcrum of governance is the chief executive officer. If a CEO countenances managing reported earnings, that attitude will drive the entire accounting regime of the firm. If he or she instead insists on an objective representation of a company's business dealings, that standard will govern recordkeeping and due diligence. It has been my experience on numerous corporate boards that CEO's who insist that their auditors render objective accounts get them. And CEO's who discourage corner-cutting by subordinates are rarely exposed to it.

I recognize that I am saying that the state of corporate governance to a very large extent reflects the character of the CEO, and that this is a very difficult issue to address. Although we may not be able to change the character of corporate officers, we can change behavior through incentives and penalties. That, in my judgment, could dramatically improve the state of corporate governance.

Our most recent experiences clearly indicate, however, that adjustments to the existing structure of regulation of corporate governance and accounting beyond addressing the role of the CEO are needed. In designing changes to our regulatory framework, we should keep in mind that regulation and supervision of our financial markets need to be flexible enough to adapt to an ever-changing and evolving financial structure. Regulation cannot be static or it will soon distort the efficient flow of capital from savers to those who invest in plant and equipment. There will be certain areas where Congress will choose to provide a specific statutory direction that will be as applicable 30 years from now as today. In other cases, agency rulemaking flexibility under new or existing statutes is more appropriate. Finally, there are some areas where private supervision would be most effective, such as that of the New York Stock Exchange, which requires certain standards of governance for listing.

Above all, we must bear in mind that the critical issue should be how to strengthen the legal base of free market capitalism: the property rights of shareholders and other owners of capital. Fraud and deception are thefts of property. In my judgment, more generally, unless the laws governing how markets and corporations function are perceived as fair, our economic system cannot achieve its full potential.

To sum up, the U.S. economy has confronted very significant challenges over the past year or so. Those problems, however, led to only a relatively brief and mild downturn in economic activity, reflecting the underlying strength and increased resiliency that the economy has achieved in recent years. The effects of the recent difficulties will linger for a bit longer, but, as they wear off, and absent significant further adverse shocks, the U.S. economy is poised to resume a pattern of sustainable growth. Our prospects for extending this performance over time can be enhanced through the implementation of sound monetary, financial, fiscal, and trade policies.

Thank you, Mr. Chairman. I look forward to your questions.

Chairman SARBANES. Thank you, Chairman Greenspan.

It is my intention to do 6 minute rounds, given the number of Members who are here. That will probably take us about an hour and a half. And then if the Chairman's time permits, we will do a second round if some Members have other questions they want to ask. But I think we have to hold down the amount of time in order to move though and give everyone a fair chance here.

Mr. Chairman, I want to address first your comments in your statement, traditionally, consumer spending on housing and autos and other consumer goods has led both the downturn and the upturns in the business cycle, while business investment has lagged. Traditionally, the swings in housing and autos have been wider than for business investment. But that has not happened this time. Housing and autos and other durables remained relatively stable in 2001. In fact, spending on housing and durables has been at cyclical highs relative to GDP. Meanwhile, business investment began a sharp decline early and has not turned around.

Ordinarily, we come out of these because housing and autos and other durables give us a good boost coming out of the recession. This time, they did not go down the way they have in previous economic downturns. And so, we do not expect we are going to get the same boost coming out, and we have not thus far. What are the implications for that for hopes for an economic recovery as we look ahead?

Chairman GREENSPAN. Mr. Chairman, the only difference that one would perceive between past business cycle recoveries where the economy had gone down appreciably and then rebounded, is that the phase of sharp decline and sharp recovery is essentially truncated, but the expansionary elements that are building in the economy today will create, as best we can judge, a level of economic growth which was typically what we would perceive after the very sharp upswings that occurred in past economic contractions and expansions.

So the best way I think to view the current situation is to essentially take past business cycles and excerpt out that sharp decline and rise, and I think we will find that the pattern of expansion is pretty much similar to ones we have seen in the past.

And indeed, the financial markets—I should say the money markets, the structure of credits and a number of other measures of that type—all are consonant with that type of outlook.

Chairman SARBANES. I might note for the record, since the media makes a lot of this nowadays, that at the beginning of the Chair-

man's statement, the Dow was down 200 points. And at the end of his testimony, it was down 132 points. So, in other words, it rose 70 points over the course of his testimony. The Nasdaq, which was down 8.65 at the beginning of his statement, was up 5.56 at the end of his testimony.

Senator SHELBY. Mr. Chairman, can you let him continue his statement.

[Laughter.]

Chairman SARBANES. I invite Members to yield back their time and we will give it to Chairman Greenspan to continue.

[Laughter.]

Senator DODD. Filibuster.

[Laughter.]

Chairman GREENSPAN. I thought you were going to dismiss me for the rest of the day, Mr. Chairman.

[Laughter.]

Senator GRAMM. It started down when you started talking.

[Laughter.]

Senator SHELBY. Yield to the Chairman.

[Laughter.]

Chairman SARBANES. Let me ask you. When we get the rates down as low as you have them, how much stimulative benefit do we derive from a further lowering of the rates? I think the Japanese actually got their rates down so far that they really could not exercise that monetary policy any further. Is that correct?

Chairman GREENSPAN. That is correct. They have run into very significant problems with endeavoring to enhance liquidity and have it spill over into economic activity. For a number of structural reasons, they have had difficulty in doing that.

Mr. Chairman, our general view of monetary policy is to evaluate what the interaction between our policies and the economy are, and endeavor to adjust accordingly.

Chairman SARBANES. As you get down at these lower levels where you do not have too much room to go before you are at zero, are you inhibited in reducing rates in order to stimulate the economy because you think to yourself, well, the economy may get worse. We may need a clearer signal that we need to provide some stimulus, and therefore, we should hold off at the moment.

Chairman GREENSPAN. Well, Mr. Chairman, all the evidence that we have been able to accumulate in recent weeks suggests that the economy is improving. It is pretty much in line with our expectations. And since our monetary policy posture was based on those projections, it is fairly evident that things at this particular stage are not behaving in a manner which creates a significant amount of uncertainty on our part as to what is happening.

Chairman SARBANES. Okay. Let me get one final question in before my time expires. The Euro edged past the dollar for the first time in more than 2 years. What are we to make of that, and what are its implications for the state of our own economy?

Chairman GREENSPAN. First of all, as I stipulated in my prepared remarks, all issues with respect to the exchange rate are left——

Chairman SARBANES. You skipped over that and I wanted to draw you out a little bit on it.

Chairman GREENSPAN. Yes. The particular issue of what the actual exchange rate number is is wholly arbitrary, so that the fact that it is above or less than 1.0 has no economic significance whatsoever. Beyond that, Mr. Chairman, that is as much as I am going to say on the exchange rate, and I suggest that you address further questions to the Secretary of the Treasury.

Chairman SARBANES. Senator Gramm.

Senator GRAMM. Well, Mr. Chairman, let me thank you for an outstanding statement. I want to ask you three questions that have to do with corporate governance and accounting.

We have passed a bill in the Senate—it is obvious by the vote that Senators believe that the bill addresses the right issues. Obviously, as we try to put together a compromise with the House bill, the question becomes how do we address these issues. And I want to ask you about your views in terms of basic principles of what works and does not work in three related areas.

First of all, the question of whether or not we should give the board the power to set standards. For example, there are many strong feelings that Members have and the public has about what auditors should do in providing other services. Obviously, everything we do in this bill that we have adopted applies to 16,254 different publicly-traded companies, some of them big, some of them not too big. As a matter of principle, would you rather have standards set by the board or set in law?

Chairman GREENSPAN. Senator, it depends on whether the types of issues we are concerned about are immutable. In other words, for example, certain issues with respect to rights and penalties are not going to change from one year or maybe one generation to the next, and it is far better that they be hard-wired into a statute.

If you conclude that the particular elements within a regulatory structure are likely to be changing or need to be changed through time, then I think the appropriate procedure is to empower, say, the Securities and Exchange Commission to do certain things under a statute specifically delineated by the Congress.

Then, finally, there are areas where it is far better that the Government were not involved at all. And as I indicated in my prepared remarks, the issue of the, I think, very helpful activities of the New York Stock Exchange in this regard is an example.

I myself do not know enough about a number of the areas of the accounting profession as such. I know a lot about accounting, but not about the business of accounting. So, in general, I find that the elements within the bill that you just passed strike me as really to the point about what has to be addressed. But I have no real judgment because I do not have competence in the area of knowing which of the various elements, which of the various different areas would be most effectively addressed by either hard-wiring or by empowering the SEC.

Senator GRAMM. Let me ask you a second question. You are familiar with the securities litigation reform that we did. We had all these strike lawsuits. We had one law firm that did 80 percent of the work. Senator Dodd was a leader in that effort. Do you see any evidence that we should be backtracking from that reform?

Chairman GREENSPAN. I do not, Senator.

Senator GRAMM. So, you would think that, for example, changing the statute of limitations set in that reform would not be something based on what you have seen that would be desirable?

Chairman GREENSPAN. Well, let me put it this way. I have seen nothing in the structure of corporate governance as it has evolved in the last year or two, or last several years, which suggests that significant changes in that area are needed. But, again, let me emphasize, these are areas in which I do not perceive to have significant competence and I do not wish to suggest that I do. I am just merely giving you my impression that as I evaluate the relationship between corporate governance and the economy, this is not an issue that has surfaced which suggests to me a problem.

Senator GRAMM. Let me on a third question raise the issue of stock options. I want to conclude by asking you to explain your view on stock options so that everybody knows exactly what it is. But no matter what the view is, do you believe that Congress should vote on the issue of setting an accounting standards with regard to how stock options are treated? In other words, should Congress be making accounting rules by law?

For example, a proposal that clearly at some point will be voted on is should stock options be expensed? One can have a view for or against. The question I am posing, and then I am going to conclude by asking your view on the issue, should Congress be voting on that or should that be set by FASB or some similar system?

Chairman GREENSPAN. I frankly do not think that one needs to do anything, as best I can judge, with what is happening. My own impression is that FASB will rule in a manner which I think, from listening to what the various discussions are, would appropriately expense stock options, which is a very important issue.

If you take a look at what is happening, for example, two companies yesterday are moving to stock option expensing, and I suspect we are going to see many more. I think we are going to find that the advantages of not expensing stock options which were so evident in the earnings reports to shareholders from 1997 to 2000, are now reversing and working adversely. So those corporations which switch to expensing are probably going to find that an underlying trend of earnings growth is going to be more apparent as they switch. So my own judgment is that nothing needs to be done at all. I think it is going to happen, and I think quite correctly so.

Senator GRAMM. Thank you, Mr. Chairman.

Chairman SARBANES. Senator Dodd.

Senator DODD. Thank you very much, Mr. Chairman.

Mr. Chairman, let me commend you for your statement. It is an excellent statement.

Just as a personal note here, I wish that these remarks had been given a week ago by someone else when it comes to the issue of corporate governance. And some of the suggestions that you have made here have been very strong and very worthwhile, and I appreciate them immensely.

You mentioned specifically in your testimony, and I indicated in the question in my brief opening comments about other areas in which you think Congress might act. I have listened to you very clearly and I understand what you are saying, that in many areas,

we ought to be careful about statutory changes because they are so hard to change.

There is a rule for the private sector and self-regulatory organizations that can be very helpful. And then, of course, there is a regulatory framework as well which allows far greater flexibility as circumstances change.

But you made some pretty strong statements in here about corporate governance and the issue of directorships and the like questions. I wonder if you might make some suggestions to us here about whether or not these are areas in which you think Congress should act statutorily. Some of us are reluctant to get into the corporate governance issues, but it may be at a moment when we probably should. I am curious whether you think such a moment has arrived.

Chairman GREENSPAN. Senator, it is crucially important to diagnose what the nature of the problem is. If there are differing views as to what is causing the problem that clearly created what is a massive degree of accounting imagination, if I may choose a new word, unless you get it right, the initiatives that you are going to employ to fix it will not work. And what I am concerned about is, having served on 15 or 20 boards, from the first board I was on, where shares were publicly held, in 1962, I have seen the evolution of corporate governance over a long period of time. And one thing I have become acutely aware of is how crucial the issue of what the chief executive officer believes and does is to governance.

If you have a situation in which the chief executive officer basically takes his external auditor aside and says, look, you are not doing me any favors by managing my earnings or making me look better. The purpose of accounting from my point of view is to find out whether the corporate strategy I have initiated is working or not. And if it is not working, I want to change it.

My impression or my experience over the years is that CEO's that have done that have gotten very effective auditing. They have gotten very effective governance because they have basically changed the view from trying to make the company look better whether it was or it was not, to really finding out whether the strategy of producing goods and services, enhancing the wealth of the company, was actually working.

I do not wish to make a generalized statement, but I suspect that if the CEO issue were fully and completely resolved, which it never will be because we are dealing with human beings, I think all of the rest of the problems will just disappear. Now that is not going to happen and therefore, it is appropriate to do what I think the Senate did yesterday and pass a whole series of changes in corporate governance which, in my judgment, are moving in the right direction and will be helpful.

But I will say this, that if you do not get the CEO changing in the way that particular position functions, a goodly part of the work of the Senate is not going to be very effective. There are just too many people out there who, for example, will get a legal opinion from a general counsel and then say, I do not like that. Get me a different opinion. If you are going to have that going on, you are dealing with human nature and I do not see how one can effectively legislate morality or character. But what you can do is to try

to create an environment and a legal structure which very significantly penalizes malfeasance.

Senator DODD. The yellow light is on, but—I think we are doing that. Part of the bill yesterday incorporated some stiffer penalties, criminal penalties.

Chairman GREENSPAN. I think that was the most important part of the bill, frankly.

Senator DODD. Senator Leahy will be happy to hear that.

But you mentioned one thing here, just quickly. You say shareholding is now predominantly for investment, not corporate control. If that is in fact the case, then the character of the CEO becomes a diminished factor, it seems to me almost. If that is what we are doing here, then control and discipline within the corporation by shareholders and people who serve them on boards seems to be diminishing, and will continue to do so. Therefore, it seems to speak more loudly to the need for some legislative action in the area of audit committees, institutional investors having seats on boards. Again, legislating in this area is dangerous, but——

Chairman GREENSPAN. It is dangerous. And I would suggest that you be careful about how you move in this direction because, remember, the system is frayed, but it is not broken. If we, indeed, had a very extraordinarily weak corporate governance or the system broke down, we would not be experiencing the productivity growth that we are basically seeing.

Remember, our economy is remarkably efficient. It has developed a resiliency and a flexibility in recent years which makes it very difficult to understand how this is going on in the context of what clearly is many breaches of what appropriate corporate governance is. What it basically is saying is, beneath all of the problems that we have is still a very sound structure. And if we endeavor to try to change the system in a fundamental way, we may end up doing more damage than help.

I am merely saying to go slow in this area, but there is not a need at this point to rush because I will tell you, corporate governance will be just fine for the next 2 years because everyone has been chastened. The opportunities and, indeed, the incentives to do the types of things that people did, are no longer there. They do not have these huge stock market capitalizations from which to draw off large earnings for themselves. It is not there.

We do not need to worry about the short term. We do, however, have to be concerned about the next episode. And unless and until structure is put in place so that if 5, 7, 10 years from now a similar situation arises, we will be much better able to handle it. So, I would say that speed and expeditiousness are not important here. Doing it right is very important.

Senator DODD. Thank you, Mr. Chairman.

Chairman SARBANES. In the extended hearings which the Committee held on the corporate governance and accounting issue, we received very strong testimony from those who had chaired previous commissions that examined the situation, the O'Malley Commission, and a number of others. The constant refrain that we heard from them was that they had made very important recommendations, that they had not been adopted because in the short run, there was this kind of reaction and pick-up.

The consequence, though, was that then there was a lapse back in terms of behavior subsequently, and the structural changes had not been accomplished to help forestall that. And of course, that is one of the things that the legislation we passed yesterday is designed to accomplish.

So at the moment, everyone is very uptight and measuring up to—presumably, high standards. But the danger that they will simply slip back, as has happened on past occurrences, and that is one of the reasons that we want to put the legislation in place, in order to help ensure that that does not happen.

Chairman GREENSPAN. Well, I agree with that, Mr. Chairman. While there is very little chance, in my judgment, for really significant new initiatives towards manipulation of markets or anything else like that, it is the case that, as I said in my prepared remarks, memories do fade. Optimizing that trade-off is a very tricky issue.

Chairman SARBANES. Yes.

Senator Shelby.

Senator SHELBY. Thank you. Mr. Chairman, I only have 6 minutes. I am going to cede most of it to you with quick questions because maybe the market will respond positively if you keep doing it like it is.

Mr. Chairman, how long do you think it will take roughly for all these restatements to come through? I know the environment is there today of fear, of concern. And the sooner they clean up, the better off we are going to be. But I figure there are going to be continuous restatements.

Chairman GREENSPAN. I think that is correct, Senator. Remember that there is a deadline of August 14, which the SEC has promulgated for these statements to come in place, and I think we are going to see a lot of restatements in the process.

Senator SHELBY. So it is going to be about 4 weeks of hard work.

Chairman GREENSPAN. I would think so. Remember that it is most unlikely we have seen all of the undiscovered events. But as I said in my prepared remarks, this is old stuff. It is history. We will learn something from it.

Senator SHELBY. It is history, in a sense. You are right. But it is not history to a lot of the investors until it comes out and they see what the real truth on the restatements are. Isn't that correct?

Chairman GREENSPAN. I agree with that. And indeed, I think that until it becomes fairly clear that the degree of spin in earnings estimates is gone, it is going to be very difficult.

Remember, it is not as though everybody should be shocked by this. We had these *pro forma* statements for months and quarters back when the market was roaring away and it was the most imaginative accounting I have ever seen.

In other words, the *pro forma* earnings were your revenues, however you wished to present them, less some of the expenses, and you determined which of them they were. Everybody knew that was going on. So it was not as though people were creating forms of accounting which people who were watching the numbers were not aware of.

Senator SHELBY. Sir, you are not saying that all the investors in America knew it was going on.

Chairman GREENSPAN. No, they certainly did not. We are talking about security analysts.

Senator SHELBY. Absolutely. The security analysts and the accountants and a lot of the CEO's and chief financial officers knew a lot of this accounting stuff was going on. But a lot of the investors in America obviously did not know it was going on.

Chairman GREENSPAN. They did not. That is certainly true.

Senator SHELBY. Because they would have gone into bonds fast, I believe.

Chairman GREENSPAN. Well, let me just take a step back.

Senator SHELBY. Sure.

Chairman GREENSPAN. We do have a set of profits data which, for all practical purposes, are free of spin. That is the numbers I was mentioning, the National Income and Product Accounts numbers, which essentially take corporate reports and make the types of adjustments that one is required to see what is going on. Those numbers are improving fairly dramatically, as indeed they must, because the necessary implications of a productivity growth at 7 percent annual rate in the average of the fourth and first quarters are very difficult to engender without a very major increase in operating earnings. And indeed, that is exactly what is happening.

Senator SHELBY. Mr. Chairman, you used the word spin just a few minutes ago, and it is a term that we see used here a lot. But what we are looking for in the capital markets is accuracy, which is basically truth, isn't it?

Chairman GREENSPAN. Yes.

Senator SHELBY. What is the true situation, not what is the spin or something, maybe even fraud, that comes from that.

Chairman GREENSPAN. Yes. I was encouraged, incidentally, yesterday by the fact that when Coca-Cola announced it was going to expense, its stock price went up, not down.

Senator SHELBY. Along those lines, could you see in the future the emergence of a credibility premium—you just alluded to it—in the markets? In other words, will honesty, Mr. Chairman, lead to higher share prices and to a lower cost of capital? I am talking about real stocks.

Chairman GREENSPAN. I think it is already happening. I think that there is a definite tiering that is going on.

Senator SHELBY. People believe that people are honest and this is true, they are going to invest, aren't they?

Chairman GREENSPAN. The risk premiums of investing go down because, first of all, it is tough enough to make a judgment of what the real earning capacity of a corporation is. It is not simple. To have on top of that a question as to whether the data are accurate creates an additional risk premium.

Senator SHELBY. That is essentially the whole problem, isn't it?

Chairman GREENSPAN. Yes. In other words, earnings estimates are very complex. The best of the earnings analysts spend a good deal of time on 10–K reports to try to unearth what the underlying profitability is. If on top of that there are serious questions of whether or not the numbers they are working with are correct, then you are imposing an additional risk premium on the earnings estimates, which, of necessity, lowers the potential market value of the firm. And there is definite tiering, as we say in the market-

place, that differentiates these various different types of views. And I hope, as indeed I expect, this will become a far more prevalent experience.

Senator SHELBY. Mr. Chairman, when do we reach the point where productivity gains are maximized and firms have to then turn to new hiring to make additional gains?

Chairman GREENSPAN. That is a very good question. We are finding that productivity is still moving at a really quite remarkable pace. And indeed, as I am sure you may know, the Federal Reserve released this morning a fairly significant increase in industrial production. We also know that this is occurring without a major increase in employment in manufacturing. That is true for the economy as a whole.

It is not possible for productivity to advance at the pace that it did in the 6 months ending March 31, and indeed, the second quarter, as best we can judge, shows some positive, continued positive productivity gains, but nowhere near what they were previously.

At some point, these very dramatic gains are going to slow down to a more sustainable, long-term pace, at which point there will be a fairly marked pick-up in employment.

Senator SHELBY. Thank you, Mr. Chairman.

Chairman SARBANES. Thank you, Senator Shelby.

Senator Akaka.

Senator AKAKA. Thank you very much, Mr. Chairman.

Chairman Greenspan, I was very interested in your remarks about the need for trust in our system. It made me recall discussions I had with Mr. Hiyami. This is a few years back, when Japan was early into their financial problems, and how even at that time, the word trust was not really a part of their system. I was indicating that this is where they need to go. I was very interested, therefore, in your comment about trust.

Also lately, as far as last Tuesday, the Chief Cabinet Secretary of Japan made comments about whether they should be discussing whether the yen is moving too fast.

The Associated Press has reported that Japan has intervened in the currency markets to weaken the yen against the dollar seven times since last May. *AP* also reported that the U.S. Federal Reserve and the European Central Bank have sold yen and bought dollars on the Bank of Japan's behalf. So my question to you, Mr. Chairman, is this intervention occurring and is the Federal Reserve providing assistance to the Bank of Japan? If so, what is your evaluation of the intervention? And what will be the immediate and long-term effects of these actions?

Chairman GREENSPAN. Well, Senator, I cannot confirm any individual degree of intervention on the Bank of Japan. But what does happen is that we and the European Central Bank will, at the request of the Bank of Japan, engage in exchange rate activity in terms of yen against our individual currencies outside the trading hours of Tokyo. So that what has happened on occasion over the years is that when the Bank of Japan has decided that it wanted a 24-hour degree of intervention, it requested the other central banks to act on their behalf, and we do it as their agent.

Senator AKAKA. Secretary of the Treasury Paul O'Neill has been quoted as saying that the current account deficit is a meaningless

concept. Please share your thoughts on the significance of the current account deficit and potential problems that it could cause.

Chairman GREENSPAN. I know that comment is attributed to the Secretary and I am not sure it is in the full context.

Chairman SARBANES. If the comment was properly in context, I take it you would disagree with it.

Chairman GREENSPAN. Yes, indeed I do. The current account deficit is a meaningful statistic. It does not, however, necessarily mean that it is bad because one of the things that obviously must be the case is that the current account deficit must be exactly matched by a capital account surplus of the same order of magnitude because balance sheets must balance.

What, therefore, is the problem in evaluation is that unless you see what is happening to the exchange rate, you cannot make a judgment as to whether the demand for dollars, for example, is much larger than the financing requirements of those, for example, who import goods and services. In that case the dollar exchange rate would rise.

If, on the other hand, U.S. importers had a far more significant demand to borrow foreign currency to finance their imports than foreigners' demand for dollars to invest in the United States, the exchange rate would go down.

All we can observe is the end result. It is a very complex issue, and indeed, I addressed that in part in my prepared remarks, Senator, as to how difficult it is to forecast exchange rates.

Senator AKAKA. Chairman Greenspan, last week, Ernst & Young issued a report which indicated that nonperforming loans in Asia have risen 33 percent to $2 trillion over the past 2 years. What factors have led to the increase in nonperforming loans in Asia? And what impact could these nonperforming loans have on the global economic recovery?

Chairman GREENSPAN. Well, Senator, I did not see the particular report, but it is certainly the case that, for example, nonperforming loans in the Japanese banking system have gone up measurably and it is one of the major difficulties confronting the Japanese government who are looking to reform the underlying structure of the banking industry.

And in part, one of the big problems that they have in the restructuring is how to resolve the issue of these nonperforming loans. Nonperforming loans are not good. Obviously, it merely indicates that a considerable amount of capital was moved out into the private sector and essentially used in an inefficient manner and it did not create wealth to pay off the loans.

Clearly, it is not a good issue. Having nonperforming loans is not good. But let me hasten to add that to have zero nonperforming loans is not good, either. That basically tells you that your banking systems are not doing what you would like them to do. There is a trade-off here, and I think what concerns the Japanese authorities is that, however one wants to look at this, the nonperforming loan issue is too high in Japan.

Senator AKAKA. Thank you very much for your responses, Chairman Greenspan.

Thank you, Mr. Chairman.

Chairman SARBANES. Thank you, Senator Akaka.

Senator Allard.

Senator ALLARD. Thank you, Mr. Chairman.

Chairman Greenspan, the housing sector has been I think relatively strong since our downturn started early in year 2000. Would you elaborate a little bit about why you think that is happening? The interest rates I know are very low right now, around 5 percent, 6 percent. Do you think that this is a major factor or not? I would like to hear some of your discussion.

Chairman GREENSPAN. Well, I think that there are three issues which are driving the housing market, new home construction to begin with. First, is mortgage interest rates, which are at really quite low levels, lower than they have been in a really long time. Second is the issue, as I point out in my prepared remarks, of the increasing shortage of buildable land. And third, a very important issue which is not discussed often, is immigration. The increase in household formation in the United States is essentially about one-third immigration, and that is enough to put a demand on the system and on the capacity to produce homes in this country which has been fairly pressing.

And so, what we have seen is very good housing markets. Prices are going up. Home equities are going up. In a sense, we have an expanding population to a large extent being driven by immigration. The net effect of that has been a very buoyant element within the housing market. It would not have been if interest rates were not lower. So it is a combination of those three factors.

Senator ALLARD. Do you think that the investors are perhaps looking at housing as perhaps a stable area where they could put their money where they could count on at least some increase in equity and perhaps some inflation to protect their value?

Chairman GREENSPAN. I think the answer to that is clearly yes. We also have to remember, Senator, that if you disaggregate the issue of equity ownership and homeownership by income groups—it is pretty evident that the lower four-fifths of households arrayed by income have a far greater proportion of their wealth in housing than they do in the stock market, and for the upper fifth, it is the other way around.

As a consequence of the fact that there is such a predominance of homeownership in the upper middle-income groups, which, while they hold stock, do not hold as much as they do in home equity, the impact on the economy, the stabilizing effect from housing, both from construction and the extraction of equity which is assisted very significantly in supporting consumer expenditures, has been critical.

Senator ALLARD. I would like to get back to this issue of corporate governance again. I have always been under the impression that the transparency of our financial sheets and what not with businesses was much greater than other countries throughout the world, and that was one of the strengths of our system here, which actually encouraged investors from other countries to invest in our stocks here in this country. What is your view on our transparency as it compares to the rest of the world?

Chairman GREENSPAN. I still think that, as best I can judge, we are far more transparent than most. Even with the problems that

have surfaced in the last 6 to 9 months, our system is still quite superior, in my judgment, to competing systems around the world.

And, indeed, if we can resolve the corporate governance issue, the underlying improvements in the American economy, this really quite notable improvement in resilience and flexibility in our economy, bodes exceptionally well for the future.

So, we will get past this corporate governance issue. It is most unfortunate and I think very regrettable, and it has had negative effects, unquestionably. But beneath it all is still a very soundly functioning system, as best I can see it.

Senator ALLARD. I noticed in your comments that you did not say anything about our unemployment figures. I wondered if you might comment on those. The unemployment figures have gone up here. Is this something that could have been predicted or not?

Chairman GREENSPAN. Indeed, I think it was predicted. If you have a slowdown in economic growth in the context of very strong growth in productivity, the algebra is almost inevitable that the unemployment rate will rise. As I pointed out in my prepared remarks, the projection of the Federal Open Market Committee at its last meeting was that the unemployment rate will peak and come down from where it is.

Senator ALLARD. What has to happen to expedite our unemployment to make those figures go down?

Chairman GREENSPAN. I think that the lingering impact of the negative events of the last 2 years, which are still pressuring our economy but are dissipating, have to finally work their way through. That will take some time.

It is going through, as far as I can judge, pretty much on schedule in the sense that, as I indicated in my earlier remarks, the economy over the last 6 months has pretty much followed the pattern that we had expected it would earlier in the year. What that suggests is that it is going to take a while, but that things are gradually improving as the negatives continually become less.

Senator ALLARD. Finally, what can the Congress do in order to help assure that we have economic growth in the short term?

Chairman GREENSPAN. There are two areas in which I think action could be quite helpful. First is to restore the various elements of fiscal discipline which really worked so well in the early 1990's through the point where we ran into a surplus. To get effective discretionary caps and PAYGO rules back in place would be a very important issue to create a fiscal environment which would be helpful to maintain low long-term interest rates, which have been critical to the housing area.

Second is in the area of trade. I do not think we fully appreciate how important the gradual breaking down of trade barriers during the post-World War II period has been on economic growth globally and especially in the United States. And it is most important that we continue to move forward in that area because the ever increasing division of labor that is implicit in globalization has been a very major factor which has enabled our high-tech industries in general, but our economy overall, to function as well as it has.

Senator ALLARD. Mr. Chairman, I see my time has expired. Thank you.

Chairman SARBANES. Thank you.

Senator Corzine.

Senator CORZINE. Thank you, Mr. Chairman. I appreciate the remarks of Chairman Greenspan, thoughtful as always.

Let me say ask a question in specifics. Do you believe that it would be appropriate for FASB to put back on its calendar of consideration stock options, sooner rather than later?

Chairman GREENSPAN. Yes, Senator.

Senator CORZINE. Second, do you feel that in the context of the developments that have occurred, certainly been revealed in the last several months, that the SEC's funding is appropriate, that pay parity issues are appropriate consideration for the Congress, and that the additional resources to match up with the $10 trillion economy are reasonable requests that we should pursue?

Chairman GREENSPAN. Senator, I have testified over the last 2 or 3 years, when the occasion arose, that the SEC is underfunded.

Senator CORZINE. I presume that underfunding means underresourced.

Chairman GREENSPAN. Yes.

Senator CORZINE. With regard to people to review statements.

Chairman GREENSPAN. Yes. But most specifically, their salary level for lawyers, for example, is much lower than it would be at the Federal Reserve. One of the reasons that has occurred is that we had the same problems that they did many years ago, and with the assistance of the Congress, we were able to pay premiums to get the types of people we need to supervise and regulate the banking system.

In my judgment, if we are going to implement the type of legislation which you have just passed, we are going to need a fairly expanded capability which at this particular stage does not exist. If you are going to pass laws and not enforce them, you are doing an injustice to a democratic system.

Senator CORZINE. I could not agree more. And that is one of the reasons, and I do not expect you to comment on it, a $100 million increase in the SEC's budget, I think was disappointingly recommended, when in fact, we need serious funding resources, and pay parity for the individuals who——

Chairman GREENSPAN. Pay parity is very important.

Senator CORZINE. I was interested in your comments to Senator Allard with regard to the fiscal environment. You talked about PAYGO and the spending issues. But conditions do change through time and policies need to change, spending policies, potentially. Do you still believe we can afford the tax cuts that are expected to roll through the economy in the context of the fiscal deterioration that we have seen, certainly with the issue of irreducible minimum debt not being quite the problem that it was a year ago at this time, or 18 months?

Chairman GREENSPAN. Senator, I have always believed that one of the things that we do poorly at this stage is project and simulate various different outlooks into the future for our Federal budget.

Thirty years ago, there was nothing in the budget that really had a major impact in years forward. We now no longer have a 1, 2, or even a 3 year budget. We have commitments, both contingent and otherwise, which go many years into the future.

I think we need far more in the way of analysis and projections and trade-offs with our whole budget, both receipts and outlays. That is specifically the case, as I have testified before, because we are running into an unquestioned significant shift in demographics toward the end of this decade, which is going to mean that the number of retirees which are going to put pressure on resources in this economy is going to be very significant.

Now my view has always been that I think that we can curtail spending far more than we do. And my own personal view is that the best way in which the economy can function is to hold spending down and get as low a tax base as you can to enable the economy to expand as rapidly as you can. But, having said that, whatever it is that is done should at least be projected in a manner which is consonant with credible long-term outlooks.

I am not going to address the specific question that you asked because that question can then lead to five or six other questions of what do I think about one specific program, another program.

Senator CORZINE. That would be fun.

[Laughter.]

Chairman SARBANES. What a path to go down.

[Laughter.]

Senator CORZINE. Right.

Chairman GREENSPAN. I have tried——

Senator CORZINE. I guess the central point of what I was trying to make, though, is that there are two tracks. And I will interpret your statement that one needs to look at receipts and outlays, and one needs to prioritize those in the context of the importance that we have. One of those that is, and I think I just heard you say that making sure that we had the proper resources at the SEC is going to mean that we have to increase spending, at least in one area. Now, we have a huge budget and we have lots of choices. But those choices need to be made and they need to be made inside the context of receipts and outlays, depending on what the needs of the Nation and projections are.

Chairman GREENSPAN. Yes, that is precisely why I am somewhat distressed by what has been a breaking down of fiscal responsibility in the process of engendering budgets.

Senator CORZINE. Thank you.

Chairman SARBANES. Senator Bunning.

Senator BUNNING. Thank you, Mr. Chairman.

I ask this question always to you and you spoke about it earlier. You see no evidence of inflation in our economy presently?

Chairman GREENSPAN. None that is evident to any of the analysts in our organization.

Senator BUNNING. Thank you. I want to make sure that is the case.

You spoke to stock options and you spoke to Coca-Cola. I received a fax—not a fax, but an e-mail from Bank One today announcing, effective with today's earnings announcement, it is reporting stock options granted to executives and other employees as expenses. So here is another one joining the team voluntarily. I think that when we see the effect of what voluntary compliance does in reporting stock options as expenses, we may not need to react with some type of legislation.

Last Friday, after the markets closed, both Fannie Mae and Freddie Mac agreed to voluntarily register their securities with the SEC. The TVA or the Tennessee Valley Authority has about $20 billion in public-traded securities, but they are exempt from SEC's jurisdiction. Do you think TVA should also be under SEC's jurisdiction with that amount of debt out?

Chairman GREENSPAN. Senator, I am not familiar with the TVA's issue. But I do know that Under Secretary Peter Fisher of the Treasury Department is testifying today on the GSE's issues of registration and the like.

There are several questions here which are emerging. One is not only on their securities, but also on mortgage-backed securities, which is a much more controversial issue. I think that this issue requires further examination, as indeed it is getting. I do not know what the consequence of the testimony is this morning. But I do think that issues such as you raise should be examined to determine what the appropriate role of GSE's and related organizations are with respect to the questions of disclosure.

Senator BUNNING. Let me talk to you about something that has been in the news as of yesterday, about wash sales, that Enron and others have been accused of. In other words, buying and selling on the same day in the electric and gas markets. Do you have an opinion on those?

Chairman GREENSPAN. People do that all the time. I do not think that is the issue. It is how they record it on their books which I think is what the real question is. And there have been allegations, which I frankly do not know whether they are accurate or not, that part of this problem we are having with dubious accounting procedures is they bloat revenues by essentially double-counting activities. For example, if you and I were, say, two corporations, I could sell you something and you could sell me back the same thing, and both of us would increase our revenues, where really, as a practical matter, nothing important happened. There has been a good deal of that going on. I am a little puzzled in certain respects as to why some people do that because, while it is the case that revenues do rise, margins, by definition, go down.

There are, unfortunately, certain types of incentives which are tied to revenues within a corporation and not profits, and so that there is an incentive to play those types of games. I am not sure that it makes any sense whatever. But clearly, it does not do credit to those who are trying to keep credible books.

Senator BUNNING. Okay. Last question, and it has to do with the electricity market, since we have had some major problems in certain areas of the country. Do you believe more regulation is needed in our electricity markets to stabilize the supply and demand that occurs in certain areas of the country?

Chairman GREENSPAN. Well, Senator, we are undergoing a major change in the technology of electric power. Remember, one of the crucial characteristics of electric power is we cannot store it, which means that there is no buffer involved between supply and demand. For generations, we therefore constructed a public utility operation in which individual utilities would function under a regulatory scheme in which they would be guaranteed rates of return, and in the process, function in an adequate manner.

What became apparent, however, was that capital was being grossly misused in the sense that because you were able to get a guaranteed rate of return on stand-by capacity, there was a tendency to create more of it than we really needed. And with the increased ability to wheel power from one area to the other and get improved technologies, we have perceived a major capability of reducing the amount of capital we need to produce the amount of energy that we have. The trouble is that in this transition, we are getting all sorts of very technically difficult problems arising.

I do not think that we should go back to the regulatory structure we had in the past. I think what we have to do is address the issues as best we can, but not to stop the continuous deregulation of electric power, which in the long run will be very helpful to this economy.

Senator BUNNING. The only question is, which everybody asks, should the Feds do it or should it be done State by State? Obviously, the Federal Government has not chosen to do it and it is being done by all the 50 States.

Chairman GREENSPAN. Well, one of the problems basically is that when you start to wheel power across grids, it is an interstate action. So it is difficult to avoid the fact that there is a Federal role in this regard.

Senator BUNNING. Thank you very much, Mr. Chairman.

Chairman SARBANES. Thank you, Senator Bunning.

Senator Bayh.

Senator BAYH. Chairman Greenspan, thank you for being with us. Your testimony, as always, is substantively insightful and rhetorically Delphic, which is appropriate since, as our Chairman pointed out, your words, can literally move markets.

[Laughter.]

So it is good to have you with us today.

I would like to begin with a couple of questions about productivity growth, which is so important at both the macro and the microlevel, and specifically how it relates to your anticipated acceleration of capital expenditures and investments.

You mentioned four factors that may contribute to improved capital expenditures. One of them was profitability of the firms, improved clarity. But there things seem to be a little murky. You mentioned that revenues are growing only tepidly. Profit margins are less vigorous than in the past. Growth in sales and profits are particularly weak.

Mr. Chairman, it seems to me, reading between the lines of your testimony, that you expect capital investment to accelerate largely because of a productivity imperative before clarity and profitability improves. Is that an accurate interpretation?

Chairman GREENSPAN. Senator, when you are confronted with a situation in which pricing power is nonexistent, and you are endeavoring to improve your profitability, there is only one way to do it, and that is improve your profit margins. And the only way to do that is to increase productivity of your firm.

That is the process that is going on. And it has been very successful, and indeed, surprisingly so because I cannot imagine anybody who projected the extraordinary acceleration in output per

hour that has occurred in the last 9 months as recently, let us say, as a year ago. It has been a very interesting indication of how much progress we have made in the underlying capabilities and efficiency of our system.

Senator BAYH. Which leads me to my second productivity-related question. You have spoken to us in the past about cycles of innovation and productivity acceleration, which then at some future point level off to a mean average. What would we look at to try and anticipate approaching a saturation point of information technology of other new information, suggesting that this wonderful acceleration in productivity growth that we have experienced may at some point—how can we anticipate at what point it might subside?

Chairman GREENSPAN. That is of course the crucial issue in forecasting, Senator. What we try to do is to glean from various surveys what the extent of the application of existing technology has been put in place in firms. What has been a remarkably consistent survey, when purchasing managers, for example, who have these various different capabilities of reporting what companies are doing, are asked, "What proportion of the existing technology currently available to you today is already in place?" The usual number is 50 percent, which essentially says that the part that is as yet unexploited is still very significant. But because the 50 percent does not change, it is essentially saying that it is expanding at the other end.

Senator BAYH. Innovation and application seem to be proceeding apace.

Chairman GREENSPAN. Yes. So, obviously, at some point, they are going to find that there is an element of saturation and we have exploited the potentials as much as we can.

Senator BAYH. But we are nowhere near at this point.

Chairman GREENSPAN. But we have not seen any evidence of that yet.

Senator BAYH. I am going to try to fit two additional questions in before my time expires, Mr. Chairman. The first deals with housing. I was interested in your remarks about the role of immigration, scarcity of land, and low mortgage rates, seem to have offset for the time being the fact that housing prices—I believe that housing price escalation has exceeded personal income growth for some time. Is it your view that this can go on indefinitely?

Chairman GREENSPAN. Well, it is an interesting question as to whether prices of homes, by the nature of the industry, will tend to rise relative to the underlying level of prices generally in an economy.

I am sure there are a lot of people who would argue with me on this question. But my impression is that because so much of our home construction is individual and customized, that the level of productivity advance that you can get in the economy as a whole is not feasible in the housing construction area. Indeed, people do not want it. You want to have something which is unique. And if it is unique, you cannot create significant productivity.

Now, I am not saying that productivity in housing is not going anywhere. It is going at a quite remarkable pace, but less than the economy as a whole, which means, over the long run, the prices of homes will rise relative to the average.

Senator BAYH. I am on the yellow light, Mr. Chairman. I will just slip in a very short question here. And I do not intend to ask you about the value of the dollar. I understand why that would be a perilous territory to tread upon. But are there factors that you would look at that would allow you to judge whether the revaluation of the dollar is proceeding in an orderly manner, or at some point would be more precipitous and thereby would verge upon the disorderly or run the risk of destabilizing or creating inflationary pressures? Or is it not possible to address that without implicitly getting into the value of the dollar?

Chairman GREENSPAN. Correct.

Senator BAYH. Okay. I understand. I was interested, not in what the valuation point might be, but instead, the rate of revaluation and the risk of instability and the economy resulting from that. But it is a conversation for another time.

Thank you, Mr. Chairman.

Chairman SARBANES. Thank you very much, Senator Bayh.

Senator Bennett.

COMMENTS OF SENATOR ROBERT F. BENNETT

Senator BENNETT. Thank you very much, Mr. Chairman.

Chairman Greenspan, when you come in a little bit late, that means you are in a circumstance where virtually everything has already been explored. I am going to take you in a direction that probably has nothing to do with your testimony today, but takes advantage of your presence and might have some implications for the situation in which we find ourselves. I want to talk to you about tax treatment of dividends.

It is very easy to—not very easy, but it is possible as we have seen to deal with the books in such a way as to manipulate earnings, or at least manage earnings. That is a concept I never learned at the beginning of my business career and it started coming up at the end. Well, we are going to manage the earnings. I always thought that earnings were a factor of how well you manage the business and came or did not come, depending on——

Chairman GREENSPAN. Doesn't that sound like an old-fashioned concept, Senator?

Senator BENNETT. Yes.

[Laughter.]

Chairman GREENSPAN. I wish we could restore it.

[Laughter.]

Senator BENNETT. Now, dividends cannot be managed nearly as easily as earnings. But when the question was raised in the company where I was involved as to whether or not we should start to pay some dividends because we had some fairly significant cash, the response we got from the people who were Wall Street savvy—we started out as a private company, obviously, so we did not have any of those folks around. But as we became a public company, then we had to have people with that expertise.

They said, no, no, you do a disservice to the shareholders if you pay dividends because, if you pay dividends, what you are saying to them is that you do not expect the company to grow as rapidly as other companies into which they could put after-tax dollars. And since you expect that you can manage their money better than they

can manage their money, and you are dealing with pre-tax dollars, you do the shareholders the best service by hanging onto the money and investing it in your own company.

It raises the issue, then, of tax treatment of dividends because if the investor had the opportunity to take his or her money out in the form of a dividend and not pay the tax on it, he or she might say, I can do a better job than the managers of this company.

Now, you and I have questioned each other in what has been kind of a Kabuki ritual over the years when I have asked you what the capital gains tax should be, and you looked thoughtful and then tell me you think the optimum capital gains tax should be zero, and then we both say, yes, that is the thing we want. Then I do it again at the next hearing.

Let us talk about taxes on dividends because dividends, like capital gains, represent a return on capital. And since every other issue has been discussed and we have a little bit of time, let us get philosophical about this issue, and particularly against the backdrop of dividends as a measure of corporate performance, as opposed to managed earnings as a measure of corporate performance.

Chairman GREENSPAN. Senator, I think there are two interesting aspects to this question. I remember, and I am sure you do, when yields on stocks were 5 and 6 percent.

Senator BENNETT. Yes.

Chairman GREENSPAN. This goes back 50 years but people bought stocks for dividends. They did not buy them for earnings. And one of the problems that we did not have back then is earnings manipulations were not very important because nobody cared.

Earnings are very difficult to estimate. In fact, there is no such thing as an objective earning level of incorporation until a corporation is fully liquidated. So earnings are always provisional.

Cash dividends are not. As I indicate in my prepared remarks, there is a question here as to the value of cash dividends inducing corporations to start to build up cash, and in that process probably think in terms of increasing cash dividends.

Now that changed very dramatically. And indeed, there is another element here: remember, one of the reasons why dividends as a means of pay-out have gone down somewhat is that there has been an awful lot of stock buy-back which effectively does not address the question of taxation. At root, this question, or the fundamental aspect of this question, really gets down to the double taxation of dividends and the issue of the integration of the corporate tax with the individual tax. And I think a lot of economists will tell you that that is an extraordinarily useful and efficient way, if you can do it, to put all of the tax burden on shareholders and not have double taxation of dividends through taxing the corporation and then taxing the dividends again.

My own impression is that we should have a very large expansion of Subchapter S corporations which effectively would enable dividends to be paid out and effectively taxed only once. I do not expect that to happen at this particular stage and there are very good reasons why problems of revenue loss are creating a concern. There are issues of equity.

But if you are asking as an economist and looking strictly at the question of the optimum allocation of capital in the system, elimi-

nating double taxation of dividends is a very valuable thing to do. And indeed, as you may be aware, the Secretary of the Treasury has very strongly been proposing that.

Senator BENNETT. Just quickly, with the time gone, the company that I managed that was most successful was in fact an S corporation. And as shareholders in that S corporation, we could make the decision as to whether or not we were going to leave the money in the company to make it grow or take it out. Since there were no shares to sell in the public arena, the whole question of stock options did not come up. So, we watched very carefully the amount of cash accumulating in the company and the amount that we could take out in the form of dividends. And as you say, it was not double-taxed.

Thank you very much.

Chairman SARBANES. Senator Carper.

COMMENTS OF SENATOR THOMAS R. CARPER

Senator CARPER. Thanks, Mr. Chairman.

Chairman Greenspan, welcome. It is good to see you and we thank you for meeting with us today. I have been in and out. We have had a couple other hearings going on and I am in and out of another one dealing with clean air. So, I apologize for not being here to hear all of the questions. I heard most of your statement.

I want to revisit an issue that revolves around the legislation that the Senate passed yesterday, which the House passed their own version of it a month or so ago. We will now create a conference committee, as you know, and we will hammer out our differences. Somewhere along the line we are going to be asking you publicly or privately for your own counsel as to which provisions are most important that we retain from the Senate bill or maybe in which instances you think the House language is preferable. Do you have today any particular thoughts that you might share with us as to what provisions of the Senate bill that you feel are most worth preserving as we go forward?

Chairman GREENSPAN. Senator, I thought that the initiative that the Senate produced was very important and very effective.

As I said to the Chairman before the hearing, my original view was that taking accounting standards and moving them out of the private sector was really unnecessary because my view was always that accountants basically knew or had to know that the market value of their companies rested on the integrity of their operations and that, indeed, that signature that they put on an order form is where the net worth of the company comes from.

And that, therefore, their self-interest is so strongly directed at making certain that their reputation was unimpeachable, that regulation by Government was utterly unnecessary and, indeed, most inappropriate. I was wrong.

I was really deeply distressed to find that actions were being taken which very clearly indicated a lack of awareness of where the market value of accounting is. Consequently, what essentially your bill, the Chairman's bill, and that of the House is endeavoring to do, is to substitute for something which should not have been necessary in the first place. I have no views as to what pieces of what

bills to take. I frankly have not read the bills in detail. Is it 112 pages or something?

Senator CARPER. It is a quick read.

[Laughter.]

Chairman GREENSPAN. I am not competent to answer a number of these questions. I think I am in the area of accounting where I have some very considerable history. But in the business of accounting, I do not, and I am not really knowledgeable enough to be able to make judgments.

Senator CARPER. All right. Thank you.

I have heard you testify a number of times and I thought today your testimony was uncommonly clear and precise. Some have suggested that it is not always that way, and I always thought it was just me.

Senator BENNETT. If I may, Senator, you are just getting better at decoding it.

[Laughter.]

Senator CARPER. Well, I hope so. I thought your testimony was just very clear and very compelling.

Chairman SARBANES. It is better than Volcker. You had to decode the smoke rings that he was blowing from his cigar.

[Laughter.]

Senator CARPER. I thought one of the things you said that really struck home with me was, and I will paraphrase, you said that the state of corporate governance within a corporation reflects the character of the CEO. I thought that was a very telling statement.

Let me just change gears a little bit, if I could, and ask us to focus on our trade deficit, which is large and seems to be growing, and to relate to that. Maybe you could just take a moment and give us a little primer on the financing of the trade deficit. Last year I think it exceeded $300 billion. The role that foreign investment plays in enabling us to finance that trade deficit, and why restoring investor confidence in our markets is important as we deal with financing the trade deficit.

Chairman GREENSPAN. Well, Senator, as I indicated previously, thinking in terms of the broader issue, the current account deficit is distinct from the trade deficit, you have to determine how it is being financed. And by construction, the current account deficit, as I indicated earlier, has to be exactly the same amount with the sign changed as the capital accounts surplus because it is double-entry bookkeeping. One must balance the other.

And obviously, when the demand to invest in the United States is increasing or is very large, it may very well create a demand for dollars to invest in the United States much larger than the demand for foreign currency by our importers who need to finance goods from abroad. That is in fact the best simple explanation of why the dollar goes up or down. When the demand for investment is greater than the demand for foreign currencies to import, the dollar will be up, and vice-versa.

The notion, however, that you have to be careful about is that we are talking about the rate of increase in investment. In other words, you can have a significant decline in the rate of inflow of capital investment in the United States, but it is still positive and so the aggregate amount of investment is growing. It is the rate of

change which determines whether in fact the pressures are for or against the dollar—whether the price of the currency is going up or going down. And I think, as I indicated in my prepared remarks, it is such a complex type of structure—that is, the markets are so efficient and so complex in exchange rate markets, that it is very difficult to forecast them much in advance.

We at the Federal Reserve have spent an inordinate amount of time trying to find models which would successfully project exchange rates, not only ours but everybody else's. It is not the most profitable investment we have made in research time. Indeed, it is really remarkable how difficult it is to forecast, which is another way of saying how successful the markets have become in absorbing the knowledge that everyone has about supply and demand for currency, supply and demand for goods and services, imports and exports. So, our inability to forecast is a testament to how good the markets have basically become.

Senator CARPER. Thank you, Chairman Greenspan.

Thank you, Mr. Chairman.

Chairman SARBANES. Thank you, Senator Carper.

Senator Schumer.

COMMENTS OF SENATOR CHARLES E. SCHUMER

Senator SCHUMER. Thank you, Mr. Chairman. And thank you, Chairman Greenspan, for your dedication to our country and its economy.

I have one general question and two specifics. My general relates to this. Many of us are scratching our heads here wondering why are the markets to skittish, so far up, so far down. And I guess you hear a whole melange of reasons—corporate governance, obviously, September 11 and the residue from September 11, people's fear about the future and unwilling to say, well, we will have a great future.

But then maybe there is the other answer, which is that stock price ratios are still very high. Maybe they were just so high that the exact details of what brings them back to traditional levels is less important than they come back to traditional levels and are not going to pop back up again. So, I guess my questions are; could you comment on that generally? How much is this specifically driven by the situations of the times, the Enron's and the Worldcom's, as well as the September 11's? How much is just possibly a return to more normal ratios of stock price ratios? And related to that, just a specific—how great is the confidence of the markets in Washington's ability to get on top of all of this?

Chairman GREENSPAN. I am glad you are asking such easy questions this morning. If we were dealing with, as you put it, normal stock price valuation processes, then we could just very readily look at a chart and say, price/earnings ratios are higher or lower, equity premiums are higher or lower, and make judgments accordingly. There is a tricky problem here, and the problem basically is the productivity problem. The change in structural productivity, the order of magnitude of which is not all that easy to judge, clearly must have an effect on the long-term equilibrium price/earnings ratio. Obviously, with productivity growth rising, the equilibrium

P/E ratio is higher. What we do not know is where it is. And so, it makes it very difficult to answer that question.

Senator SCHUMER. So the traditional valuations do not work. We do not know where they end up, but they do not work. Or as well.

Chairman GREENSPAN. They do not work as well. No, I am not saying that we throw them out. I am just basically saying——

Senator SCHUMER. Let me ask then the second part of that. How great do you think is the confidence in the markets of Washington's ability to get on top of this crisis of confidence that we have?

Chairman GREENSPAN. I do not know the answer to that.

Senator SCHUMER. When the President gives a speech, then the markets go down, things like that.

Chairman GREENSPAN. Well, I do not know.

Senator SCHUMER. You know, I am not saying cause and effect.

Chairman GREENSPAN. Well, confidence is a difficult thing to put your finger on. You do not reverse investor, consumer, or other confidence——

Senator SCHUMER. By a speech.

Chairman GREENSPAN. ——overnight, or by any particular action by anybody. And the reason is that we have an extraordinarily complex economy which is fairly stable, in the sense that it used to be that we had many regional economies in the United States. I remember the time when mortgage interest rates were 50 basis points higher in California than in New York. We now have a single financial market—indeed, I would argue, international financial market—which does not move with minor changes.

Senator SCHUMER. So, again, maybe what you are saying here, and I do not want to put words in your mouth, is that it has become—even creating that kind of confidence in a complicated economy has become complicated. So the jury is out as to whether we can do it.

Chairman GREENSPAN. Yes. At root, confidence occurs when you have a stable economic environment from which to function. We know, for example, that inflation is very antithetical to investor confidence, and we see it in the marketplace. Stability and predictability are crucial elements to confidence. And those are not easy issues to really produce.

Senator SCHUMER. You had mentioned that you supported the Leahy part of the bill, the increase in the penalties to the 10 years.

Chairman GREENSPAN. I supported all of the elements in which the issue of taking fraud as an action of theft and treated accordingly is appropriate.

Senator SCHUMER. Right. There was some talk yesterday or this morning of backing off some of those tougher provisions as we get to the conference. I take it you would regard that as a bad idea.

Chairman GREENSPAN. Well, now you are getting into areas of jurisprudence and criminal law in which my expertise is zero or less. I do not know how one should basically interpret it. All I can tell you, from an economist's point of view, that the issue of fraud and misrepresentation are extraordinarily deleterious to the functioning of a voluntary free market capitalist system, and that if you want the benefits from the type of system that we have, you cannot have issues of fraud, which are the equivalent of violence to the markets themselves.

Senator SCHUMER. I would read into that that we ought to stick with the tougher penalties.

Chairman GREENSPAN. I have really said what I believe as an economist. How that is interpreted into the criminal law is something which I do not have a clue about.

Senator SCHUMER. Okay. One final question. A proposal has been put together. I could not offer it in this bill because it was not germane. But being aware, and this again relates to transparency and knowledge, which I think are really the main functions of how we ought to regulate the markets, rather than with a heavier hand. But you have large numbers of companies, when they file their earnings under the Securities Act and others, so differ with the filings of their taxable income on their IRS statements.

For instance, Worldcom supposedly reported $16 billion of earnings to its shareholders between 1996 and 2001, and yet, reported only a billion dollars of taxable earnings, to the IRS. Now, admittedly, the accounting standard and the tax standard are different. They do not seem to be so different.

Chairman GREENSPAN. Partly. Partly illusion, Senator.

Senator SCHUMER. Yes. But the proposal being that with ways to protect proprietary information of the companies, in other words, not filing the whole tax return, but some kind of summary, what would be your initial thinking on a proposal that said that companies had to file those tax returns with the SEC and they would be made public to the investing public, again, with the caveat of leaving out specific proprietary information. Not to say they would be the same, but maybe they would have some salutary, prophylactic effect of having fewer disparities.

Chairman GREENSPAN. Well, my initial reaction is that unless you can see some real advantages in doing it, which I cannot, I would not be in favor of that. And I think that the issue really gets to the question of appropriate governance.

For example, there is no question that the accounting treatment for tax purposes is not the same thing as the accounting treatment for other corporation puposes. Indeed, there used to be jokes that everyone had two or three sets of books, as though that was something bad. The truth of the matter is you might want two or three separate sets of books.

You may want, for example, and the most important one from the point of view of the chief executive officer is to have a set of accounts which says, as I indicated earlier today, whether in fact a particular corporate strategy is successful. That is a very specific request and you would keep your accounts in a certain manner.

There is another set of accounts which you may want to keep to determine, what is the probability that you will default? And that is a different set. You value assets differently.

For example, in one case, you try to get an exact measure of the value of assets. In a default issue, you want to get a very conservative estimate, to lean over backwards. Then you have tax accounting, which is different again.

And all I would suggest is that, as I indicated in my prepared remarks, in the National Income and Product Accounts, which, as I indicated, profits are rising quite significantly, are essentially de-

rived from the IRS data system, and in that regard offer the macrodata more accurately.

Senator SCHUMER. No one is disputing there should be different types of books and accounts. What is wrong with having the public see them? What is wrong with more knowledge rather than less?

Chairman GREENSPAN. Well, largely because I do not think you can effectively maintain the confidentiality that is required for proprietary purposes, no matter how hard you try.

Senator SCHUMER. Thanks, Mr. Chairman.

Chairman SARBANES. As we draw the hearing to a close, first of all, Senator Schumer, you talked about restoring confidence and so forth. I do not think you were here at the outset. When Chairman Greenspan began his testimony, the Dow was down 200 points and the Nasdaq was down 8.65. When he concluded his testimony, the Dow was down 132 and the Nasdaq was up 5.56. And we checked, just a moment ago, now that we are about to complete the questioning. The Dow is now down 20, and it was down 200 when he began. So through his testimony, and then the question and answer session, we have gone from minus 200 to minus 20. And the Nasdaq has gone from minus 8.65 to plus 21.

Senator SCHUMER. We should keep talking, Mr. Chairman.

[Laughter.]

Chairman SARBANES. I was going to say, regrettably, we are not going to be able to extend this hearing indefinitely. And so, we take no responsibility for what happens the balance of the day.

[Laughter.]

Mr. Chairman, I want to put just a couple of questions to you before we draw to a close. First of all, I want to underscore how much I agree with you when you made the point that fraud undercuts the very fundamentals of the workings of our economic system. That is why we have penalties, severe penalties, in the bill for corporate executive officers who engage in fraud or misleading information. Second, the ability of investors to rely on information in order to make judgments as to where they invest their money is why we have developed this strengthening of the system in terms of oversight of the accounting industry and the effort to eliminate the conflicts of interest that affect auditors making a tough call as they audit the books, or stock analysts in terms of their buy or sell recommendations. So that is certainly something that the legislation is addressed to accomplish.

I just want to ask two questions as we close. You referred to the Federal Reserve's release this morning on industrial production, that it was up, I think, eight-tenths of a point.

I note in the material that the production of business equipment, however, fell in June, that it fell at a 6.6 percent rate in the second quarter, and that capacity utilization, while up a bit, remains at the lowest levels in almost 20 years. What will it take to get our capital goods sector back to reasonable growth?

Chairman GREENSPAN. I think that underlying profitability is by far the most important way of doing that. It is fairly evident that the cutting edge of technologies continue to be important in this economy. And that should in itself be the major force which will induce recovery.

Remember that one of the problems we ran into subsequent to the early months of the year 2000 was that we found that even though demand for high tech was rising at a fairly significant pace, the supply was rising at twice the pace, and that inevitably created a glut which had to be worked off. And as best we can judge, as I indicated in my prepared remarks, that is largely complete.

Chairman SARBANES. I want to invite you to think with me for a moment about an issue that I think is out there in the future, but I want to try to anticipate it. It has been raised in my mind by the question I put to you earlier about the Euro now being worth more than the dollar, but it really addressed the European Union and what that possibly represents as a challenge.

I am prompted to this by a story in *The Wall Street Journal* a few weeks ago. The headline was: U.S. Loses Sparkle as Icon of Market Place. Wave of Corporate Scandals Could Tilt World Business Away From American Model. There are comments from the Europeans. One of their leading industrialists in Germany says, "I warn people not to simply take over rules from the United States without first reflecting on them critically." And then they go on to say, "European leaders are also pushing for greater acceptance of their auditing rules, known as the International Accounting Standards, as an alternative to American rules. The great virtue of the International Accounting Standards, which all European Union companies will have to adopt by 2005, is that it is a simple and fairly compact list of basic principles."

The chief executive of KPMG in India said that there had been a painful loss of face for consultants and accountants representing American companies. The scandal has been unhelpful, especially since we as a profession operate on a reputation and the implicit trust that follows.

The point I want to make is, that the American accounting industry needs, in effect, to cleanse itself and shape up and have a proper system in which it functions, or it is going to end up finding itself severely challenged internationally.

Traditionally, the United States has this reputation for the most transparent markets, the ones with the most integrity. It has been our standard so to speak—that is the prevailing standard. That is in part, I think, because we have been overwhelmingly the largest economy, although the EU now is fast approaching equivalency with the United States in terms of the size of the economy.

Also, as this notes, all the countries are going to adopt the same international accounting standards in the EU by 2005. And I think this is going to be, looking down the road, a very serious challenge to the preeminence of the American accounting profession which it has had up to this point.

Which it seems to me is just another very strong argument why we need to put these changes into place to get it back up to a standard that commands universal respect, because it is very clear now that the Europeans looking at it no longer concede that we have this established lead, that our system is necessarily better than theirs. They are now large enough economically, in a sense, to challenge it. And so I see a competition developing down the road which, it seems to me, we need to pay attention to.

I think the integrity of the American capital markets has been a great economic asset for the United States, and that anything that jeopardizes that carries with it the erosion of our economic strength and our international economic position. Do you have a view on this issue?

Chairman GREENSPAN. I agree with the general comments you are making, Mr. Chairman. We thought at one point that the detailed GAAP rules actually produced clarity. What we regrettably found in too many cases is that the various sets of GAAP rules were used as a hurdle for legal cover of various different types of actions. And the reason I think that, as in your bill and other requirements, that a CEO or CFO certifies the overall accounts, what is in effect occurring is not merely a stipulation that we passed say 104 of GAAP requirements and we met them all and therefore, we have disclosed what needs to be disclosed. What we have learned, regrettably, is that in order to get a really important understanding of what the underlying profitability and the nature of a corporation is, you need far more than merely a listing of whether or not you met a certain set of GAAP requirements.

Now what that says is that you are requiring over and above having met individual GAAP requirements that the CFO and CEO are certifying, that irrespective of that, the system has basically—the set of accounts that are being offered does indeed correctly portray, as best one can, what the nature of the company is. A combination of GAAP and oversight by the CEO, certification by the CEO, may be an important way of looking at accounting.

Now, I am not denying that having principles rather than specifics has certain advantages, and I think that the competition that we now see between the two different systems is very healthy. What will ultimately emerge out of it, in my judgment, is probably an international system which will combine the best of both systems and be applicable on a worldwide basis.

Chairman SARBANES. Mr. Chairman, we thank you very much. It has been a very interesting and informative hearing.

The hearing stands adjourned.

[Whereupon, at 12:35 p.m., the hearing was adjourned.]

[Prepared statements, response to written questions, and additional material supplied for the record follow:]

PREPARED STATEMENT OF SENATOR JON S. CORZINE

Mr. Chairman, I want to again congratulate you on the overwhelming passage of the accounting and investor protection reform legislation yesterday, your leadership in that effort was nothing short of stellar. I also want to thank you for holding this hearing this morning, and of course want to welcome Chairman Greenspan before the Committee and thank him for joining us today.

Chairman Greenspan, I look forward to your testimony on the issue of the state of our Nation's economy. In a speech in Alabama yesterday, President Bush outlined that with low interest rates, relatively low inflation, and increasing productivity that "our economy is fundamentally strong." That may well be true, but we have this unprecedented decline of equity markets and at the beginning of an economic recovery. My question is "why?"

Are we facing the risk of slipping into a deflationary spiral that parallels what we witnessed during the Japanese crisis of the 1990's? Or is this all attributable to the fact that corporate scandals, like we have witnessed at Enron and Worldcom, have led to a crisis of confidence in corporate management and corporate financial statements that have called many to question not only the integrity of our equities markets, but also the fundamental underpinnings of our economic well-being.

Hopefully, last night's reform package passed here in the Senate will be embraced not only in conference by the House membership, but also by President Bush, who to date has been reluctant to state his support for this bill over the far weaker legislation passed by the House.

Like the rest of my colleagues, I look forward to your perspectives about what, if any, impact you believe the legislative proposal passed by the Senate yesterday will have toward helping to soothe the fragile psyche of investors.

Finally, Chairman Greenspan, I look forward to a discussion about some of the elements the legislation did not deal with, in particular, the issue of expensing stock options. And whether you believe more companies will follow suit in light of Coca-Cola's announcement yesterday that they would begin expensing employee stock options.

As always, Chairman Greenspan, it is a pleasure to have you serve in front of this Committee, I look forward to your testimony and to perspectives on America's future economic prospects.

Thank you, Mr. Chairman.

PREPARED STATEMENT OF SENATOR JIM BUNNING

Mr. Chairman, I would like to thank you for holding this hearing, and I would like to thank Chairman Greenspan for coming before the Committee today.

We have a crisis in our economy today—a crisis of confidence. We have all seen it, and the majority of Americans have felt it. Whether they own stock, have a 401(k) or another type of pension plan, millions have been personally hit by the recent market dips. At this point, the losses might be only on paper. But we all know how to add and subtract. And the sheer drop of the Dow, Nasdaq, and S&P 500 in the last few weeks has folks on edge.

To make things worse, the markets are dropping in a time when, overall, most of the economic news is pretty good. The economy grew at 6 percent in the first quarter. Retail sales were up in June. And inflation is almost nonexistent. But the last I heard, over one thousand companies have restated earnings.

The stock markets are in the tank. Investors keep waiting for the other shoe to drop—again. They are waiting to see if there will be another Enron, or Global Crossing, or Worldcom. To be fair, the retail investor seems to be more willing to ride out the market and sit on their hands. It would be nice if institutional investors would do the same. But the bottom line is that investors large and small are going to do what is right for them. No one can blame them.

We must restore confidence in our markets. I am glad that Congress is well on its way to passing legislation to help. But it is going to take more than enacting a bill to restore that confidence. The President has taken some good steps too. I think his ideas will help greatly.

It would be nice if some of his political opponents would stop taking potshots at the President for things that started long before he came into office. Some of the rhetoric that has been flying around the past few days has been dangerous and irresponsible. Clearly it has been more about political agendas than the overall economic mood of the country. But those who try to use recent problems for political gain—whether they be Republican or Democrat—are playing with fire. Markets can go back up just as fast as they go down.

Personally, I think that one way we could restore some confidence in the market would be for the public to see some of these executives who have committed fraud to walk around in handcuffs and orange jumpsuits. When the American people see that the system does work and those who have committed crimes pay the piper, they will feel a lot more secure about their investments and security. I would like to figure out a legal, constitutional way to expedite the prosecution of those who have committed crimes and get them in jail right away. I know that is a little far afield for this hearing. But I really believe that it is one of the real, tangible things that could be done that would send out the right signal to investors, markets, and business.

I look forward to hearing from Chairman Greenspan about our economy. I would hope to hear any suggestions on what else he thinks can be done to restore confidence in our markets. And I look forward to talking with you further during the question and answer period.

Thank you, Mr. Chairman.

PREPARED STATEMENT OF ALAN GREENSPAN

CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

JULY 16, 2002

I appreciate this opportunity to present the Federal Reserve's Monetary Policy Report to the Congress. Over the four and one-half months since I last testified before this Committee on monetary policy, the economy has continued to expand, largely along the broad contours we had anticipated at that time. Although the uncertainties of earlier this year are as yet not fully resolved, the U.S. economy appears to have withstood a set of blows—major declines in equity markets, a sharp retrenchment in investment spending, and the tragic terrorist attacks of last September—that in previous business cycles almost surely would have induced a severe contraction. The mildness and brevity of the downturn, as I indicated earlier this year, are a testament to the notable improvement in the resilience and flexibility of the U.S. economy.

But while the economy has held up remarkably well, not surprisingly the depressing effects of recent events linger. Spending will continue to adjust for some time to the declines that have occurred in equity prices. In recent weeks, those prices have fallen further on net, in part under the influence of growing concerns about corporate governance and business transparency problems that evidently accumulated during the earlier rapid runup in these markets. Considerable uncertainties—about the progress of the adjustment of capital spending and the rebound in profitability, about the potential for additional revelations of corporate malfeasance, and about possible risks from global political events and terrorism—still confront us.

Nevertheless, the fundamentals are in place for a return to sustained healthy growth: Imbalances in inventories and capital goods appear largely to have been worked off; inflation is quite low and is expected to remain so; and productivity growth has been remarkably strong, implying considerable underlying support to household and business spending as well as potential relief from cost and price pressures. In considering policy actions this year, the Federal Open Market Committee has recognized that the accommodative stance of policy adopted last year in response to the substantial forces restraining the economy likely will not prove compatible over time with maximum sustainable growth and price stability. But, with inflation currently contained and with few signs that upward pressures are likely to develop any time soon, we have chosen to maintain that stance pending evidence that the forces inhibiting economic growth are dissipating enough to allow the strong fundamentals to show through more fully.

As has often been the case in the past, the behavior of inventories provided substantial impetus for the initial strengthening of the economy. Manufacturers, wholesalers, and retailers took vigorous steps throughout 2001 to eliminate an unwanted buildup of stocks that emerged when final demand slowed late in 2000. By early this year, with inventory levels having apparently come into better alignment with expected sales, the pace of inventory reduction began to ebb, and efforts to limit further drawdowns provided a considerable boost to production. The available evidence suggests that, in some sectors, liquidation may be giving way to a rebuilding of inventories. However, as inventories start to grow more in line with sales in coming quarters, the contribution of inventory investment to real GDP growth should lessen. As a result, the strength of final demand will play its usual central role in

determining the vigor of the expansion. While final demand has been increasing, the pace of forward momentum remains uncertain.

Household spending held up quite well during the downturn and through recent months, and thus served as an important stabilizing force for the overall economy. Real consumer outlays and spending on residential construction each rose about 3 percent over the course of 2001, even as the growth of real GDP fell off to only ½ percent. Household spending was boosted by ongoing increases in incomes, which in turn were spurred by strong advances in productivity as well as by legislated tax reductions and, in recent months, by extended unemployment insurance benefits.

Monetary policy also played a role by cutting short-term interest rates, which helped lower household borrowing costs. Particularly important in buoying spending were the very low levels of mortgage interest rates, which encouraged households to purchase homes, refinance debt and lower debt service burdens, and extract equity from homes to finance expenditures. Fixed mortgage rates remain at historically low levels and thus should continue to fuel reasonably strong housing demand and, through equity extraction, to support consumer spending as well. Indeed, recent sizable increases in home prices, which reflect the effects on demand of low mortgage rates, immigration, and shortages of buildable land in some areas, have significantly increased the equity in houses that homeowners can readily tap through home equity loans and mortgage refinancing.

But those sources of strength probably will be tempered by other influences. As we noted in February, because consumer and residential expenditures did not decline during the overall downturn, there is little pent-up demand to be satisfied. Consequently, a surge in household spending early in this recovery is unlikely. Moreover, the declines in household wealth that have occurred over the past couple of years should continue to restrain spending in the period ahead. Still, despite the concerns about economic prospects, equity valuations, terrorism, and geopolitical conflicts, consumers do not appear to have retrenched in retail markets. Indeed, consumers responded strongly to the new interest rate incentives of motor vehicle manufacturers this month. Early reports indicate a significant improvement in sales over June.

By contrast, business spending has been depressed. The recent economic downturn was driven, in large measure, by the sharp falloff in the demand for capital goods that occurred when firms suddenly realized that stocks of such goods—both those already in place as well as those in inventory—were excessive. The resulting declines in the production of capital goods were particularly sizable in the high-tech sector. Monthly shipments of computers and peripherals, for example, fell by about 40 percent from their peak in 1999 through their trough in 2001. Sales by communications equipment producers slumped just as sharply. Outside the high-tech sector, production also declined. Assemblies of commercial aircraft slowed abruptly. In addition, the construction of office and industrial buildings fell off noticeably. The collapse of many Internet firms and the difficulties of the high-tech sector more generally led to a significant drop in the demand for office space that was exacerbated as the economic slowdown widened beyond the tech sector. Overall, the level of real business fixed investment plunged about 11 percent between its quarterly peak in the final months of 2000 and the first quarter of this year.

With the adjustment of the capital stock to desired levels now evidently well advanced, business fixed investment may be set to improve. A recovery in this category of spending is likely to be gradual by historical standards and uneven across sectors. For example, an upturn in production of semiconductors and computers has been under way now for nearly a year, but with significant overcapacity still prevailing in some segments of the telecom industry, investment in communications equipment is likely to remain subdued for some time to come. Overall capital expenditures should strengthen with time. In particular, firms should respond increasingly to the expected improvement in the outlook for sales and profits, low debt financing costs, the heightened incentives resulting from the partial expensing tax provisions legislated earlier this year, and especially the productivity enhancements offered by continuing advances in technology.

Indeed, despite the recent depressed level of investment expenditures, the productivity of the U.S. economy has continued to rise at a remarkably strong pace. In the nonfarm business sector, output per hour is currently estimated to have soared at an average annual rate of about 7 percent over the fourth quarter of 2001 and first quarter of 2002, and the available evidence points to continued gains last quarter—though not at the frenetic pace of the preceding half year. In part, these increases in productivity reflect the very cautious attitudes of managers toward hiring. But the magnitude of the recent gains would not have been possible without ongoing benefits from the rapid pace of technological advance and from the heavy invest-

ment over the latter half of the 1990's in capital equipment incorporating such advances.

Despite these encouraging developments regarding the longer-term prospects for the economy, financial markets have been notably skittish of late, and business managers remain decidedly cautious. In part, these attitudes reflect the lingering effects of the shocks that our economy endured in 2000 and 2001. Particularly given the dimensions of those shocks, some persistent uncertainty and concern are not surprising.

Also contributing to the dispirited attitudes among many corporate executives is the intensely competitive business environment facing their firms. Increased competition, while producing manifold benefits for consumers and for the economy as a whole, clearly makes individual firms' operations more difficult. Past deregulation and, more recently, the enhanced speed and efficiency of information flows resulting from technological advances are strengthening competition domestically. In addition, globalization is intensifying competition in a broad range of markets and damping pricing power across developed and developing nations alike.

Those businesses where heightened competition has engendered a loss of pricing power have sought ways to raise profit margins by employing technology to lower costs and improve efficiency. In the United States, as a consequence of the interaction of monetary policy, globalization, and cost-reducing productivity advances, price inflation has fallen in recent years to its lowest level in four decades, as has the recent growth rate of nominal GDP and consolidated corporate revenues.

In part because nominal corporate revenues, although no longer declining, are growing only tepidly, managers seem to remain skeptical of the evidence of an emerging upturn. Profit margins do appear to be coming off their lows registered late last year, but, unsurprisingly, the recovery in economic activity from a shallow decline appears less vigorous than in the past. The lowest sustained rates of inflation in 40 years imply that nominal growth in sales and profits looks particularly anemic. In contrast, in the 1950's and early 1960's, the last period of stable prices, populations and employment were growing considerably faster than the recent pace so that growth in nominal GDP, consolidated corporate sales, and profits was seen as still quite respectable. Reflecting concerns about the strength of the recovery, managers continue to limit capital spending to only the most pressing needs.

Given the key role of perceptions of subdued profitability in the current period, it is ironic that the practice of not expensing stock option grants, which contributed to the surge in earnings reported to shareholders from 1997 to 2000, has imparted a deceptive weakness to the growth of earnings reported to shareholders in recent quarters. As stock market gains turned to losses a couple of years ago, the willingness of employees to accept stock options in lieu of cash or other forms of compensation apparently diminished. According to estimates by Federal Reserve staff, the value of stock option grants for the S&P 500 corporations fell about 15 percent from 2000 to 2001, and grant values have likely declined still further this year. Moreover, options grants are presumably being replaced over time by cash or other forms of compensation, which are expensed, contributing further to less robust growth in earnings reported to shareholders from its trough last year.

In contrast, the measure of profits calculated by the Department of Commerce for the National Income and Product Accounts is designed to gauge the economic profitability of current operations. It excludes a number of one-time charges that appear in shareholder reports, and, importantly, records options as an expense, albeit at the time of exercise. Although this treatment of the cost of options is not ideal, it is arguably superior to their treatment in shareholder reports, where options are generally not expensed at all. NIPA profits closely approximate those obtained from reports submitted for tax purposes, and, for obvious reasons, corporations tend not to inflate taxable earnings. Consequently, NIPA profits have been far less subject to the spin evident in reports to shareholders in recent years. NIPA profits have increased sharply since the third quarter of last year, partly reflecting the dramatic jump in productivity and decline in unit labor costs.

The difficulties of judging earnings trends have been intensified by revelations of misleading accounting practices at some prominent businesses. The resulting investor skepticism about earnings reports has not only depressed the valuation of equity shares, but it also has been reportedly a factor in the rising risk spreads on corporate debt issued by the lower rung of investment-grade and below-investment grade firms, further elevating the cost of capital for these borrowers. Businesses concerned about the impact of possible adverse publicity regarding their accounting practices on their access to finance could revert to a much heavier emphasis on cash generation and accumulation. Such an emphasis could slow new capital investment initiatives.

The recent impressive advances in productivity suggest that to date any impairment of efficiency of U.S. corporations overall has been small. Efficiency is of course a key measure of corporate governance. Nonetheless, the danger that breakdowns in governance could at some point significantly erode business efficiency remains worrisome. Well-functioning markets require accurate information to allocate capital and other resources, and market participants must have confidence that our predominately voluntary system of exchange is transparent and fair. Although business transactions are governed by laws and contracts, if even a modest fraction of those transactions had to be adjudicated, our courts would be swamped into immobility. Thus, our market system depends critically on trust—trust in the word of our colleagues and trust in the word of those with whom we do business. Falsification and fraud are highly destructive to free-market capitalism and, more broadly, to the underpinnings of our society.

In recent years, shareholders and potential investors would have been protected from widespread misinformation if any one of the many bulwarks safeguarding appropriate corporate evaluation had held. In too many cases, none did. Lawyers, internal and external auditors, corporate boards, Wall Street security analysts, rating agencies, and large institutional holders of stock all failed for one reason or another to detect and blow the whistle on those who breached the level of trust essential to well-functioning markets.

Why did corporate governance checks and balances that served us reasonably well in the past break down? At root was the rapid enlargement of stock market capitalizations in the latter part of the 1990's that arguably engendered an outsized increase in opportunities for avarice. An infectious greed seemed to grip much of our business community. Our historical guardians of financial information were overwhelmed. Too many corporate executives sought ways to "harvest" some of those stock market gains. As a result, the highly desirable spread of shareholding and options among business managers perversely created incentives to artificially inflate reported earnings in order to keep stock prices high and rising. This outcome suggests that the options were poorly structured, and, consequently, they failed to properly align the long-term interests of shareholders and managers, the paradigm so essential for effective corporate governance. The incentives they created overcame the good judgment of too many corporate managers. It is not that humans have become any more greedy than in generations past. It is that the avenues to express greed had grown so enormously.

Perhaps the recent breakdown of protective barriers resulted from a once-in-a-generation frenzy of speculation that is now over. With profitable opportunities for malfeasance markedly diminished, far fewer questionable practices are likely to be initiated in the immediate future. To be sure, previously undiscovered misdeeds will no doubt continue to surface in the weeks ahead as chastened CEO's restate earnings. But even if the worst is over, history cautions us that memories fade. Thus, it is incumbent upon us to apply the lessons of this recent period to inhibit any recurrence in the future.

A major focus of reform of corporate governance, of course, should be an improved functioning of our economy. A related, but separate, issue is that shareholders must perceive that corporate governance is properly structured so that financial gains are fairly negotiated between existing shareholders and corporate officeholders. Shareholding is now predominately for investment, not corporate control. Our vast and highly liquid financial markets enable large institutional shareholders to sell their shares when they perceive inadequacies of corporate governance, rather than fix them. This has placed de facto control in the hands of the chief executive officer. Shareholders routinely authorize slates of directors recommended by the CEO. Generally, problems need to become quite large before CEO's are dislodged by dissenting shareholders or hostile takeovers.

Manifestations of lax corporate governance, in my judgment, are largely a symptom of a failed CEO. Having independent directors, whose votes are not controlled by the CEO, is essential, of course, for any effective board of directors. However, we need to be careful that in the process, we do not create a competing set of directors and conflicting sources of power that are likely to impair a corporation's effectiveness. The functioning of any business requires a central point of authority.

In the end, a CEO must be afforded the full authority to implement corporate strategies, but also must bear the responsibility to accurately report the resulting condition of the corporation to shareholders and potential investors. Unless such responsibilities are enforced with very stiff penalties for noncompliance, as many now recommend, our accounting systems and other elements of corporate governance will function in a less than optimum manner.

Already existing statutes, of course, prohibit corporate fraud and misrepresentation. But even a small increase in the likelihood of large, possibly criminal penalties

for egregious behavior of CEO's can have profoundly important effects on all aspects of corporate governance because the fulcrum of governance is the chief executive officer. If a CEO countenances managing reported earnings, that attitude will drive the entire accounting regime of the firm. If he or she instead insists on an objective representation of a company's business dealings, that standard will govern recordkeeping and due diligence. It has been my experience on numerous corporate boards that CEO's who insist that their auditors render objective accounts get them. And CEO's who discourage corner-cutting by subordinates are rarely exposed to it.

I recognize that I am saying that the state of corporate governance to a very large extent reflects the character of the CEO, and that this is a very difficult issue to address. Although we may not be able to change the character of corporate officers, we can change behavior through incentives and penalties. That, in my judgment, could dramatically improve the state of corporate governance.

Our most recent experiences clearly indicate, however, that adjustments to the existing structure of regulation of corporate governance and accounting beyond addressing the role of the CEO are needed. In designing changes to our regulatory framework, we should keep in mind that regulation and supervision of our financial markets need to be flexible enough to adapt to an ever-changing and evolving financial structure. Regulation cannot be static or it will soon distort the efficient flow of capital from savers to those who invest in plant and equipment. There will be certain areas where Congress will choose to provide a specific statutory direction that will be as applicable 30 years from now as today. In other cases, agency rulemaking flexibility under new or existing statutes is more appropriate. Finally, there are some areas where private supervision would be most effective, such as that of the New York Stock Exchange, which requires certain standards of governance for listing.

Above all, we must bear in mind the critical issue should be how to strengthen the legal base of free market capitalism: The property rights of shareholders and other owners of capital. Fraud and deception are thefts of property. In my judgment, more generally, unless the laws governing how markets and corporations function are perceived as fair, our economic system cannot achieve its full potential.

A considerable volume of market commentary in recent weeks has suggested that concerns about earnings prospects and the proliferating revelations of serious governance and accounting issues have contributed not only to lower equity prices but also to a decline in the foreign exchange value of the dollar. And some of that commentary has extrapolated the trend of dollar weakness. As you know, the Secretary of the Treasury speaks for our Government on exchange rate policy. But, given the recent intense interest in the future course of the dollar, I would like to raise a technical issue and a flag of caution regarding those forecasts—or, for that matter, any forecast of exchange rates. There may be more forecasting of exchange rates, with less success, than almost any other economic variable.

The reason that it is so difficult is that an exchange rate is a very complex price that balances, on the one hand, the demand for, for example, dollars stemming from the demand for dollar investments and for U.S. exports against, on the other hand, the demand for foreign currencies by U.S. investors desiring to acquire foreign assets and by U.S. importers of foreign goods and services. Hence, exchange-rate movements depend on shifting perceptions of the relative returns from investing in different countries and on the myriad influences on relative tendencies to import and export. The net effect of these factors over any future time period is extraordinarily difficult to assess in advance. Although measures such as real interest rate differentials, differential rates of productivity gains, and chronic external deficits are often employed to explain exchange rate behavior, none has been found to be consistently useful in forecasting exchange rates even over substantial periods of 1 or 2 years.

Our ability to attract foreign capital in coming years will help facilitate the increases in investment that will promote continued gains in productivity and standards of living. But policymakers should also recognize the important role that prudent fiscal policy can play in promoting national saving and maintaining conditions conducive to investment and continued strong growth of productivity. Beginning in the late 1980's, impressive progress was made in reining in Federal expenditures and restoring a better balance between spending and revenues. The lower Federal deficits and, for a time, the realization of surpluses contributed significantly to improved national saving and thereby put downward pressure on real interest rates. This, in turn, enhanced the incentives of businesses to invest in productive plant and equipment.

Recently, however, some of those gains have been given up. To a degree, the return to budget deficits has been a result of temporary factors, especially the falloff in revenues and the increase in outlays associated with the economic downturn.

Those influences should tend to reverse over the next year or two, other things equal, although the decline in revenues reflecting the drop in capital gains realizations, including those on options is unlikely to be fully reversed. And the necessary rise in expenditures related to the war on terrorism and enhanced homeland security has also played a role, as have the tax reductions legislated last year. Unfortunately, there are also signs that the underlying disciplinary mechanisms that formed the framework for Federal budget decisions over most of the past 15 years have eroded. The Administration and the Congress can make a valuable contribution to the prospects for the growth of the economy by taking measures to restore this discipline and return the Federal budget over time to a posture that is supportive of long-term economic growth.

To sum up, the U.S. economy has confronted very significant challenges over the past year or so. Those problems, however, led to only a relatively brief and mild downturn in economic activity, reflecting the underlying strength and increased resiliency that the economy has achieved in recent years. The effects of the recent difficulties will linger for a bit longer but, as they wear off, and absent significant further adverse shocks, the U.S. economy is poised to resume a pattern of sustainable growth. Indeed, the central tendency of Federal Reserve policymakers' forecasts is for expansion of real GDP over the four quarters of 2002 of 3½ to 3¾ percent, somewhat above the rates anticipated in our February report. Economic growth is projected to be solid again next year, with real output rising 3½ to 4 percent. Monetary policymakers anticipate that these gains should be sufficient to bring the unemployment rate down to 5¼ to 5½ percent by the end of next year. Inflation is expected to be subdued throughout, with prices for personal consumption expenditures increasing at only a 1½ to 1¾ percent rate. Our prospects for extending this performance over time can be enhanced through implementation of sound monetary, financial, fiscal, and trade policies.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR SARBANES FROM ALAN GREENSPAN

Budget for Economic Statistics

The Senate Appropriations Committee has recently voted out the Fiscal 2003 spending levels for the Bureau of Economic Analysis and the Bureau of the Census. The bill covers only pay raises for personnel and nothing more for economic statistics. According to the Bureau of the Census, the Senate bill does not provide the funds necessary to carry out the once every 5 years 2002 Economic Census that forms the foundation for many monthly and economic statistics over the next 5 years. It also provides no funding for the quarterly survey of service industries, the earlier release of trade statistics, or the modernization of the GDP that were included in the President's budget.

Q.1. What is your view about providing the funds necessary to carry out the 2002 Economic Census?

A.1. As you know, I am reluctant to support increased spending. In the case of certain economic statistics, however, the benefits are so large relative to cost that there should be little question as to its desirability.

Because the Economic Census, which is taken every 5 years by the Census Bureau, covers all businesses and not just a sample of businesses, the data collected in this effort are among the most fundamental building blocks of the Nation's economic statistics. The information gathered by the Economic Census is critical to maintaining the quality of our national income accounts and a host of other economic statistics, including the Federal Reserve's industrial production and capacity programs. I support full funding, at the level requested by the President, for the Economic Census.

The President's budget also requests funding for other important statistical initiatives at both the Census Bureau and the Bureau of Economic Analysis. These include several initiatives important to the Federal Reserve, such as establishing a new quarterly indicator of service sector activity, collecting more information on business purchases of services and materials, and the earlier release of trade statistics. I also support funding of such initiatives at the levels requested by the President.

Dynamic Scoring

On January 10, 1995, you testified on the issue of budget estimating before a joint hearing of the House and Senate Budget Committees. You stated at that time that:

> . . . full dynamic estimates of individual budget initiatives should be our goal. Unfortunately, the analytical tools required to achieve it are deficient. In fact, the goal may ultimately be unreachable. The estimation of full dynamic effects requires a model that captures micro and macroeconomic processes and produces reliable long-term forecasts of economic outcomes. Unfortunately, no such model exists. Indeed, no model currently in use can predict macroeconomic effects without substantial *ad hoc* adjustments that effectively override the internal structure of

> the model. We should not assume that models can capture the long run dynamic effects of specific tax and outlay changes any better than they can forecast the economy.

(1) Have economists improved their analytical tools over the last 7½ years enough so that we can reach the goal of full dynamic estimates of individual budget initiatives now or in the near future?

At a Senate Banking Committee hearing March 7, 2002, Senator Bennett asked your views on a series of columns by Robert Bartley that had raised the issue of the relationship between taxes, surpluses, and economic growth. A transcript of your response includes the following:

> I also come out pretty much where he does on most of those issues, but in certain places I do not. And I think on the issue of surpluses in the most recent period, I think that created some value, especially in reducing long-term real interest rates, and I think that has been an effective factor in the last several years.
>
> But there is no question that it is important that, in approaching those different forms of economic policy in Government, that we have answers to those questions.
>
> As you know, Senator, most economists will agree that in evaluating the effects of various different fiscal policies, it would be far better to use what we call dynamic scoring—that is, the ability to get the interaction of the effect as well as the initial impact.
>
> The only problem is, is that the interaction is a function of the particular model you are using, and no one can quite agree on what the appropriate model is. So that we have fallen back to a static analysis which we all can somehow agree on as the first stage of the effect. . . .
>
> In certain instances, we are making very specific adjustments in our budgetary analysis. We are seeing that the secondary impacts of tax and spending programs are zero. Now, we know that to be false. But we are making those judgments because we have no alternative.

(2) Is one of the reasons that "we have no alternative" to assuming "that the secondary impacts of tax and spending programs are zero" because the macroeconomic feedback effects can plausibly be modeled to be either positive or negative, depending on whether the "*ad hoc* adjustments" are more or less favorable? What are other reasons that "we have no alternative?"

(3) Would you recommend that the Congressional Budget Office or the Joint Committee on Taxation devote the resources necessary to make alternative dynamic scoring estimates that were both positive and negative?

(4) Do you believe that the budget packages of 1990 or 1993 that reduced future budget deficits by raising taxes and putting limits on spending probably had the effects of (a) raising national savings? (b) lowering longer-term interest rates? (c) raising the level of investment by businesses and households? (d) raising the growth rate of the economy?

Q.2. Do you support increased funding for the statistical initiatives in the President's budget, particularly the quarterly survey of service industries, the earlier release of trade statistics, and the BEA's plans to modernize its GDP measures?

A.2. With regard to dynamic scoring, my assessment has not changed. Full dynamic estimates of the budget and economic effects of fiscal policy decisions should be our goal, but, unfortunately, the econometric tools that we have available to evaluate the effects of fiscal policy on the economy are still inadequate for the task. Essentially, the profession has yet to reach a consensus on the magnitudes of a variety of key behavioral responses, such as the response of labor supply to changes in the after-tax real wage, as well as the expectations formation process that are necessary to reliably evaluate the effects of fiscal policy on the economy. The short-run impact of either a tax cut or an outlay increase under almost all dynamic scoring models tends to exhibit a lower increase in the budget deficit than does static analysis. Longer term, the results will depend on the specific nature of the policy initiative.

In such an environment, the current framework of evaluating the fiscal effects of a policy is a standard approach. The Congressional Budget Office and Joint Committee on Taxation allow for behavioral adjustments at the micro level, while leaving the macroeconomic projection unchanged. The second step, evaluating the macroeconomic effects, is typically conducted by numerous public and private sector analysts which allows decisionmakers to incorporate judgements about these effects.

An example of the difficulties of reaching a consensus on the macroeconomic effects of fiscal policy changes is the range of views regarding the macroeconomic impact of the budget reduction packages passed in the early 1990's. It is my judgement that the move to budget surpluses contributed to the rise in national saving and the reduction in long-term interest rates. The increase in net investment, and higher productive capacity of the economy largely reflected increased long-run expected profit growth, though lower long-term interest rates doubtless helped.

RESPONSE TO WRITTEN QUESTION OF SENATOR MILLER FROM ALAN GREENSPAN

Q.1. Are you aware of any factors or information that would have caused the California energy crisis? Have you seen anything further to suggest that energy derivatives trading contributed either to the California energy crisis or to Enron's bankruptcy?

A.1. I am aware of no solid evidence that energy derivatives trading contributed to the California energy crisis. The primary cause of the crisis clearly was a deeply flawed approach to the deregulation of electricity prices in California. As I understand it, the CFTC and the FERC are investigating whether energy derivatives trading may have exacerbated the imbalances created by the flawed deregulation, but those investigations have not been completed. Nor have I seen evidence that energy derivatives trading contributed to Enron's bankruptcy. To the contrary, Enron's energy derivatives trading business seems to have been profitable—in fact, its EnronOnline energy trading business was purchased by another firm. Available evidence suggests Enron's implosion resulted from

a loss of market confidence following revelations that it been hiding large losses on merchant investments in a variety of other businesses.

I continue to oppose legislation providing for additional regulation of energy derivatives because the public policy case for such legislation has not been made and because such legislation has the potential to impair the important risk transfer functions that such instruments perform.

For use at 10:00 a.m., EDT
Tuesday
July 16, 2002

Board of Governors of the Federal Reserve System

Monetary Policy Report to the Congress

Pursuant to section 2B of the Federal Reserve Act

July 16, 2002

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM
Washington, D.C., July 16, 2002

THE PRESIDENT OF THE SENATE
THE SPEAKER OF THE HOUSE OF REPRESENTATIVES

The Board of Governors is pleased to submit its Monetary Policy Report to the Congress pursuant to section 2B of the Federal Reserve Act.

Sincerely,

Alan Greenspan, Chairman

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Monetary Policy Report to the Congress

Report submitted to the Congress on July 16, 2002, pursuant to section 2B of the Federal Reserve Act

MONETARY POLICY AND THE ECONOMIC OUTLOOK

The pace of economic activity in the United States picked up noticeably in the first half of 2002 as some of the powerful forces that had been restraining spending for the preceding year and a half abated. With inventories in many industries having been brought into more comfortable alignment with sales, firms began boosting production around the turn of the year to stem further runoffs of their stocks. And while capital spending by businesses has yet to show any real vigor, the steep contraction of the past year or so appears to have come to an end. Household spending, as it has throughout this cyclical episode, continued to trend up in the first half. With employment stabilizing, the increases in real wages made possible by gains in labor productivity and the effects of a variety of fiscal actions have provided noticeable support to disposable incomes. At the same time, low interest rates have buoyed the purchase of durable goods and the demand for housing. Growth was not strong enough to forestall a rise in the unemployment rate, and slack in product and labor markets, along with declining unit costs as productivity has soared, has helped to keep core inflation low. The exceptionally strong performance of productivity over the past year provides further evidence of the U.S. economy's expanded capacity to provide growth over the longer haul.

The Federal Reserve had moved aggressively in 2001 to counter the weakness that had emerged in aggregate demand; by the end of the year, it had lowered the federal funds rate to 1-3/4 percent, the lowest level in forty years. With only tentative signs that activity was picking up, the Federal Open Market Committee (FOMC) decided to retain that unusual degree of monetary accommodation by leaving the federal funds rate unchanged at its January meeting. Confirmation of an improvement in activity was evident by the time of the March meeting, and the FOMC moved toward an assessment that the risks to the outlook were balanced between its long-run goals of price stability and maximum sustainable economic growth, a view maintained through its June meeting. The durability and strength of the expansion were recognized to depend on the trajectory of final sales. The extent of a prospective strengthening of final sales was—and still is—uncertain, however, and with inflation likely to remain contained, the Committee has chosen to maintain an accommodative stance of policy, leaving the federal funds rate at its level at the end of last year.

The economy expanded especially rapidly early in the year. As had been anticipated, much of the first quarter's strength in production resulted from the efforts of firms to limit a further drawdown of inventories after the enormous liquidation in the fourth quarter of 2001. With respect to first-quarter sales, purchases of light motor vehicles dropped back from their extraordinary fourth-quarter level, but other consumer spending increased substantially. Housing starts, too, jumped early

in the year—albeit with the help of weather conditions favorable for building in many parts of the country—and spending on national defense moved sharply higher. All told, real GDP is now estimated to have increased at an annual rate in excess of 6 percent in the first quarter.

Economic activity appears to have moved up further in recent months but at a slower pace than earlier in the year. Industrial production has continued to post moderate gains, and nonfarm payrolls edged up in the second quarter after a year of nearly steady declines. However, several factors that had contributed importantly to the outsized gain of real output in the first quarter appear to have made more modest contributions to growth in the second quarter. Available data suggest that the swing in inventory investment was considerably smaller in the second quarter than in the first. Consumer spending has advanced more slowly of late, and while the construction of new homes has expanded further, its contribution to the growth of real output has not matched that of earlier in the year.

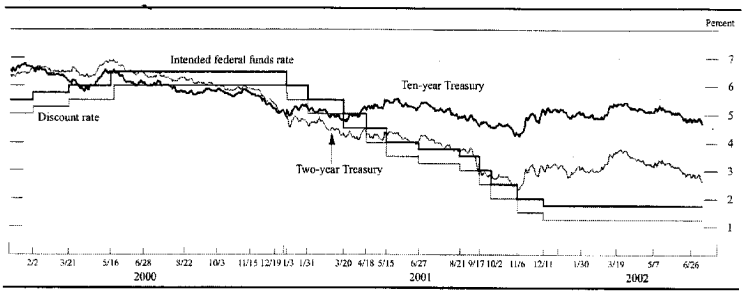
Notable crosscurrents remain at work in the outlook for economic activity. Although some of the most recent indicators have been encouraging, businesses still appear to be reluctant to add appreciably to workforces or to boost capital spending, presumably until they see clearer signs of improving prospects for sales and profits. These concerns, as well as ongoing disclosures of corporate accounting irregularities and lapses in corporate governance, have pulled down equity prices appreciably on balance this year. The accompanying decline in net worth is likely to continue to restrain household spending in the period ahead, and less favorable financial market conditions could reinforce business caution.

Nevertheless, a number of factors are likely to boost activity as the economy moves into the second half of 2002. With the inflation-adjusted federal funds rate barely positive, monetary policy should continue to provide substantial support to the growth of interest-sensitive spending. Low interest rates also have allowed businesses and households to strengthen balance sheets by refinancing debt on more favorable terms. Fiscal policy actions in the form of lower taxes, investment incentives, and higher spending are providing considerable stimulus to aggregate demand this year. Foreign economic growth has strengthened and, together with a decline in the foreign exchange value of the dollar, should bolster U.S. exports. Finally, the exceptional performance of productivity has supported household and business incomes while relieving pressures on price inflation, a combination that augurs well for the future.

Monetary Policy, Financial Markets, and the Economy over the First Half of 2002

The information reviewed by the FOMC at its meeting of January 29 and 30 seemed on the whole to indicate that economic activity was bottoming out and that a recovery might already be under way. Consumer spending had held up remarkably well, and the rates of decline in manufacturing production and business purchases of durable equipment and software had apparently moderated

Selected interest rates



NOTE. The data are daily and extend through July 10, 2002. The dates on the horizontal axis are those of scheduled FOMC meetings and of any intermeeting policy actions.

toward the end of 2001. In addition, the expectation that the pace of inventory runoff would slow after several quarters of substantial and growing liquidation constituted another reason for anticipating that economic activity would improve in the period immediately ahead. Nonetheless, looking beyond the near term, the FOMC faced considerable uncertainty about the strength of final demand. Because household spending had not softened to the usual extent during the recession, it appeared likely to have only limited room to pick up over coming quarters. Intense competitive pressures were thought to be constraining the growth of profits, which could damp investment and equity prices. At the same time, the outlook for continued subdued inflation remained favorable given the reduced utilization of resources and the further passthrough of earlier declines in energy prices. Taken together, these conditions led the FOMC to leave the stance of monetary policy unchanged, keeping its target for the federal funds rate at 1-3/4 percent. In light of the tentative nature of the evidence suggesting that the upturn in final demand would be sustained, the FOMC decided to retain its assessment that the more important risk to achieving its long-run objectives remained economic weakness—the possibility that growth would fall short of the rate of increase in the economy's potential and that resource utilization would fall further.

When the FOMC met on March 19, economic indicators had turned even more positive, providing encouraging evidence that the economy was recovering from last year's recession. Consumer spending had remained brisk in the early part of the year, the decline in business expenditures on equipment and software appeared to have about run its course, and housing starts had turned back up. Industrial production, which had been falling for nearly a year and a half, increased in January and February as businesses began to meet more of the rise in sales from current production and less from drawing down inventories. Indications that an expansion had taken hold led to noticeable increases in broad stock indexes and in long-term interest rates. But the strength of the recovery remained unclear. The outlook for business fixed investment—which would be one key to

the strength of economic activity once the thrust from inventory restocking came to an end—was especially uncertain, with anecdotal reports indicating that businesses remained hesitant to enter into major long-term commitments. While the FOMC believed that the fiscal and monetary policies already in place would continue to stimulate economic activity, it considered the questions surrounding the outlook for final demand over the quarters ahead still substantial enough to justify the retention of the current accommodative stance of monetary policy, particularly in light of the relatively high unemployment rate and the prospect that the lack of price pressures would persist. Given the positive tone of the available economic indicators, the FOMC announced that it considered the risks to achieving its long-run objectives as now being balanced over the foreseeable future.

By the time of the May 7 FOMC meeting, it had become evident that economic activity had expanded rapidly early in 2002. But the latest statistical data and anecdotal reports suggested that the expansion was moderating considerably in the second quarter and that the extent to which final demand would strengthen was still unresolved. Business sentiment remained gloomy as many firms had significantly marked down their own forecasts of growth in sales and profits over coming quarters. These revised projections, along with the uncertainty surrounding the robustness of the overall economic recovery, had contributed to sizable declines in market interest rates and weighed heavily on equity prices, which had dropped substantially between the March and May meetings. The outlook for inflation had remained benign despite some firming in energy prices, as excess capacity in labor and product markets held the pricing power of many firms in check, and the apparent strong uptrend in productivity reduced cost pressures. In these circumstances, the FOMC decided to keep the federal funds rate at its accommodative level of 1-3/4 percent and maintained its view that, against the background of its long-run goals of price stability and sustainable economic growth, the risks to the outlook remained balanced.

Over the next seven weeks, news on the economy did little to clarify questions regarding the vigor of the ongoing recovery. The information received in advance of the June 25-26 meeting of the FOMC continued to suggest that economic activity had expanded in the second quarter, but both the upward impetus from the swing in inventory investment and the growth in final demand appeared to have diminished. In financial markets, heightened concerns about accounting irregularities at prominent corporations and about the outlook for profits had contributed to a substantial decline in equity prices and correspondingly to a further erosion in household wealth. But some cushion to the effects on aggregate demand of the decline in share prices had been provided by the fall in the foreign exchange value of the dollar and the drop in long-term interest rates. Although the FOMC believed that robust underlying growth in productivity, as well as accommodative fiscal and monetary policies, would continue to support a pickup in the rate of increase of final demand over coming quarters, the likely degree of the strengthening remained uncertain. The FOMC decided to keep unchanged its monetary policy stance and its view that the risks to the economic outlook remained balanced.

Economic Projections for 2002 and 2003

The members of the Board of Governors and the Federal Reserve Bank presidents, all of whom participate in the deliberations of the FOMC, expect the economy to expand rapidly enough over the next six quarters to erode current margins of underutilized capital and labor resources. The central tendency of the forecasts for the increase in real GDP over the four quarters of 2002 is 3-1/2 percent to 3-3/4 percent, and the central tendency for real GDP growth in 2003 is 3-1/2 percent to 4 percent. The central tendency of the projections of the civilian unemployment rate, which averaged just under 6 percent in the second quarter of 2002, is that it stays close to this figure for the remainder of the year and then moves down to between 5-1/4 percent and 5-1/2 percent by the end of 2003.

Support from monetary and fiscal policies, as well as other factors, should lead to a strengthening in final demand over coming quarters. Business spending on equipment and software will likely be boosted by rising sales, improving profitability, tax incentives, and by the desire to acquire new capital embodying ongoing technological advances. Improving labor market conditions and a robust underlying trend in productivity growth should further bolster household income and contribute to an uptrend in spending. In addition, the liquidation of last year's inventory overhangs has left businesses in a position to begin rebuilding stocks as they become more persuaded that the recovery in final sales will be sustained.

Most FOMC participants expect underlying inflation to remain close to recent levels through the end of 2003. Core inflation should be held in check by productivity gains that hold down cost increases, a lack of pressure on resources, and well-anchored inflation expectations. Overall inflation, which was depressed last year by a notable decline in energy prices, is likely to run slightly higher this year. In particular, the central tendency of the projections of the increase in the chain-type index for personal consumption expenditures over the four quarters of both 2002 and 2003 is 1-1/2 percent to 1-3/4 percent, compared with last year's pace of 1-1/4 percent.

Economic projections for 2002 and 2003
Percent

Indicator	Federal Reserve Governors and Reserve Bank presidents	
	Range	Central tendency
	2002	
Change, fourth quarter to fourth quarter[1]		
Nominal GDP	4½–5½	4¾–5¼
Real GDP	3–4	3½–3¾
PCE chain-type price index	1¼–2	1½–1¾
Average level, fourth quarter		
Civilian unemployment rate	5½–6¼	5¾–6
	2003	
Change, fourth quarter to fourth quarter[1]		
Nominal GDP	4½–6	5–5¾
Real GDP	3¼–4¼	3½–4
PCE chain-type price index	1–2¼	1½–1¾
Average level, fourth quarter		
Civilian unemployment rate	5–6	5¼–5½

1. Change from average for fourth quarter of previous year to average for fourth quarter of year indicated.

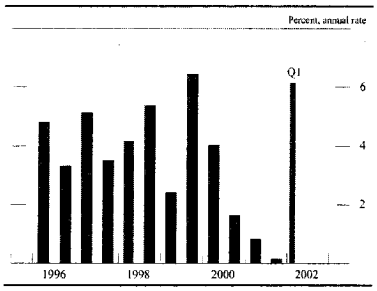
ECONOMIC AND FINANCIAL DEVELOPMENTS IN 2002

The pace of economic activity picked up considerably in the first half of 2002 after being about unchanged, on balance, in the second half of 2001. Final sales advanced modestly as substantial gains in household and government spending were partly offset by weak business fixed investment and a widening gap between imports and exports. In addition, inventory liquidation slowed sharply as businesses stepped up production to bring it more closely in line with the pace of final sales. The increase in real GDP was particularly rapid early in the year, with the first-quarter gain elevated by a steep reduction in the pace of the inventory run-off, a surge in defense spending, and a weather-induced spurt in construction. Real GDP is currently estimated to have risen at an annual rate of just over 6 percent in the first quarter and appears to have posted a more moderate gain in the second quarter.

Private payroll employment declined through April, and at mid-year the unemployment rate stood somewhat above its average in the fourth quarter of 2001. Core inflation—which excludes the direct influences of the food and energy sectors—remained subdued through May, held down by slack in resource utilization and continued sizable advances in labor productivity. Overall inflation was boosted by a surge in energy prices in March and April, but energy prices have since retreated a bit. Inflation expectations remained in check in the first half of this year.

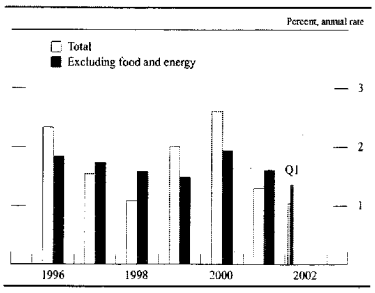
As judged by declines in most interest rates over the first half of the year, financial market participants have marked down their expectation of the vigor of the economic expansion. Interest rates, along with most equity indexes, rose noticeably toward the end of the first quarter in reaction to generally stronger-than-expected economic data. But Treasury yields and equity prices more than rolled back those increases on renewed questions about the strength of the rebound in the economy,

Change in real GDP



NOTE. Here and in subsequent charts, except as noted, change for a given period is measured to its final quarter from the final quarter of the preceding period.

Change in PCE chain-type price index



NOTE. The data are for personal consumption expenditures (PCE).

including growing uncertainty regarding prospective corporate profits and concerns about escalating geopolitical tensions and about the governance and transparency of U.S. corporations. Private demands on credit markets moderated in the first half the year, as businesses substantially curbed their net borrowing. For the most part, this reduction reflected further declines in business investment, a pickup in operating profits, and a return to net equity issuance. But, in addition, lenders became more cautious and selective, especially for borrowers of marginal credit quality.

Market perceptions that the recovery in the United States might turn out to be less robust than anticipated also put downward pressure on the foreign exchange value of the dollar as measured against the currencies of our major trading partners, especially during the second quarter of 2002. Central banks in some foreign countries, including Canada, tightened policy as growth firmed. The euro-area economy recovered modestly during the first half, and some brighter signs were evident in Japan. In contrast, the dollar strengthened on balance against the currencies of our other important trading partners; in particular, the Mexican peso lost ground, and financial markets reacted to political and economic problems in several South American countries.

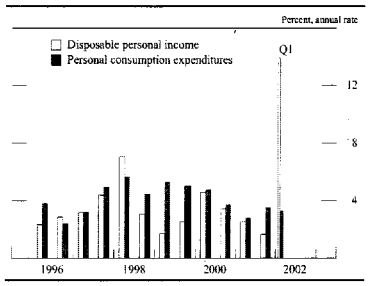
The Household Sector

Household spending began the year on a strong note and continued to rise in the second quarter. Further gains in disposable income have supported a solid underlying pace of spending. The decline in stock prices in the first half of 2002 reduced household wealth, and the debt-service burden remained high, but financial stress among households to date has been limited.

Consumer Spending

Real consumer expenditures increased at an annual rate of 3-1/4 percent in the first quarter. Demand for motor vehicles dropped from an extraordinary fourth-quarter pace, but purchases remained supported in part by continued large incentive packages. Outlays for other goods and services advanced smartly in the first quarter. In the second quarter, the rate of increase in consumer spending looks to have eased somewhat. Motor vehicle purchases were little changed, and most other major categories of consumer spending likely posted smaller gains than earlier in the year.

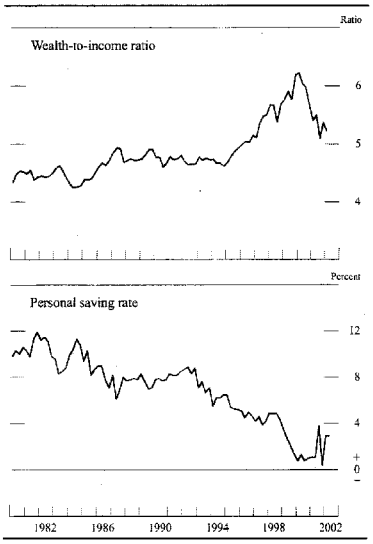
Change in real income and consumption



Real disposable personal income moved sharply higher in the first quarter and appears to have risen a little further in the second quarter. Wages and salaries have

increased only moderately this year. But tax payments have fallen markedly; last year's legislation lowered withheld tax payments again this year, and final payments this spring on tax obligations for 2001 were substantially below last year's level (likely related at least in part to a decline in capital gains realized last year). All told, real disposable income increased at an annual rate of 8 percent between the fourth quarter of last year and May. However, household net worth has likely fallen further because the negative effect of the decline in stock prices has been only partly offset by an apparent continued appreciation in the value of residential real estate. According to the flow of funds accounts, by the end of the first quarter, the ratio of household net worth to disposable income had reversed close to two-thirds of its run-up in the second half of the 1990s; this ratio has undoubtedly registered additional declines since the end of March. Consumer sentiment improved over the first several months of the year, with indexes from both the Conference Board and the Michigan Survey Research Center reversing last fall's sharp deterioration. However, both indexes have given up some of those gains more recently.

Wealth and saving



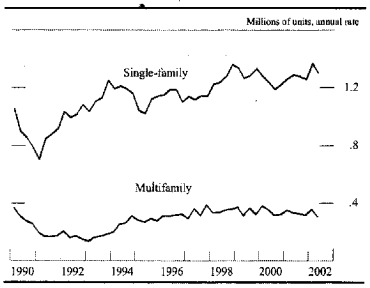
NOTE. The data are quarterly. The wealth-to-income ratio is the ratio of household net worth to disposable personal income and extends through 2002:Q1. The personal saving rate extends through 2002:Q2; the reading for that quarter is the average for April and May.

The personal saving rate increased in the first half of this year, as the decline in wealth over the past two years likely held down consumer spending relative to disposable personal income. In May, the saving rate stood at 3 percent of disposable income, up from an average of 1-1/2 percent over 2001. Movements in the saving rate have been very erratic over the past year, reflecting cyclical factors, the timing of tax cuts, and adjustments in incentives to purchase motor vehicles.

Residential Investment

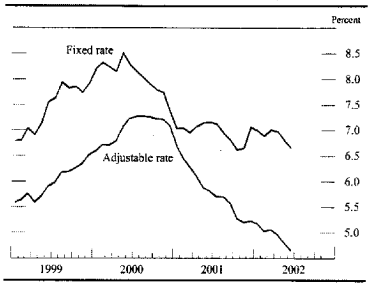
Real residential investment increased at an annual rate of about 15 percent in the first quarter and the level of activity appears to have remained robust in the second quarter. The first-quarter surge was spurred partly by unseasonably warm and dry winter weather, which apparently encouraged builders to move forward some of their planned construction. At the same time, underlying housing activity has been supported by the gains in income and

Private housing starts



NOTE. The data for 2002:Q2 are the averages for April and May; the data for earlier periods are quarterly.

Mortgage rates



NOTE. The data, which are monthly and extend through June 2002, are contract rates on thirty-year mortgages.
SOURCE. Federal Home Loan Mortgage Corporation.

confidence noted above, and, importantly, by low interest rates on mortgages. In the single-family sector, starts averaged an annual rate of 1.35 million units over the first five months of the year—up 6-1/2 percent from the already buoyant pace registered in 2001. Sales of existing homes jumped in early 2002 after moving sideways during the preceding three years; sales of new homes have also been running quite high in recent months.

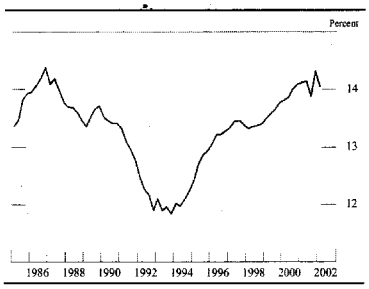
Home prices have continued to move up strongly. For example, over the year ending in the first quarter, the constant-quality price index for new homes rose 5-1/4 percent, and the repeat-sales price index for existing homes was up 6-1/4 percent. Despite these increases, low mortgage rates have kept housing affordable. Rates on thirty-year conventional fixed-rate loans averaged less than 7 percent in the first half of this year, and rates on adjustable-rate loans continued the downtrend that began in early 2001. The share of median household income required to finance the purchase of a median-price house is close to its average for the past ten years and well below the levels that prevailed in the 1970s and 1980s.

In the multifamily sector, housing starts averaged 340,000 units at an annual rate over the first five months of the year, a pace close to the average of the previous five years. However, conditions in this market have deteriorated somewhat during the past year. In the first quarter, the vacancy rate for apartments spiked to the highest level since the late 1980s, and rents and property values were below year-earlier readings.

Household Finance

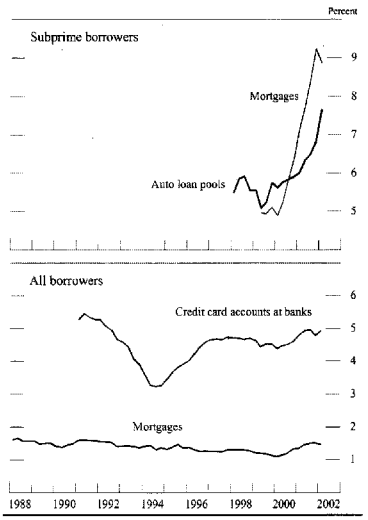
As it did last year, household debt appears to have expanded at more than an 8 percent annual rate during the first half of 2002. Although consumer credit (debt not secured by real estate) has increased, the bulk of the expansion in household debt has come from a sizable buildup of home

Household debt service burden



NOTE. The data are quarterly and extend through 2002:Q1. Debt burden is an estimate of the ratio of debt payments to disposable income; debt payments consist of the estimated required payments on outstanding mortgage and consumer debt.

Delinquency rates on selected types of household loans

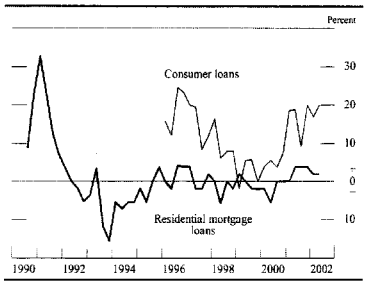


NOTE. The data are quarterly and extend through 2002:Q1.
SOURCE. For auto loans, Federal Reserve staff estimates based on data from Moody's Investors Service; for mortgages, the Mortgage Bankers Association and LoanPerformance; for credit cards, bank Call Reports.

mortgage debt. Refinancing activity has fallen below last year's record pace, but it has remained strong as households have continued to extract a portion of the accumulated equity in their homes.

The aggregate household debt-service burden—the ratio of estimated minimum scheduled payments on mortgage and consumer debt to disposable personal income—although still elevated, has moved little this year. The effect of the fast pace of household borrowing on the debt burden has been offset by lower interest rates and the brisk growth in disposable income. On balance, indicators of credit quality do not suggest much further deterioration in the financial condition of households. While delinquency rates for subprime borrowers have risen further for auto loan pools and have stayed high for mortgages, mortgage delinquencies for all borrowers have changed little, and delinquencies on credit card

Net percentage of domestic banks tightening standards on consumer loans and residential mortgage loans



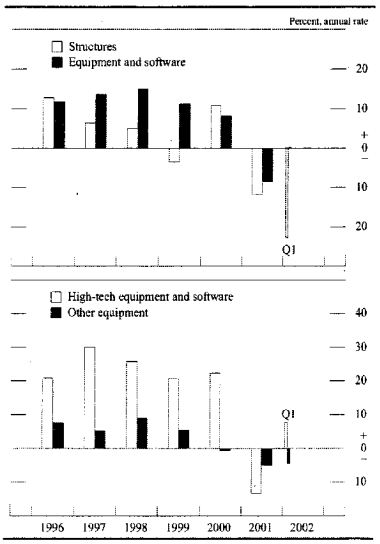
NOTE. The data are based on a survey generally conducted four times per year; the last reading is from the April 2002 survey. Net percentage is the percentage reporting a tightening less the percentage reporting an easing.
SOURCE. Federal Reserve Senior Loan Officer Opinion Survey on Bank Lending Practices.

accounts at banks have not risen significantly since the mid-1990s. The number of personal bankruptcy filings also has essentially moved sideways this year, albeit at a historically high rate. Lenders have apparently reacted to these indicators of household credit quality by tightening standards for consumer loans, as reported on the Federal Reserve's Senior Loan Officer Opinion surveys. Standards for mortgage loans, however, have changed little, and, on the whole, credit appears to have remained readily available to the household sector.

The Business Sector

Spending in the business sector appears to have bottomed out recently, but a strong recovery has not yet taken hold. Real business fixed investment, which declined sharply last year, fell again in the first quarter, but seems to have firmed in the second quarter. Excess capacity in some sectors and uncertainty about the pace of the economic expansion are likely still restraining equipment demand, but rising output, improving corporate profits, and continuing technological advances appear to be working in the opposite direction. Many businesses have worked off their excess stocks, and the substantial inventory runoff that began in the first quarter of last year seems to be drawing to a close. The combination of higher profits and weak investment spending has led to a drop in borrowing by the nonfinancial business sector thus far this year.

Change in real business fixed investment



NOTE. High-tech equipment consists of computers and peripheral equipment and communications equipment.

Fixed Investment

Real business spending on equipment and software (E&S) was little changed in the first quarter after having dropped sharply last year. In the high-tech category, real expenditures moved up in the first quarter after a double-digit decline in 2001. Outlays for computers posted large gains in inflation-adjusted terms in both the fourth and first quarters; many businesses apparently postponed computer replacement over much of last year but now

seem to be taking advantage of ongoing technological progress and the associated large declines in prices. In contrast, real expenditures for communications equipment were little changed in the first quarter after having plunged by one-third during 2001. Excess capacity in the provision of telecom services is continuing to weigh heavily on the demand for communications equipment. Business outlays for software edged down in real terms in the first quarter.

Real spending on transportation equipment dropped in the first quarter. Outlays for aircraft shrank dramatically as the reduction in orders after last year's terrorist attacks began to show through to spending. Outlays for motor vehicles fell sharply early in the year owing to weakness in the market for heavy trucks and a reported reduction in fleet sales to rental companies related to the downturn in air travel. Real E&S spending outside of the high-tech and transportation categories moved up in the first quarter after sizable declines in the three preceding quarters. This pattern probably reflects the deceleration and subsequent acceleration in business output, which is an important determinant of spending in this category.

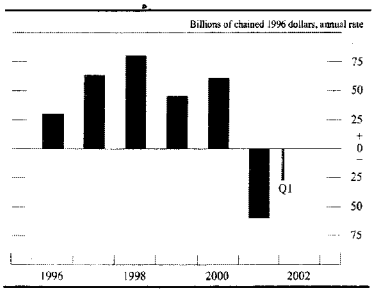
In the second quarter, real E&S spending likely rose, borne along by increases in sales and a rebound in profits. Incoming data on orders and shipments suggest that real outlays for high-tech equipment advanced and that expenditures for other nontransportation equipment also rose. Spending on aircraft probably contracted further, but orders for heavy trucks surged this spring, as some companies reportedly shifted purchases forward in anticipation of stricter emissions requirements that are scheduled to take effect in the fall. Because of lags in the ordering and building of new equipment, the provision for partial expensing in the Job Creation and Worker Assistance Act passed by the Congress in early March will likely bolster investment spending gradually.

Real outlays for nonresidential structures registered a very large decline in the first quarter after having slipped appreciably in 2001. Outlays for office and industrial structures, lodging facilities, and public utilities dropped substantially. Vacancy rates for offices jumped in the first quarter to their highest level since the mid-1990s; in addition, rents and property values were noticeably below their levels one year earlier. Vacancy rates have risen dramatically in the industrial sector as well. Construction of drilling structures also contracted sharply in the first quarter, thereby continuing the downtrend that began in the middle of last year in the wake of the decline in the prices of oil and natural gas from their peaks a few quarters earlier. Incoming data point to further declines in spending for nonresidential structures in the second quarter.

Inventory Investment

Businesses ran off inventories at an annual rate of nearly $30 billion in the first quarter. This drawdown followed a much larger liquidation—at an annual rate of roughly $120 billion—in the fourth quarter, and the associated step-up in production contributed almost 3-1/2 percentage points to the first-quarter increase in real GDP. Book-value data on inventories outside of the motor vehicle sector point to a further slackening of the drawdown more recently. Since last fall, inventory-sales

Change in real business inventories



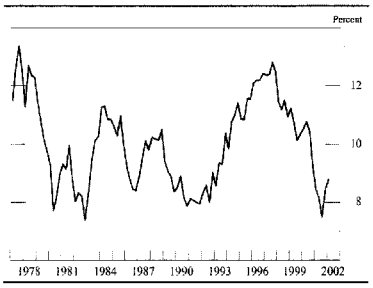
ratios have more than reversed the run-up that occurred as the economy softened. Currently, inventories do not appear to be excessive for the economy as a whole, although industry reports suggest that overhangs persist in a few areas. In contrast to inventories in other sectors, motor vehicle stocks increased in the first half of this year, as automakers boosted production in order to rebuild stocks that had been depleted by the robust pace of sales in late 2001. Motor vehicle inventories were no longer lean as of the middle of this year.

Corporate Profits and Business Finance

The economic profits of the U.S. nonfinancial corporate sector grew 5 percent at a quarterly rate in the first quarter of this year after a surge of 13-3/4 percent in the fourth quarter of 2001. The corresponding ratio of profits to sector GDP has edged up to 8-3/4 percent, reversing a portion of the steep decline registered over the preceding few years but remaining well below its peak in the mid-1990s. Early indicators point to further profit gains in the second quarter.

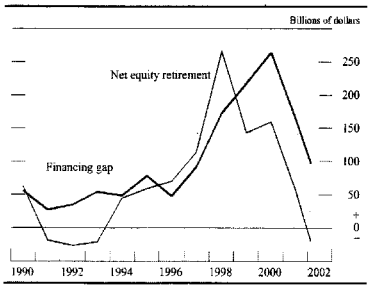
The rise in profits since late 2001, combined with weak capital expenditures and low share repurchase and cash-financed merger activities, have helped keep nonfinancial corporations' need for external funds (the financing gap) below the average of last year. In addition, corporations have

Before-tax profits of nonfinancial corporations as a percent of sector GDP



NOTE. The data are quarterly and extend through 2002:Q1. Profits are from domestic operations of nonfinancial corporations, with inventory valuation and capital consumption adjustments.

Financing gap and net equity retirement at nonfarm nonfinancial corporations

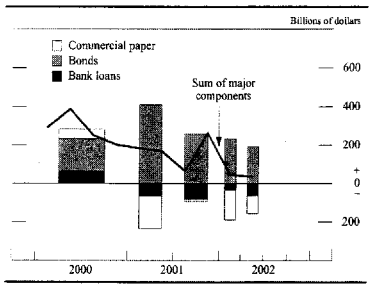


NOTE. The data are annual through 2001; the final observation is for 2002:Q1 at an annual rate. The financing gap is the difference between capital expenditures and internally generated funds. Net equity retirement is the difference between equity retired through share repurchases, domestic cash-financed mergers, or foreign takeovers of U.S. firms and equity issued in public or private markets, including funds invested by venture capital partnerships.

turned to the equity markets to raise a portion of their needed external funds: Corporations have sold more new equity than they have retired this year—the first period of net equity issuance in nearly a decade. They have used much of these funds to repay debt. As a result, the growth of nonfinancial business debt appears to have slowed considerably in the first half of 2002 after rapid gains in preceding years.

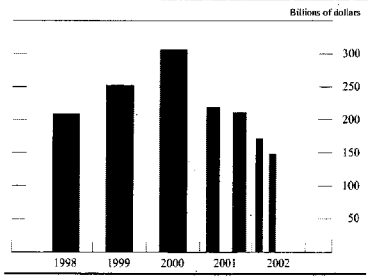
Much of the growth in nonfinancial business debt this year has been concentrated in the corporate bond market (though issuance has not been quite so strong as in 2001), as firms have taken advantage of historically attractive yields. Many corporations have used the proceeds of their bond offerings to pay down commercial and industrial (C&I) loans at banks and commercial paper. In recent months, however, net corporate bond issuance has slowed, and the contraction in short-term funding appears to have moderated.

Major components of net business financing



NOTE. Seasonally adjusted annual rate for nonfarm nonfinancial corporate business. The data for the sum of major components are quarterly. The data for 2002:Q2 are estimated.

Nonfinancial commercial paper outstanding



NOTE. The data are period-end figures and extend through 2002:Q2.

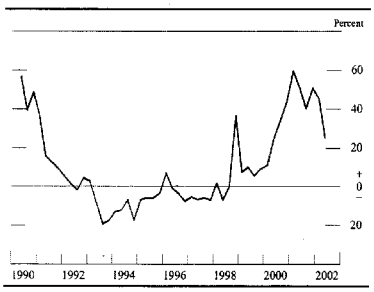
About one fifth of total bond offerings over the first half of 2002 have been in the speculative-grade market. This fraction is about unchanged from last year but still well below the proportions seen in the latter half of the 1990s, and speculative-grade bond offerings have been concentrated in the higher quality end of that market. Troubles in the two largest sectors of the market—telecommunications and energy—have continued to weigh on issuance this year.

Although many businesses have apparently substituted bond debt for shorter-term financing by choice, others, especially investment-grade firms in the telecommunications sector, have done so by necessity: They were pushed out of the commercial paper market or otherwise encouraged by investors and credit-rating agencies to curb their reliance on short-term sources of financing to limit the associated rollover risk. Indeed, commercial paper outstanding ran off sharply in February and early March, when several companies that were perceived as having questionable accounting practices were forced to tap bank lines to pay off maturing

commercial paper. With lower-quality borrowers leaving the market in the face of elevated risk spreads, commercial paper outstanding shrank nearly 30 percent in the first half of the year after a sizable decline in 2001.

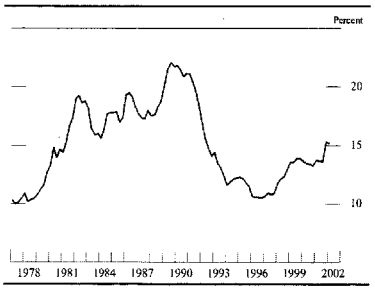
Some firms that exited the commercial paper market turned, at least temporarily, to banks as an alternative. Nonetheless, on net, commercial and industrial loans at banks have declined this year, reflecting borrowers' preference for lengthening the maturity of their liabilities and the overall reduction in the demand for external financing, noted earlier. To a more limited extent, a somewhat less receptive lending environment probably also weighed on business borrowing at banks. In particular, banks continued to tighten terms and standards on C&I loans on net over the first half of this year, although the fraction of banks that reported having done so fell noticeably in the Federal Reserve's Senior Loan Officer Opinion survey in April. Banks have also imposed stricter underwriting standards and higher fees and spreads on backup lines of credit for commercial paper over most of 2001 and early 2002; banks cited increased concerns about the creditworthiness of issuers and a higher likelihood of lines being drawn down.

Net percentage of domestic banks tightening standards on commercial and industrial loans to large and medium-sized firms



NOTE. The data are based on a survey generally conducted four times per year; the last reading is from the April 2002 survey. Large and medium-sized firms are those with annual sales of $50 million or more. Net percentage is the percentage reporting a tightening less the percentage reporting an easing.
SOURCE. Federal Reserve Senior Loan Officer Opinion Survey on Bank Lending Practices.

Net interest payments of nonfinancial corporations relative to cash flow



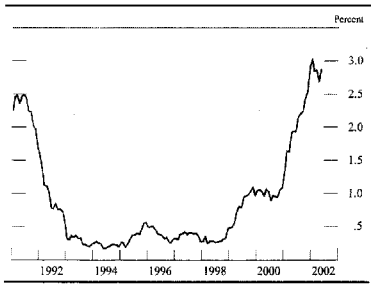
NOTE. The data are quarterly and extend through 2002:Q1.

Indicators of credit quality still point to some trouble spots in the nonfinancial business sector. The ratio of net interest payments to cash flow has trended up since the mid-1990s for the nonfinancial corporate sector as a whole, with increases most pronounced for weaker speculative-grade firms. The default rate on outstanding corporate bonds has remained quite elevated by historical standards. By contrast, although the delinquency rate on C&I loans at banks has risen a bit further this year, it has stayed well below rates observed in the early 1990s.

In part, however, this performance may be attributable to more aggressive loan sales and charge-offs than in the past. It may be that problems have risen more for large firms than for smaller ones, as the increase in C&I loan delinquencies over recent quarters was limited to large banks, where loans to larger firms are more likely to be held. Credit rating downgrades continued to outpace upgrades by a substantial margin, as was the case in the last quarter of 2001. Spreads of corporate bond yields over those on comparable Treasuries have remained high by historical standards and have risen considerably across the credit-quality spectrum for telecom firms. Corporate bond spreads also widened, though to a much smaller extent, for a few highly rated firms in other industries owing to concerns about their accounting practices.

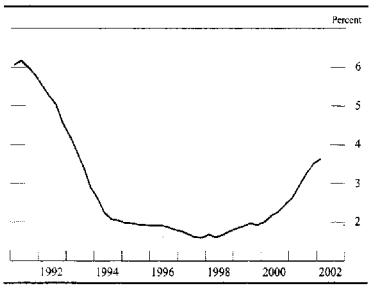
After having surged late last year, growth in commercial mortgage debt dropped back in the first half of this year amid a sharp decline in construction activity. Issuance of commercial mortgage backed securities (CMBS), a major component of commercial mortgage finance, has been especially weak. Nonetheless, investor appetite for CMBS has apparently been strong, as yield spreads have narrowed this year. Delinquency rates on CMBS pools, which had been rising during the early part of the year, seem to have stabilized in recent months, and delinquency rates on commercial mortgages held by banks and insurance companies have remained near their historical lows.

Default rate on outstanding bonds



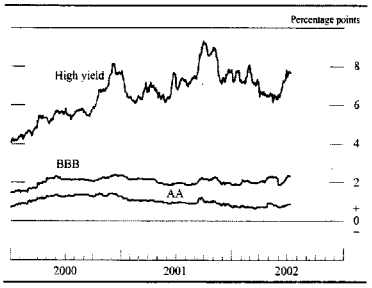
NOTE. The default rate is monthly and extends through May 2002. The rate for a given month is the face value of bonds that defaulted in the twelve months ending in that month divided by the face value of all bonds outstanding at the end of the calendar quarter immediately preceding the twelve-month period.

Delinquency rates on commercial and industrial loans at banks



NOTE. The data, from bank Call Reports, are quarterly, seasonally adjusted, and extend through 2002:Q1.

Spreads of corporate bond yields over the ten-year Treasury yield



NOTE. The data are daily and extend through July 10, 2002. The spreads compare the yields on the Merrill Lynch AA, BBB, and 175 indexes with the yield on the ten-year off-the-run Treasury note.

The low level of risk spreads for CMBS suggests that concerns about terrorism insurance have not been widespread in the market for commercial mortgages, and responses to the Federal Reserve's Senior Loan Officer Opinion survey in April indicate that most domestic banks required insurance on less than 10 percent of the loans being used to finance high-profile or heavy-traffic properties. Nonetheless, that fraction was much higher at a few banks, and some credit-rating agencies have placed certain CMBS issues—mainly those backed by high-profile properties—on watch for possible downgrade because of insufficient terrorism insurance.

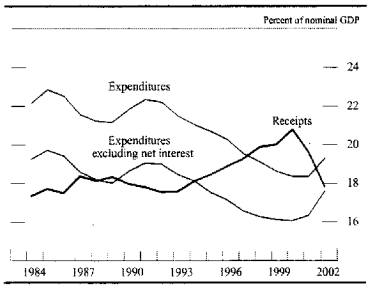
The Government Sector

The federal unified budget moved into deficit in fiscal 2002 after having posted a substantial surplus in fiscal 2001. The deterioration reflects a sharp drop in tax collections (resulting in part from the effects of the economic downturn, the decline in stock prices, and legislated tax cuts) and unusually large supplemental spending measures. As a consequence, federal debt held by the public increased in the first half of the year after rapid declines during the previous several years. The budgets of states and localities have also been strained by economic events, and many state and local governments have taken steps to relieve these pressures.

Federal Government

Over the first eight months of fiscal year 2002 (October through May) the unified budget recorded a deficit of $147 billion, compared with a surplus of $137 billion over the same period of fiscal year 2001. Nominal receipts were 12 percent lower than during the same period of fiscal 2001, and daily Treasury data since May suggest that receipts have remained subdued. Individual tax payments are running well below last year's pace; this weakness reflects general macroeconomic conditions, the legislated changes in tax policy, and the decline in stock prices and consequent reduction in capital gains realizations in 2001. The extent of the weakness was not widely anticipated—this spring's nonwithheld tax payments, which largely pertain to last year's liabilities, generated the first substantial negative April surprise in revenue collections in a number of years. Corporate tax payments

Federal receipts and expenditures



NOTE. The budget data are from the unified budget; through 2001 they are for fiscal years (October through September), and GDP is for Q3 to Q3. For 2002, the budget data are for the twelve months ending in May, and GDP is for 2001:Q1 to 2002:Q1.

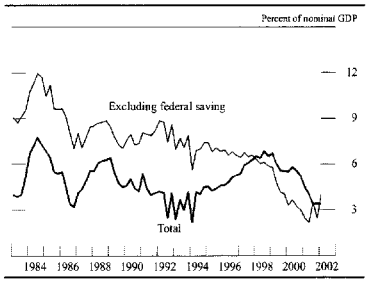
have also dropped from last year's level because of weak profits and the business tax provisions included in the Job Creation and Worker Assistance Act of 2002.

Nominal federal outlays during the first eight months of fiscal 2002 were 10 percent higher than during the same period last year; excluding a drop in net interest payments owing to the current low level of interest rates, outlays were up 14 percent. The rate of increase was especially large for expenditures on income security, health, and national and homeland defense. Real federal expenditures for consumption and gross investment, the part of government spending that is a component of real GDP, rose at an annual rate of roughly 11-1/2 percent in the first calendar quarter of 2002 as defense spending surged. The available data suggest that real federal expenditures for consumption and gross investment increased further in the second quarter.

Federal saving, which equals the unified budget surplus adjusted to conform to the accounting practices followed in the national income and product accounts, has fallen considerably since the middle of last year. Net federal saving, which accounts for the depreciation of government capital, turned negative in the first quarter of this year. At the same time, the net saving of households, businesses, and state and local governments has moved up from its trough of last year. On balance, net national saving as a share of GDP has held roughly steady in the past several quarters after having moved down sharply since 1999.

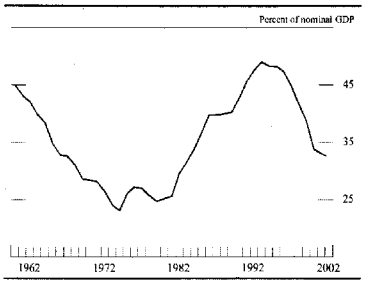
Federal debt held by the public, which had been declining rapidly over the past few years, grew at a 3-1/4 percent annual rate in the first quarter of 2002 and is estimated to have increased considerably more in the second quarter. The ratio of federal government debt held by the public to nominal GDP fell only slightly in the first quarter following several years of steep declines. In response to the changing budget outlook, the Treasury suspended its buyback operations through mid-August and increased the number of auctions of new five-year notes and ten-year indexed securities.

Net national saving



NOTE. The data are quarterly and extend through 2002:Q1.

Federal government debt held by the public



NOTE. Through 2001, the data for debt are year-end figures and the corresponding value for GDP is for Q4 at an annual rate; the final observation is for 2002:Q1. Excludes securities held as investments of federal government accounts.

During the second quarter, the Treasury took unusual steps to avoid breaching its statutory borrowing limit of $5.95 trillion. In early April, it temporarily suspended investments in the Government Securities Investment Fund—the so called G-fund of the Federal Employees' Retirement System. Incoming individual nonwithheld tax receipts later that month allowed the Treasury to reinvest the G-fund assets with an adjustment for interest. Late in May, the Treasury declared a debt ceiling emergency, which allowed it to disinvest a portion of the Civil Service Retirement and Disability Fund, in addition to the G-fund, to keep its debt from breaching the statutory limit. At the time of the declaration, the Treasury indicated that disinvestments from these two funds, combined with other stopgap measures, would be sufficient to keep it from breaching the debt ceiling only through late June. The Congress approved legislation raising the statutory borrowing limit to $6.4 trillion on June 27.

State and Local Governments

Slow growth of revenue resulting from the economic downturn has also generated a notable deterioration in the fiscal position of many state and local governments over the past year. In response, many states and localities have been trimming spending plans and, in some cases, raising taxes and fees. In addition, many states have been dipping into rainy-day and other reserve funds. Together, these actions are helping to move operating budgets toward balance.

Real consumption and investment spending by state and local governments rose at an annual rate of 4-1/4 percent in the first quarter, but available data suggest that outlays were little changed in the second quarter. Outlays for consumption items seem to have held to only moderate increases in the first half of this year, a step-down from last year's more robust gains. Investment spending rose briskly in the first quarter and retreated in the second quarter; this pattern largely reflects the contour of construction expenditures, which were boosted early in the year by unseasonably warm and dry weather.

Debt growth in the state and local government sector has slowed so far in 2002 from last year's very rapid pace. States and localities have continued to borrow heavily in bond markets to finance capital expenditures and to refund existing obligations, including short-term debt issued last year. The overall credit quality of the sector has remained high despite the fiscal stresses associated with the recent economic slowdown, and yield ratios relative to Treasuries have changed little this year, on net.

The External Sector

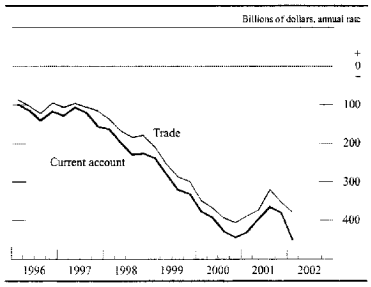
Stronger growth in the United States contributed to a widening of U.S. external deficits in the first quarter of this year. The United States has continued to receive large net private financial inflows in 2002, but both inflows and outflows have been at lower levels than in recent years.

Trade and the Current Account

The U.S. deficit on trade in goods and services widened about $27 billion in the first quarter, to nearly $380 billion at an annual rate, as a surge in imports overwhelmed a slower expansion of exports. U.S. net investment income decreased $33 billion to a slight deficit position after recording modest surpluses in all four quarters last year. The U.S. deficit on other income and transfers widened about $9 billion, to nearly $70 billion at an annual rate. The U.S. current account, which is the sum of the above, recorded a deficit in the first quarter of $450 billion at an annual rate, 4.3 percent of GDP and nearly $70 billion larger than the deficit in the fourth quarter of 2001.

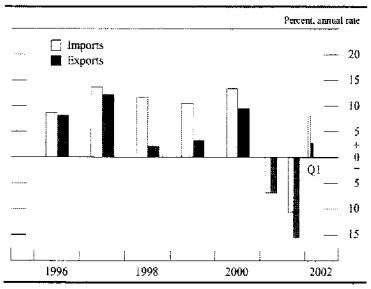
Real exports of goods and services increased 3 percent at an annual rate in the first quarter, after five quarters of decline. This improvement resulted from a very large step-up in service receipts, as payments by foreign travelers moved back up to near pre-September 11 levels and other private service receipts increased as well. The real value of exported goods contracted in the first quarter, but at only a 3-1/2 percent annual rate. Goods exports had declined much more steeply in the previous three quarters under the effects of slower output growth abroad, continued appreciation of the dollar, and plunging global demand for high-tech products. The better performance in the first quarter of 2002 included a markedly slower rate of decline of machinery exports and a small increase in exported aircraft. While exports of computers continued to fall, exports of semiconductors rose for the first time in nearly two years. Export prices continued to edge down in the first quarter.

U.S. trade and current account balances



NOTE. The data are quarterly and extend through 2002:Q1.

Change in real imports and exports of goods and services

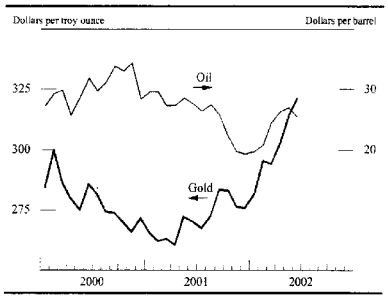


NOTE. Change for the half-year indicated is measured from the preceding half-year, and the change for 2002:Q1 is from 2001:Q4. Imports and exports for each period are the average of the levels for component quarters.

U.S. real imports of goods and services expanded in the first quarter at an 8 percent annual rate. As was the case with exports, a substantial part of the increase came from larger service payments related to increased travel abroad by U.S. residents. Reflecting the rebound in U.S. economic activity, imports of real goods rose at about a 4 percent pace in the first quarter of 2002, the first increase in four quarters, as a decline in oil imports was more than offset by a substantial increase in imports of other goods. Growth of non-oil imports was led by increased imports of computers, autos, and consumer goods. The price of imported non-oil goods declined at about a 2-1/4 percent annual rate, in line with its trend in 2001; prices fell for a wide range of capital goods and industrial supplies.

Declining demand during the second half of last year put the price of West Texas intermediate (WTI) crude oil in December 2001 at around $19 per barrel, its lowest level since mid-1999. Unusually warm winter weather in the United States—along with low prices—helped keep the value of oil imports at a very low level in the first quarter. But oil prices began to rise in February and March as global economic activity picked up and as OPEC reduced its production targets in an agreement with five major non-OPEC producers (Angola, Mexico, Norway, Oman, and Russia). Oil prices remained firm in the second quarter around $26 per barrel amid turmoil in the Middle East, a one-month suspension of oil exports by Iraq, disruption of supply from Venezuela, and increasing global demand. The price of gold also has reacted to heightened geopolitical tensions and moved up more than 13 percent over the first half of 2002.

Prices of oil and gold

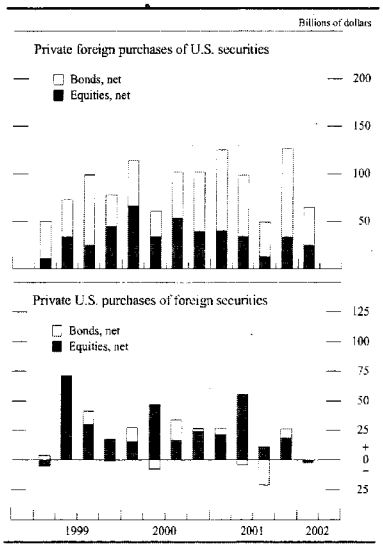


NOTE. The data are monthly. The oil price is the spot price of West Texas intermediate crude oil. The gold price is the price in London.

The Financial Account

The shift in the pattern of U.S. international financial flows observed in the second half of 2001 continued into the first quarter of this year. Influenced by increased economic uncertainty, questions about corporate governance and accounting, and sagging share prices, foreign demand for U.S. equities remained weak. Foreign net purchases of U.S. bonds slowed; although purchases of corporate bonds continued to be robust, demand for agency and Treasury bonds slackened. Nonetheless, because U.S. net purchases of foreign securities also fell off, the contribution of net

U.S. international securities transactions



SOURCE. Department of Commerce and the Federal Reserve Board.

inflows through private securities transactions to financing the U.S. current account deficit remained at a high level. Preliminary and incomplete data for the second quarter of 2002 suggest a continuation of this pattern.

Slower economic activity, both in the United States and abroad, and reduced merger activity caused direct investment inflows and outflows to drop sharply late last year. Direct investment inflows, which were strong through the first half of 2001, plummeted in the second half. U.S. direct investment abroad stayed at a high level through the third quarter but then fell sharply. Both inflows and outflows remained weak in the first quarter of 2002. Available data point to a pickup of capital inflows from official sources during the first half of 2002, as the recent weakening of the foreign exchange value of the dollar prompted some official purchases.

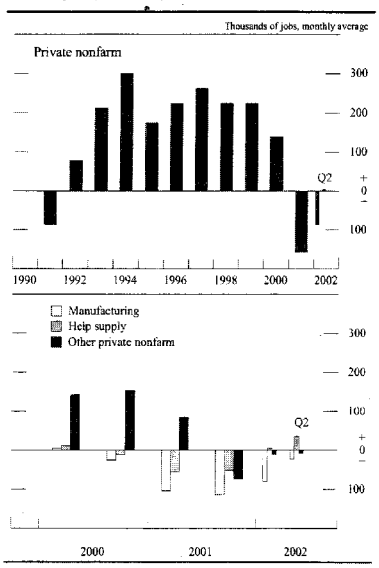
The Labor Market

Labor markets weakened further in the first few months of the year; they now appear to have stabilized but have yet to show signs of a sustained and substantial pickup. Growth of nominal compensation slowed further in the first part of the year after having decelerated in 2001. With productivity soaring in recent quarters, unit labor costs have fallen sharply.

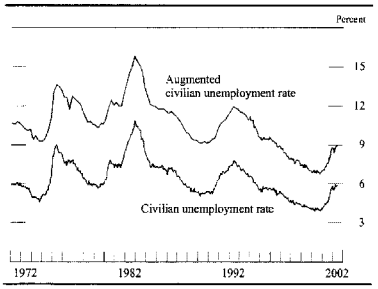
Employment and Unemployment

After having fallen an average of nearly 160,000 per month in 2001, private payroll employment declined at an average monthly rate of 88,000 in the first quarter and was about unchanged in the second quarter. Employment losses in the manufacturing sector have moderated in recent months, and employment in the help supply services industry—which provides many of its workers to the manufacturing sector—has increased. These two categories, which were a major locus of weakness last year, gained an average of 11,000 jobs per month over the past three months, compared with an

Net change in payroll employment



Measures of labor utilization



NOTE. The data extend through June 2002. The civilian rate is the number of civilian unemployed divided by the civilian labor force. The augmented rate adds to the numerator and the denominator of the civilian rate the number of those who are not in the labor force but want a job. The small break in the augmented rate in January 1994 arises from the introduction of a redesigned survey. For the civilian rate, the data are monthly; for the augmented rate, the data are quarterly through December 1993 and monthly thereafter.

average loss of 76,000 jobs per month in the first quarter of the year and 163,000 jobs per month over 2001.

Apart from manufacturing and help supply, private payrolls fell 12,000 per month in the first quarter and declined 8,000 per month in the second quarter. In the second quarter, hiring in construction fell by the same amount as in the first quarter. Retail employment declined somewhat after rising a bit in the first quarter, and the employment gain in services other than help supply was slightly smaller than in the first quarter. However, employment losses in several other categories abated in the second quarter.

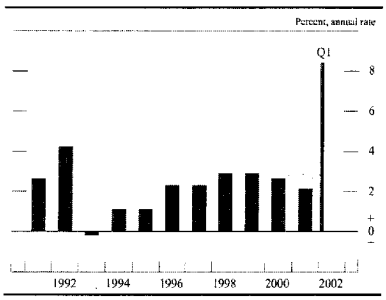
The unemployment rate in the second quarter averaged 5.9 percent, up from a reading of 5.6 percent in both the fourth quarter of last year and the first quarter of this year. The higher unemployment rate in recent months is consistent with weak employment gains, and it probably was boosted a bit by the federal temporary extended unemployment compensation program. Because this program provides additional benefits to individuals who have exhausted their regular state benefits, it encourages unemployed individuals to be more selective about taking a job offer and likely draws some people into the labor force to become eligible for these benefits.

Productivity and Labor Costs

Labor productivity has increased rapidly in recent quarters. After rising at an average annual rate of around 1 percent in the first three quarters of last year, output per hour in

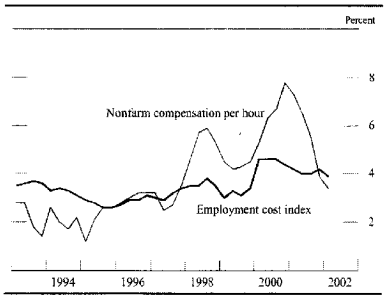
the nonfarm business sector jumped at an annual rate of 5-1/2 percent in the fourth quarter of last year and 8-1/2 percent in the first quarter of this year. Productivity likely continued to rise in the second quarter, albeit at a slower pace. Labor productivity often rises briskly in the early stages of economic recoveries, but what makes the recent surge unusual is that it followed a period of modest increases, rather than declines. In earlier postwar recessions, productivity deteriorated as firms retained more workers than may have been required to meet reduced production needs. The strength in productivity growth around the beginning of this year suggests that employers may have doubted the durability of the pickup in sales and, therefore, deferred new hiring until they became more convinced of the vigor of the expansion. Smoothing through the recent cyclical fluctuations, productivity advanced at an average annual rate of close to 3-1/2 percent between the fourth quarter of 2000 and the first quarter of this year. Although this pace is unlikely to be sustained, it further bolsters the view that the underlying trend in productivity has moved up since the first half of the 1990s.

Change in output per hour



NOTE. Nonfarm business sector.

Measures of change in hourly compensation



NOTE. The data extend through 2002:Q1. For nonfarm compensation, change is over four quarters; for the employment cost index (ECI), change is over the twelve months ending in the last month of each quarter. Nonfarm compensation is for the nonfarm business sector; the ECI is for private industry excluding farm and household workers.

The employment cost index (ECI) for private nonfarm businesses increased just under 4 percent during the twelve months ended in March of this year, after rising about 4-1/4 percent in the preceding twelve-month period. The recent small step-down likely reflects the lagged effects of the greater slack in labor markets and lower consumer price inflation. The wages and salaries component and the benefits component of the ECI both decelerated by 1/4 percentage point relative to the preceding year. The slowing in benefits costs occurred despite a 2-1/2 percentage point pickup in health insurance cost inflation, to a 10-1/2 percent rate of increase.

Nominal compensation per hour in the nonfarm business sector—an alternative measure of compensation based on the national income and product accounts—rose 3-1/2 percent during the year ending in the first quarter. This rate represented a sharp slowing from the 7-1/4 percent pace recorded four quarters earlier, which likely had been

boosted significantly by stock options; stock options are included in this measure at their value when exercised. The deceleration in this measure of compensation is much more dramatic than in the ECI because the ECI does not include stock options. The moderate increase in nominal compensation combined with the spike in productivity growth led unit labor costs to drop at an annual rate in excess of 5 percent in the first quarter, after a decline of 3 percent in the fourth quarter.

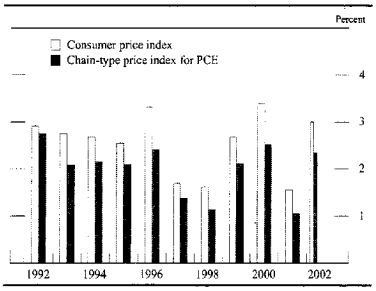
Information about the behavior of compensation in more recent months is limited. Readings on average hourly earnings of production or nonsupervisory workers suggest a further deceleration in wages: The twelve-month change in this series was 3-1/4 percent in June, 3/4 percentage point below the change for the preceding twelve months.

Prices

A jump in energy prices in the spring pushed up overall inflation in the first part of 2002, but core inflation remained subdued. The chain-type price index for personal consumption expenditures (PCE) increased at an annual rate of 2-1/4 percent over the first five months of the year, compared with a rise of just over 1 percent for the twelve months of 2001. Core PCE prices rose at an annual rate of just over 1-1/2 percent during the first five months of this year, which was the pace recorded for 2001.

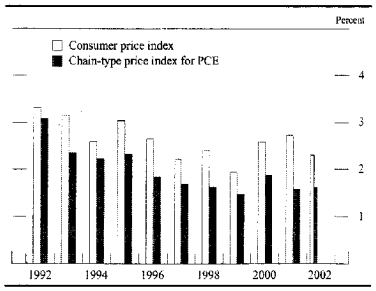
Energy prices rose sharply in March and April but have turned down more recently. Gasoline prices spiked in those two months, as crude oil costs moved higher and retail gasoline margins surged. Since April, gasoline prices have, on balance, reversed a small part of this rise. Natural gas prices stayed low in early 2002 against a backdrop of very high inventories; however, these prices have, on average, moved higher in more recent months. Electricity prices have dropped this year, a

Change in consumer prices



NOTE. Change for 2002 is from December 2001 to May 2002 at an annual rate; changes for earlier periods are from December to December.

Change in consumer prices excluding food and energy



NOTE. Change for 2002 is from December 2001 to May 2002 at an annual rate; changes for earlier periods are from December to December.

move reflecting deregulation of residential prices in Texas as well as lower prices for coal and natural gas, which are used as inputs in electricity generation. All told, energy prices increased at an annual rate of 20 percent over the first five months of the year, reversing a little more than half of last year's decline.

Consumer food prices increased at an annual rate of 1-1/2 percent between December and May. A poor winter crop of vegetables pushed up prices early this year, but supplies subsequently increased and prices came down. In addition, consumer prices for meats and poultry, which began to weaken late last year, remained subdued this spring.

Core inflation was held down over the first five months of the year by continued softness in goods prices, including a significant decline in motor vehicle prices. Non-energy services prices continued to move up at a faster pace than core goods prices, although the very sizable increases in residential rent and the imputed rent of owner-occupied housing have eased off in recent months. The rate of increase in core consumer prices has been damped by several forces. One is the lower level of resource utilization that has prevailed over the past year. Core price increases were also held down by declines in non-oil import prices and the lagged effects of last year's decline in energy prices on firms' costs. In addition, inflation expectations have stayed in check: The Michigan Survey Research Center index of median expected inflation over the subsequent year has rebounded from last fall's highly unusual tumble, but its average in recent months of 2-3/4 percent is below the average reading of 3 percent in 2000.

Like core PCE inflation, inflation measured by the core consumer price index (CPI) has remained subdued. However, the levels of inflation corresponding to these two alternative measures of consumer prices are markedly different: Core PCE inflation was about 1-1/2 percent over the twelve months ended in May, while core CPI inflation was about 2-1/2 percent. This gap is more than 1/2 percentage point larger than the average difference between these inflation measures during the 1990s (based on the current methods used to construct the CPI instead of the official published CPI). The larger differential arises from several factors. First, the PCE price index (unlike the CPI) includes several components for which market-based prices are not available, such as checking services provided by banks without explicit charges; the imputed prices for these components have increased considerably less rapidly in the past couple of years than previously. Second, the substantial acceleration in shelter costs since the late 1990s has provided a larger boost to the CPI than to the PCE price index because housing services have a much larger weight in the CPI. Third, PCE medical services prices—which are largely based on producer price indexes rather than information from the CPI—have increased more slowly than CPI medical services prices over the past couple of years.

The chain-type price index for gross domestic purchases—which captures prices paid for consumption, investment, and government purchases—rose at an annual rate of roughly 1 percent in the first quarter of 2002, putting the four-quarter change at 3/4 percent. This pace represents a marked slowing relative to the 2-1/4 percent rise in the year-earlier period, owing to both a drop in energy prices (as the decline in the second half of 2001 was only partly offset by the increase this

Alternative measures of price change
Percent

Price measure	2000 to 2001	2001 to 2002
Chain-type		
Gross domestic product	2.3	1.4
Gross domestic purchases	2.2	.7
Personal consumption expenditures	2.4	.7
Excluding food and energy	1.9	1.3
Fixed-weight		
Consumer price index	3.4	1.2
Excluding food and energy	2.7	2.5

NOTE. Changes are based on quarterly averages and are measured from Q1 to Q1.

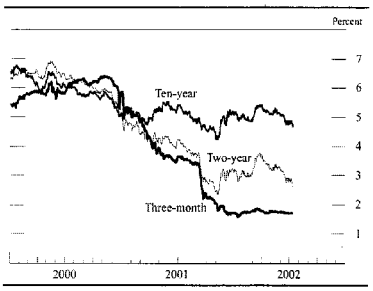
spring) and more rapid declines in the prices of investment goods such as computers. The GDP price index rose at an annual rate of 1-1/4 percent in the first quarter and was up almost 1-1/2 percent relative to the first quarter of last year. The GDP price index decelerated somewhat less than the index for gross domestic purchases, in part because declining oil prices receive a smaller weight in U.S. production than in U.S. purchases.

U.S. Financial Markets

Market interest rates have moved lower, on net, since the end of 2001, as market participants apparently viewed the ongoing recovery as likely to be less robust than they had been expecting late last year. Such a reassessment of the strength of economic activity and associated business earnings, along with worries about the accuracy of published corporate financial statements, weighed heavily on major equity indexes, which dropped 12 to 31 percent. The debt of the nonfinancial sectors expanded at a moderate pace, but lenders have imposed somewhat firmer financing terms, especially on marginal borrowers.

Households' preferences for safer assets, which had intensified following last year's terrorist attacks, diminished early in 2002, as evidenced by strong flows into both equity and bond mutual funds. Equity fund inflows lessened in May and turned into outflows in June, however, as concerns about the strength and accuracy of corporate earnings reports mounted. But the net shift toward longer-term assets this year appears to have contributed to a significant deceleration in M2, which has also been slowed by reduced mortgage refinancing activity and a leveling out of the opportunity cost of holding M2 assets.

Rates on selected Treasury securities



NOTE. The data are daily and extend through July 10, 2002.

Interest Rates

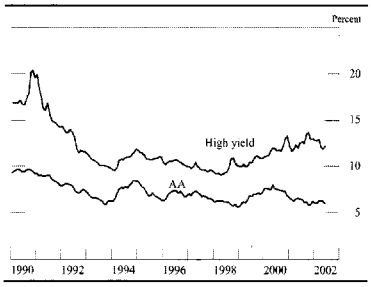
Uncertain about the robustness of the economic recovery, the FOMC opted to retain its accommodative policy stance over the first half of 2002, leaving its target for the federal

funds rate at 1-3/4 percent. Market participants, too, have apparently been unsure about the strength of the recovery, and shifts in their views of the economic outlook have played a significant role in movements in market interest rates so far this year. During the first quarter of the year, news on aggregate spending and output came in well above expectations, and Treasury coupon yields rose between 35 and 65 basis points. The second quarter, however, brought renewed concerns about the economic outlook, compounded by sharp declines in equity prices. In recent months, Treasury coupon yields have more than reversed their earlier increases and are now 40 to 50 basis points below their levels at the end of 2001.

Survey measures of long-term inflation expectations have been quite stable this year, implying that real rates changed about as much as nominal rates. The spread between nominal and inflation-indexed Treasury yields, another gauge of investors' expectations about inflation, has moved over a relatively wide range since the end of 2001, but, on net, it has edged up only slightly. Even the small widening of this spread likely overstates a shift in sentiment regarding future price pressures in the economy. In mid-February, the Treasury reassured investors that it would continue to issue indexed debt, an announcement that was reinforced in May when the Treasury made public its decision to add one more auction of ten-year indexed notes to its annual schedule of offerings. This reaffirmation of the Treasury's commitment to issue indexed securities may have pulled indexed yields down by bolstering the actual and expected liquidity of the market.

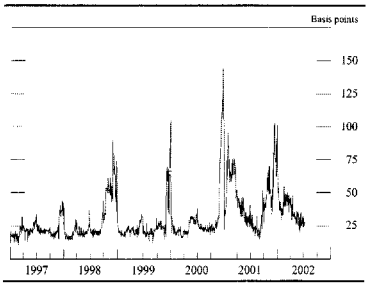
Yields on longer-maturity bonds issued by investment-grade corporations have stayed close to their lows of the past ten years, but speculative-grade yields remained near the high end of their range since the mid-1990s. Spreads relative to Treasury yields have widened most recently for both investment- and speculative-grade bonds as concerns about corporate earnings reporting intensified. Such concerns have also played a prominent role in the commercial paper market, especially early

Corporate bond yields



NOTE. The data are monthly averages and extend through June 2002. The AA rate is calculated from bonds in the Merrill Lynch AA index with seven to ten years remaining maturity. The high-yield rate is the yield on the Merrill Lynch 175 high-yield index.

Spread of low-tier CP rates over high-tier CP rates

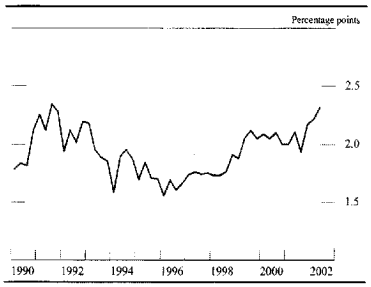


NOTE. The data are daily and extend through July 10, 2002. The series shown is the difference between the rate on A2/P2 nonfinancial commercial paper and the AA rate.

this year, when investors, who had become increasingly worried about accounting scandals, imposed high premiums on lower quality borrowers. Subsequently, however, many such borrowers either left the commercial paper market or reduced their reliance on commercial paper financing, and the average yield spread on second-tier commercial paper over top-tier paper has narrowed considerably.

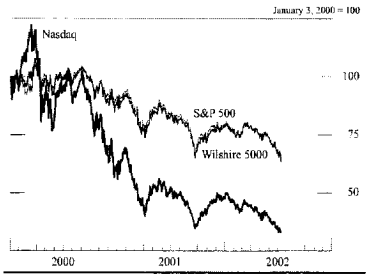
Interest rates on car loans have changed little, on net, this year, and mortgage rates have moved lower. However, according to the Federal Reserve's Survey of Terms of Business Lending, interest rates on C&I loans at domestic banks have moved a bit higher this year, as banks have raised the spread of the average interest rate on business loans over the target federal funds rate. The wider spread reflects higher risk premiums on C&I loans to lower-quality borrowers; spreads for higher-quality borrowers have changed little on net.

Spread of average business loan rate over the intended federal funds rate



NOTE. The data are for loans made by domestic commercial banks and are based on a survey conducted in the middle month of each quarter; the final observation is for 2002:Q2.
SOURCE. Federal Reserve Survey of Terms of Business Lending.

Major stock price indexes

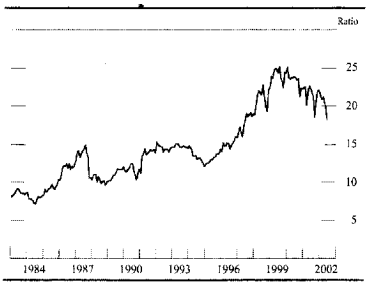


NOTE. The data are daily and extend through July 10, 2002.

Equity Markets

After falling in January in reaction to pessimistic assessments of expected business conditions over the coming year—especially in the tech sector—stock prices rebounded smartly toward the end of the first quarter on stronger-than-expected macroeconomic data. Most first-quarter corporate earnings releases met or even exceeded market participants' expectations, but many firms included sobering guidance on sales and earnings prospects in those announcements. These warnings, combined with mounting questions about corporate accounting practices, worries about threats of domestic terrorism, and escalating geopolitical tensions, have taken a considerable toll on equity prices since the end of March. On net, all major equity indexes are down substantially so far this year. Share prices in the telecom and technology sectors have performed particularly poorly, and, on July 10, the Nasdaq was 31 percent lower than

Price-earnings ratio for the S&P 500



NOTE. The data are monthly and extend through June 2002. The ratio is based on I/B/E/S consensus estimates of earnings over the coming twelve months.

at the end of 2001. The Wilshire 5000, a broad measure of equity prices, fell 18-1/2 percent over the same period, returning to a level 40 percent below its historical peak reached in March 2000.

Declining share prices pulled down the price-earnings ratio for the S&P 500 index (calculated using operating profits expected over the coming year). Nonetheless, the ratio remained elevated relative to its typical values before the mid-1990s, suggesting that investors continued to anticipate rapid long-term growth in corporate profits.

Monetary Policy Instruments

At its March 19 meeting, the FOMC assessed the priorities, given limited resources, it should attach to further studies of the feasibility of outright purchases for the System Open Market Account (SOMA) of mortgage-backed securities guaranteed by the Government National Mortgage Association (GNMA-MBS) and the addition of foreign sovereign debt securities to the list of collateral eligible for U.S. dollar repurchase agreements by the System. As noted in the February and July 2001 Monetary Policy Reports to the Congress, such alternatives could prove useful if outstanding Treasury debt obligations were to become increasingly scarce relative to the necessary growth in the System's portfolio, and the FOMC had requested that the staff explore these options. Noting that many of the staff engaged in these studies were also involved in contingency planning, which had been intensified after the September 11 attacks, the FOMC decided to give the highest priority to such planning. Federal budgetary developments over the past year meant that constraints on Treasury debt supply would not become as pressing an issue as soon as the FOMC had previously thought. Still, given the inherent uncertainty of budget forecasts, the likely significant needs for large SOMA operations in coming years, and the lead times required to implement new procedures, the FOMC decided that the exploratory work on the possible addition of outright purchases of GNMA-MBS should go forward once it was possible to do so without impeding contingency planning efforts.

The Federal Reserve also addressed possible changes to the structure of its discount window facility. On May 17, 2002, the Federal Reserve Board released for public comment a proposed amendment to the Board's Regulation A that would substantially revise its discount window lending procedures. Regulation A currently authorizes the Federal Reserve Banks to operate three main discount window programs: adjustment credit, extended credit, and seasonal credit. The proposed amendment would establish two new discount window programs called primary credit and secondary

credit as replacements for adjustment and extended credit. The Board also requested comment on the continued need for the seasonal program but did not propose any substantive changes to the program. The proposal envisions that primary credit would be available for very short terms, ordinarily overnight, to depository institutions that are in generally sound financial condition at an interest rate that would usually be above short-term market interest rates, including the federal funds rate; currently, the discount rate is typically below money market interest rates. The requirement that only financially sound institutions should have access to primary credit should help reduce the stigma currently associated with discount window borrowings. In addition, because the proposed discount rate structure will eliminate the incentive that currently exists for depository institutions to borrow to exploit a positive spread between short-term money market rates and the discount rate, the Federal Reserve will be able to reduce the administrative burden on borrowing banks. As a result, depository institutions should be more likely to turn to the discount window when money markets tighten significantly, enhancing the window's ability to serve as a marginal source of reserves for the overall banking system and as a backup source of liquidity for individual depository institutions. Secondary credit would be available, subject to Reserve Bank approval and monitoring, for depository institutions that do not qualify for primary credit. The proposed amendment is intended to improve the functioning of the discount window and the money market more generally. Adoption of the proposal would *not* entail a change in the stance of monetary policy. It would not require a change in the FOMC's target for the federal funds rate and would not affect the overall level of market interest rates. The comment period on the proposal ends August 22, 2002. If the Board then votes to revise its lending programs, the changes likely would take place several months later.

Debt and Financial Intermediation

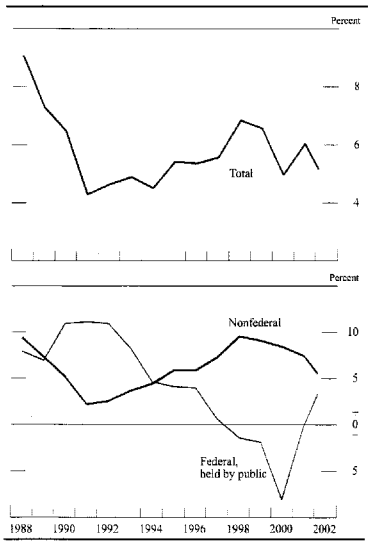
Growth of the debt of domestic nonfinancial sectors other than the federal government is estimated to have slowed during the first half of 2002, as businesses' needs for external funds declined further owing to weak capital spending, continuing inventory liquidation, and rising profits. In addition, growth in consumer credit moderated following a surge in auto financing late last year. On balance, nonfederal debt expanded at a 5-1/2 percent annual rate in the first quarter of the year after growing 7-1/2 percent in 2001. In contrast, the stock of federal debt held by the public, which had contracted slightly in 2001, grew 3-1/4 percent at an annual rate in the first quarter and expanded further in the second quarter, as federal tax revenues fell short of expectations and government spending increased substantially. The sharp rise in federal debt outstanding followed a few years of declines.

The proportion of total credit supplied by depository institutions over the first half of the year is estimated to have been near its lowest value since 1993. Although banks have continued to acquire securities at about the same rapid pace observed in 2001, the shift in household and business preferences toward longer-term sources of credit greatly reduced the demand for bank loans. As noted, banks' loans to businesses ran off considerably, as corporate borrowers turned to the bond market in volume to take advantage of favorable long-term interest rates. Growth of real estate loans

slowed markedly this year, partly as outlays for nonresidential structures declined, but growth of consumer loans was fairly well maintained. With some measures of credit quality in the business and household sectors still pointing to pockets of potential strain, loan-loss provisions remained high at banks and weighed on profits. Nonetheless, bank profits in the first quarter stayed in the elevated range observed over the past several years, and virtually all banks—98 percent by assets—remained well capitalized.

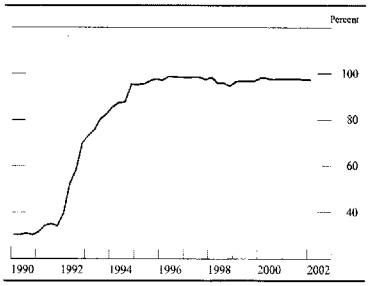
Among nondepository financial intermediaries, government-sponsored enterprises (GSEs) curtailed their net lending (net acquisition of credit market instruments) during the first quarter of the year, but available data suggest that insurance companies more than made up for the shortfall. The GSEs appeared to continue to restrain their net lending in the second quarter, in part as yields on mortgage-backed securities, which are a major component of their holdings of financial assets, compared less favorably to yields on the debt they issue. Net lending by insurance providers in the first quarter was especially strong among life insurance companies, which experienced a surge in sales late last year in the aftermath of the September 11 terrorist attacks. Net lending by the GSEs amounted to 14 percent of the net funds raised by both the financial and nonfinancial sectors in the credit markets in the first quarter of 2002, and the figure for insurance companies was 10 percent; depository credit accounted for 13 percent of all net borrowing over the same period.

Change in domestic nonfinancial debt



NOTE. For 2002, change is from 2001:Q4 to 2002:Q1 at an annual rate. For earlier years, the data are annual and are computed by dividing the annual flow for a given year by the level at the end of the preceding year. The total consists of nonfederal debt and federal debt held by the public. Nonfederal debt consists of the outstanding credit market debt of state and local governments, households, nonprofit organizations, nonfinancial businesses, and farms. Federal debt held by the public excludes securities held as investments of federal government accounts.

Percent of all U.S. commercial bank assets at well-capitalized banks

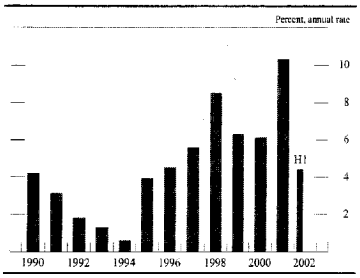


NOTE. The data are quarterly and extend through 2002:Q1. Capital status is determined using the regulatory standards for the leverage, tier 1, and total capital ratios.

Monetary Aggregates

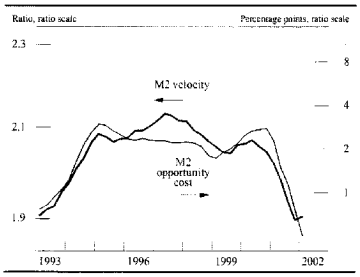
The broad monetary aggregates decelerated considerably during the first half of this year. M2 rose 4-1/2 percent at an annual rate after having grown 10-1/4 percent in 2001. Several factors contributed to the slowing in M2. Mortgage refinancing activity, which results in prepayments that temporarily accumulate in deposit accounts before being distributed to investors in mortgage-backed securities, moderated over the first half of this year. In addition, the opportunity cost of holding M2 assets has leveled out in recent months, so the increase in this aggregate has been more in line with income. Because the rates of return provided by many components of M2 move sluggishly, the rapid declines in short-term market interest rates last year temporarily boosted the attractiveness of M2 assets. In recent months, however, yields on M2 components have fallen to more typical levels relative to short-term market interest rates. Lastly, precautionary demand for M2, which was high in the aftermath of last year's terrorist attacks, seems to have unwound in 2002, with investors shifting their portfolios back toward longer-term assets such as equity and bond mutual funds. With growth in nominal GDP picking up significantly this year, M2 velocity—the ratio of nominal GDP to M2—rose about 1-1/2 percent at an annual rate in the first quarter of 2002, in sharp contrast to the large declines registered throughout 2001.

M2 growth rate



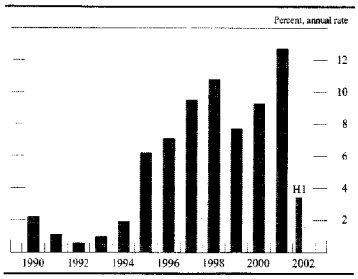
NOTE. M2 consists of currency, travelers checks, demand deposits, other checkable deposits, savings deposits (including money market deposit accounts), small-denomination time deposits, and balances in retail money market funds.

M2 velocity and opportunity cost



NOTE. The data are quarterly and extend through 2002:Q1. The velocity of M2 is the ratio of nominal gross domestic product to the stock of M2. The opportunity cost of holding M2 is a two-quarter moving average of the difference between the three-month Treasury bill rate and the weighted average return on assets included in M2.

M3 growth rate



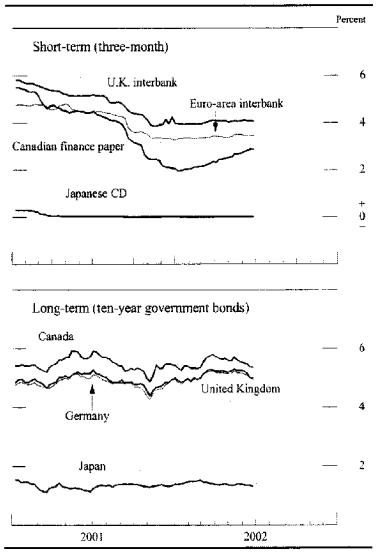
NOTE. M3 consists of M2 plus large-denomination time deposits, balances in institutional money market funds, repurchase-agreement liabilities (overnight and term), and eurodollars (overnight and term).

M3—the broadest monetary aggregate—grew 3-1/2 percent at an annual rate through the first six months of the year after rising 12-3/4 percent in 2001. Most of this deceleration, apart from that accounted for by M2, resulted from the weakness of institutional money market funds, which declined slightly, after having surged about 50 percent last year. Yields on these funds tend to lag market yields somewhat, and so the returns on the funds, like those on many M2 assets, became less attractive as their yields caught up with market rates.

International Developments

Signs that economic activity abroad had reached a turning point became clearer during the first half of 2002, but recovery has been uneven and somewhat tepid on average in the major foreign industrial countries. Improving conditions in the high-tech sector have given a boost to some emerging-market economies, especially in Asia, but several Latin American economies have been troubled by a variety of adverse domestic developments. Foreign financial markets became increasingly skittish during the first half of the year amid worries about global political and economic developments, including concerns about corporate governance and accounting triggered by U.S. events. Oil prices reversed a large part of their 2001 decline.

Foreign interest rates



NOTE. The data are weekly and extend through July 5, 2002.

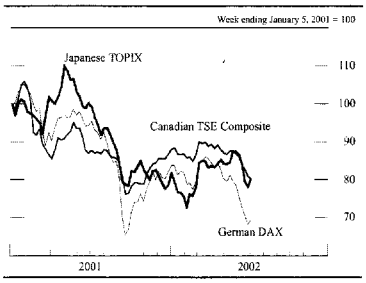
During the first half, monetary authorities in some foreign countries where signs of recovery were most evident and possible future inflation pressures were becoming a concern—Canada, Australia, New Zealand, and Sweden, among others—began to roll back a portion of last year's easing, raising expectations that policy tightening might become more widespread. However, policy was held steady at the European Central Bank (ECB) and the Bank of England. The Bank of Japan (BOJ) maintained short-term interest rates near zero and kept balances of bank deposits at the BOJ at elevated levels. Yield curves in most foreign industrial countries became a bit steeper during the first

quarter as long-term rates rose in reaction to news suggesting stronger U.S. growth and improving prospects for global recovery. Since then, long-term rates have edged lower, on balance, in part as investors shifted out of equity investments. Foreign equities performed well in most countries early in the year, but share prices in many countries have fallen since early in the second quarter—in some cases more steeply than in the United States. The broad stock indexes for the major industrial countries are down since the beginning of the year, except in Japan, where stock prices, on balance, are about unchanged. High-tech stocks have been hit especially hard.

During the first quarter of 2002, the foreign exchange value of the dollar (measured by a trade-weighted index against the currencies of major industrial countries) appeared to react primarily to shifting market views about the relative strength of the U.S. recovery and its implications for the timing and extent of future monetary tightening. Despite some fluctuations in this period, the dollar stayed fairly close to the more than sixteen-year high reached in January. In the second quarter, however, the dollar trended downward as earlier market enthusiasm about U.S. recovery dimmed. Concerns about profitability, corporate governance, and disclosure at U.S. corporations appeared to dampen the attraction of U.S. securities to investors, as did worries that the United States was particularly vulnerable to the consequences of global geopolitical developments. With U.S. investments perceived as becoming less attractive, the financing requirements of a large and growing U.S. current account deficit also seemed to emerge as a more prominent negative factor. The dollar has lost more than 9 percent against the major currencies since the end of March and is down, on balance, more than 8 percent so far in 2002. In contrast, the dollar has gained about 2 percent this year, on a weighted-average basis, against the currencies of our other important trading partners.

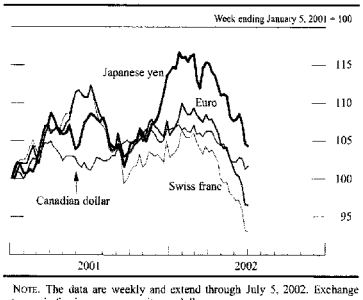
The dollar's exchange rate against the Japanese yen was quite volatile in the first half and, on balance, the dollar has fallen more than 10 percent since the beginning of the year. Although Japan's domestic economy continued to struggle with deflation and severe structural problems, including

Foreign equity indexes



NOTE. The data are weekly and extend through July 5, 2002.

U.S. dollar exchange rate against selected currencies



NOTE. The data are weekly and extend through July 5, 2002. Exchange rates are in foreign currency units per dollar.

mounting bad loans in the financial sector and growing bankruptcies, some indicators (including strong reported first-quarter GDP, a firming of industrial production, and a somewhat better reading on business sentiment in the BOJ's second-quarter Tankan survey) suggested that a cyclical recovery has begun. The yen's rise occurred despite downgradings of Japan's government debt by leading rating services in April and May and several episodes of intervention sales of yen in foreign exchange markets by Japanese authorities in May and June. Japanese stock prices, which had fallen to eighteen-year lows in early February, turned up later as economic prospects became less gloomy. At midyear, the TOPIX index was about where it was at the start of the calendar year.

After declining in the final quarter of 2001, euro-area GDP appears to have increased in the first half, though at only a modest rate. Exports firmed and inventory destocking appeared to be winding down, but consumption remained weak. The pace of activity varied across countries, with growth in Germany—the euro area's largest economy—lagging behind. Despite lackluster area-wide growth, concerns about inflation became increasingly prominent. For most of the first half, euro-area headline inflation persisted at or above the ECB's 2 percent target limit, partly on higher energy and food price inflation; even excluding the effects of those two components, inflation picked up somewhat during the period. Inflation concerns also were fanned by difficult labor market negotiations this spring, but the strength of the euro may blunt inflationary pressures to some extent. The new euro notes and coins were introduced with no noticeable difficulties at the beginning of the year, but the euro drifted down against the dollar for several weeks thereafter. Since then, however, the euro has reversed direction and moved steadily higher. On balance, the dollar has lost nearly 11 percent against the euro so far in 2002.

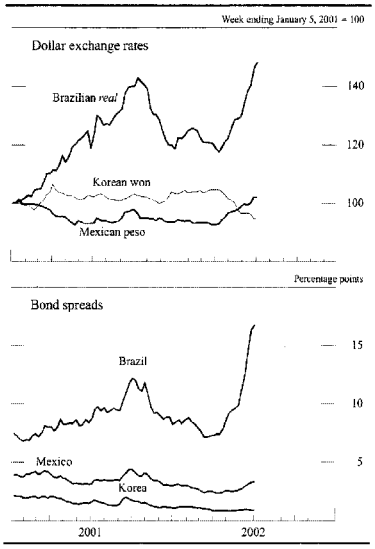
The United Kingdom seemed to weather last year's slump better than most industrial countries, as strength in consumption counteracted weakness in investment and net exports, though growth did weaken in the last quarter of 2001 and into the first quarter of 2002. Notable increases in industrial production and continued strength in the service sector indicate that growth picked up in the second quarter. Household borrowing has increased briskly, supported by rapid increases in housing prices, and unemployment rates remain near record lows. At the same time, retail price inflation has remained below the Bank of England's 2-1/2 percent target. Sterling has fallen nearly 5 percent against the euro since the beginning of the year, while it has gained more than 6 percent against the dollar. Elsewhere in Europe, the exchange value of the Swiss franc has been driven up by flows into Swiss assets prompted in part by uncertainties about global political developments. The Swiss National Bank eased its official rates in May to counteract this pressure and provide support for the Swiss economy.

Economic recovery appears to be well under way in Canada. Real GDP increased 6 percent at an annual rate in the first quarter, and other indicators point to continued strong performance in the second quarter. Canadian exports—particularly automotive exports—benefitted early in the year from the firming of U.S. demand, but the expansion has become more widespread, and employment growth has been strong. Although headline consumer price inflation has remained in the bottom half

of the Bank of Canada's target range of 1 percent to 3 percent, core inflation has crept up this year. In April, the Bank of Canada increased its overnight rate 25 basis points, citing stronger-than-expected growth in both the United States and Canada, and it increased that rate again by the same amount in June. The Canadian dollar, which had been at a historically low level against the U.S. dollar in January, moved up quite steeply in the second quarter and has gained about 5 percent for the year so far.

The Mexican economy was hit hard by the global slump in 2001 and especially by the weaker performance of the U.S. economy. Mexican exports stabilized early this year as U.S. activity picked up, and other indicators also now suggest that the Mexican economy is beginning to recover. In February, despite the weak level of activity at the time, the Bank of Mexico tightened monetary policy to keep inflation on track to meet its 4-1/2 percent target for 2002, and the Mexican peso moved up a bit against the dollar during February and March. In April, with inflation apparently under control, the central bank eased policy, and since then the peso has moved down substantially. Against the dollar, the decline since the beginning of the year has amounted to almost 7 percent. After rising through April, Mexican share prices also fell sharply, leaving them at midyear about unchanged from their end-2001 levels.

Selected emerging markets



NOTE. The data are weekly and extend through July 5, 2002. Exchange rates (top panel) are in foreign currency units per dollar. Bond spreads (bottom panel) are the J.P. Morgan Emerging Market Bond Index (EMBI+) spreads over U.S. Treasuries.

Financial and economic conditions deteriorated significantly in Argentina this year. The Argentine peso was devalued in January and then allowed to float in early February; since then, it has lost more than 70 percent of its value versus the dollar. The peso's fall severely strained balance sheets of Argentine issuers of dollar-based obligations. Various stop-gap measures intended to restrict withdrawals from bank accounts and to force conversion of dollar-denominated loans and deposits into peso-denominated form put banks and depositors under further stress. Meanwhile, economic activity has continued to plummet, and the government has struggled to gain support for reforms that would address chronic fiscal imbalances. Since late 2001, the government has been servicing its

obligations only to its multilateral creditors, and spreads on Argentina's international debt have soared to more than 65 percentage points.

In recent months financial markets elsewhere in the region have become more volatile. Brazilian markets have been roiled by political uncertainties related to national elections coming in the fall. Attention has focused on vulnerabilities associated with Brazil's large outstanding stock of debt, much of which is short-term. Since April, the value of the *real* against the dollar has fallen nearly 20 percent, and Brazilian spreads have widened substantially. Several other South American countries, including Uruguay and Venezuela, also have been beset by growing financial and economic problems.

Asian economies that rely importantly on exports of computers and semiconductors (Korea, Singapore, Malaysia, and Taiwan) have grown quite vigorously so far this year, a buoyancy reflecting in part the recent turnaround of conditions in the technology sector and stronger U.S. growth. The currencies of several countries of this group have moved up against the dollar. In Korea, the expansion has been more broad-based, as domestic demand was fairly resilient during the recent global downturn and has remained firm. China, which is less dependent on technology exports, has continued to record strong growth as well. Other countries in the region also have started to recover from steep slowdowns or contractions in 2001, although Hong Kong has continued to be troubled by the collapse of property prices. Most stock markets in the region have recorded gains so far this year.