FEDERAL RESERVE'S SECOND MONETARY POLICY REPORT FOR 1999

HEARING

BEFORE THE

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

ONE HUNDRED SIXTH CONGRESS

FIRST SESSION

ON

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

JULY 28, 1999

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FEDERAL RESERVE'S SECOND MONETARY POLICY REPORT FOR 1999

WEDNESDAY, JULY 28, 1999

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 Phil Gramm (Chairman of the Committee) presiding.

OPENING STATEMENT OF CHAIRMAN PHIL GRAMM

Chairman GRAMM. Let me call our Committee to order.

We are in the process of voting. Our Members will be coming in as they finish making their vote.

I thought, however, that since one of our distinguished colleagues was obviously organized—was there when the vote started, voted early, and like his fastball in days of old, zoomed over here—we would start now. While I thought that it might be advisable to limit opening statements to the Chairman and Ranking Member, since Senator Bunning is here, I will recognize him for an opening statement.

OPENING STATEMENT OF SENATOR JIM BUNNING

Senator BUNNING. Thank you, Mr. Chairman. It's always a little nerve-wracking to participate in a congressional hearing when you know that Alan Greenspan is going to testify. When Mr. Greenspan talks, people listen. Whenever he appears before a congressional committee, the stock market usually reacts in a matter of minutes, depending on whether he frowns or smiles. I hope today is a good day. I hope he smiles on the period of economic growth that we have been blessed with recently and which continues the longest-running period of uninterrupted growth in our national economy.

It appears that the U.S. economy is growing faster than predicted by the Fed in February. The unemployment rates remain at historical lows, at about 4.3 percent, and 1.25 million jobs have been created in the first 6 months of this year.

One of the reasons people pay so much attention to Chairman Greenspan is that everyone knows he is no Pollyanna when it comes to economic growth. He has always balanced his optimism with concern about the potential reawakening of inflation. Hopefully, today, Chairman Greenspan can tell us that low unemployment rates, such as we are experiencing now, can be sustained, can even be improved upon, without automatically signaling any dangerous inflationary pressures.

When the Humphrey–Hawkins bill was passed back in 1978, unemployment was around 6 percent and headed up, and inflation was pushing double digits and heading up. Only recently have we approached the national goals that the bill originally established in 1978, unemployment of 4 percent and inflation under 3 percent.

Hopefully we can maintain that progress, and I'm looking forward to Chairman Greenspan's thoughts on the subject.

Chairman GRAMM. Thank you, Senator Bunning.

We are hosting today our semiannual Humphrey–Hawkins presentation. Under existing law, this is the last mandated hearing of Humphrey–Hawkins.

As I have said, we get an opportunity to hear from Alan Greenspan on a regular basis. He has not been selfish with his time with regard to the Congress. In fact, he probably spends more time up here than he should in terms of any kind of efficient allocation of his time.

I do not see any great necessity in continuing the Humphrey–Hawkins hearings. Some of my colleagues feel differently. Obviously, while I'm Chairman, I'm going to be guided by the will of the majority of the Committee. But whether this is the last of the Humphrey–Hawkins hearings, or whether this is just one in a continuing series, I want to welcome Alan Greenspan, Chairman of the Board of Governors of the Federal Reserve System.

Alan Greenspan is the greatest central banker in the history of the United States and therefore, by definition, is the greatest central banker in the history of the world. It is an amazing thing to me, as I travel around the world and meet other central bankers, how clear it is that Alan Greenspan has become the world's standard for central banking. To the degree that imitation is the highest form of flattery, almost no matter where you go, no matter which central bankers you visit with, they tend to act and sound like Alan Greenspan. It seems to me, Mr. Greenspan, that is a great compliment to you.

We have spent many hours—far more than the debate actually deserves—debating about who is responsible for the golden economic era we find ourselves in. I don't ever remember the economy being better than it is today; I don't ever remember prosperity being as broadly based as it is today. In my hometown, we have unemployment of less than 1 percent. If you go into any store in America, you find high-quality goods, many of them imports, at the lowest price, in any kind of real measure, that we have seen in the history of the country.

Last year, our economy not only had strong economic growth, but probably over the last 3 years the average white-collar worker in America, certainly above the age of 50, has seen the value of their financial assets grow by more than their annual income. For the first time ever last year, Americans had more financial wealth than they had in the equity value of their homes.

We have debated endlessly as to who is responsible. I give a lot of credit to Ronald Reagan in terms of planting the seeds of modernization and efficiency, holding back the forces of protectionism. In the 1980's, when General Motors was questioning whether it could stay in the automobile industry, the unions and the automakers came to Washington and met with Ronald Reagan. He gave them a prescription, which I think is the proper Government prescription: "Compete or die." They competed.

There are many people deserving of credit for the current golden economic age we live in, but if there is any person currently in office who could lay a claim to having done more than any other person on the planet to produce this record level of prosperity, it is Alan Greenspan. I want to thank you, Chairman Greenspan, for the great job you have done. I want to thank you for the great service you have provided.

Your utterances have become somewhat like the Bible in the sense that everybody quotes you to prove their point, even though their quote may be counter to the quote that someone else is using to prove exactly the opposite point. I am sure that much of your time today will be spent deciding the exact meaning of Deuteronomy, or at least that section of Alan Greenspan's utterances.

In any case, we appreciate the great job you have done, and we appreciate the sacrifice you have made in keeping this position. I have tried now for several years to raise your pay. I know that you're not missing any meals, and you don't necessarily need it, but I don't want it so that you have to be rich to be the Chairman of the Board of Governors of the Federal Reserve System. I intend to continue to work until we get salaries at the Fed comparable to what they are in other areas of the Government. I want to thank you for being here.

I would like to recognize the Ranking Member of the Committee, Senator Sarbanes.

OPENING STATEMENT OF SENATOR PAUL S. SARBANES

Senator SARBANES. Thank you very much, Mr. Chairman. I join in welcoming Chairman Greenspan before the Committee. I have listened carefully to your effusive praise of Chairman Greenspan and I'm reminded of an event I was at a couple of weeks ago when I had the opportunity to introduce Secretary Rubin, now former Secretary Rubin. I said the big debate that was going on in Washington was whether Secretary Rubin was the best Secretary of the Treasury since Alexander Hamilton or the best Secretary of the Treasury including Alexander Hamilton.

When Secretary Rubin got up to speak, he said he appreciated that, but he was reminded of the fact that in 1928, they were saying much the same thing about Andrew Mellon, who was then the Secretary of the Treasury, and a year later they were calling for his immediate ouster from the post. These things have a way of going up and down, as we are well aware.

I also listened to Chairman Gramm when he talked about the fact that you are quoted by Members for supporting positions that are 180 degrees opposite to one another because of the opaqueness with which you make your remarks. I see where *The New York Times*, just last Friday, labeled you. They said you are widely considered an expert in opacity. We will try to work through that here this morning.

Let me just say, Chairman Greenspan, I hope we continue the Humphrey–Hawkins requirements for these semiannual monetary policy reports to the Congress by the Federal Reserve. I think it serves the Nation well. I think, in fact, the economic and financial community has now come to, in effect, not only look forward to these sessions, but expects this opportunity to have laid before the country the thinking of the Federal Reserve and its view on economic circumstances. I think that is highly desirable, and I believe it is preferable to have a clear requirement. We may have a Chairman who is quite prepared to follow that pattern, but we may not, and I believe it's better to get it into place. It then becomes a regular part of the landscape, and everyone can work accordingly. I hope we can discuss that issue further.

I wanted to comment a bit this morning about the June 30 Federal Open Market Committee vote to raise interest rates a quarter of a point. The statement of the FOMC on the rationale for this action said:

> Last fall, the Federal Open Market Committee reduced interest rates to counter a significant seizing-up of financial markets in the United States. Since then, much of the financial strain has eased, foreign economies have firmed, and economic activity in the United States has moved forward at a brisk rate. Accordingly, the full degree of adjustment was judged no longer necessary.

The FOMC statement acknowledged that:

> Labor markets have continued to tighten over recent quarters, but strengthening productivity growth has contained inflationary pressures.

It went on to say:

> Owing to the uncertain resolution of the balance of conflicting forces in the economy going forward, the FOMC has chosen to adopt a directive that includes no predilection about near-term policy action.

That, of course, has everyone wondering what it means. I saw one commentator who said, "Well, you know, eventually we'll find out." That seems to me about as perceptive a comment as was made on that.

But let me, in any event, begin by commending the Federal Open Market Committee, whether one agrees with the substance of its decisions or not, for following through on its new policy announced last year of making public a decision to shift the bias of monetary policy when it is deemed to be of significant consequence. That was the announcement, as I recall, that the FOMC made.

I think this policy substantially adds to the transparency of the FOMC's decisionmaking process, and I'm frank to say I believe that it's to the benefit of all participants in the economy for the FOMC to really be as open as it can about its policy directions.

As you know, Chairman Greenspan, I had urged the FOMC prior to that meeting not to adopt the so-called preemptive strategy of raising interest rates.

I agree that the FOMC needs to be alert to developments that might indicate that financial conditions may no longer be consistent with containing inflation, but it's my view that current conditions are consistent with containing inflation. Therefore, I did not think a rate increase was advisable.

Now, I want to lay out some parameters, and hopefully in the discussion period we'll have a chance to address them. Perhaps you address them in your statement. It seems to me that economic developments over the 4 weeks since the meeting of the Federal Open Market Committee have reinforced the view that current conditions are consistent with containing inflation. The Labor Department reported in June that for the second consecutive month there was no change in the consumer price index. Only twice before in the post-World War II period have there been back-to-back months with no increase in the CPI.

In addition, the core inflation rate, which excludes the volatile food and energy prices, increased just one-tenth of 1 percent for the second consecutive month. All of this, I think, reinforces the view that the seven-tenths of 1 percent increase in April was aberrational and not reflective of deeper inflationary pressures developing in the economy.

In fact, core inflation has fallen over the past 5 years. In 1994, when unemployment was last at 6 percent, core CPI rose 2.6 percent. It rose only 2.1 percent over the past 12 months. For the first 6 months of this year, core CPI rose at a 1.6 percent annual rate. I think this is absolutely a terrific development. We were told when we were at 6 percent unemployment that if we drove the unemployment rate down below that level, we would set the inflation rate escalating upward. In fact, we're now down to 4.3 percent unemployment, and the inflation rate is down to around 2 percent. When we were at 6 percent unemployment, the inflation rate was at 2.6 percent.

Producer prices have fallen. The core rate of inflation, as measured by the PPI, fell two-tenths of 1 percent.

If we go beyond these prices at consumer and producer levels, it's difficult to find evidence of inflation elsewhere in the economy. The Commerce Department said retail sales rose only slightly in June, suggesting a moderation in consumer spending.

The trade deficit, unfortunately, continued to deteriorate in May, thereby placing a drag on economic growth. As an aside, I'm increasingly concerned about the size of this trade deficit. I don't know how long we can go on digging this hole for ourselves. It is the one economic statistic that gives me serious pause and concern at the moment. I, for one, do not think we can go on running these very large trade deficits year after year. Fortunately, the Congress has appointed a commission to look into the causes of the trade deficit and what might be done about it. Murray Weidenbaum is chairing that commission, and Apa Demetrio from Bard College is the Vice Chairman.

Some assert that low unemployment is going to cause labor cost pressures, but in the last year, growth rates for both wages and benefits have declined, even as productivity has accelerated. The unemployment cost index for private industry rose 3.3 percent last year, compared to 3.5 percent the year before. Average hourly earnings give the same picture. I won't go into the figures for the sake of time.

But rising productivity gains mean that cost pressure from the labor side has been easing even more than the wage data suggest. Productivity in the nonfinancial corporate sector, a measure that the Chairman often refers to, is up 3.7 percent in the last year, the highest in more than a decade.

Labor costs and productivity, taken together, give us unit labor costs. They have increased only six-tenths of 1 percent in the last year. Unit labor costs have actually had a downward pressure on inflation.

Another indicator that's often referred to is capacity utilization. High rates of capacity utilization have been correlated with rising inflation, lower utilization rates correlated with falling inflation. This expansion has been marked by a very substantial increase in manufacturing capacity. It has risen more than 5 percent per year for the first time since the 1960's. With manufacturing output growing less than 5 percent, capacity utilization has been declining for the last several years. In fact, the Fed reported in June that the manufacturing sector was using only 79.4 percent of its capacity. That's less than the average utilization of 81.1 percent for the last 31 years.

Now, as I indicated, economists earlier on—there were even a number of people actually within the Federal Reserve System, fortunately not the Chairman—established this kind of theory that if unemployment went below a certain level, the so-called NAIRU, then inflation would go upward. We were told that if the economy grew fast enough to drive unemployment below some magic figure, 6 percent was often put forward, we would get inflation. Well, as I said, we have had unemployment below 6 percent for almost 5 years and no real evidence of inflation.

A recent issue of *Business Week* pointed out that in the absence of strong evidence of inflation, a policy of raising rates preemptively can do enormous damage. In fact, they estimated that if rates had been raised enough to keep unemployment at 6 percent, the United States would have lost about $1 trillion worth of gross domestic product and 2.5 million people would be without jobs today.

Unemployment now has been below 5 percent for 2 years. For a year, it's not gone above 4.5 percent, and the people at the bottom finally are beginning to catch up. According to the Labor Department, black unemployment fell to 7.3 percent last month, which is the lowest rate since separate statistics were first collected in 1973. Teenage unemployment rates are down substantially. The unemployment rate for adult women stands at 3.9 percent, among the lowest rates in 30 years.

Chairman Greenspan, I know that you're sensitive to this aspect of the benefits of sustained economic growth. You're sensitive to the fact that it begins to reach into geographic and demographic areas that previously have not experienced a lift as the economy moves ahead. We very much hope that the Federal Open Market Committee will keep this dimension in mind as it formulates monetary policy over the coming years.

I am anxious to hear the indicators that lead you to believe that we may be beginning to approach the need to constrain or dampen down the economy. We obviously don't want to do that needlessly, and we don't want to give up the growth and the jobs and all of the benefits that flow from that to address preemptively a problem that may, in fact, not be there. I'm searching for the kind of indicators that seem to you to warrant the movement which the Fed took in June. I have tried to list some of the indicators to which the Fed has referred to in the past, on occasion, as being guides or signals they have used. None of those, it seems to me, have indicated the necessity to tighten policy.

I very much hope that the Fed will think long and hard about further preemptive actions, because we have a very virtuous economy right now. Obviously, we all want to keep it.

I think Chairman Greenspan wants to keep it as much as any of us, and I'm trying to search here for an analysis that gives us the basis to make that judgment. I'm also trying to get the Chairman to undercut this article that sought to label him as an expert in opacity.

Thank you very much, Mr. Chairman.

Chairman GRAMM. Thank you. Let me make it very clear that you were talking about that Chairman.

Senator SARBANES. I have accused you of a lot, Mr. Chairman, but not opacity.

[Laughter.]

Chairman GRAMM. Thank you.

I had intended to try to go to Chairman Greenspan after our two opening statements, but I'm afraid that I and our distinguished Ranking Member, being somewhat old, have rambled on, so I feel a little guilty not to give people an opportunity at least to say a word.

What I would like to do is set the little green light——

OPENING COMMENTS OF SENATOR CHRISTOPHER J. DODD

Senator DODD. I think we should go to Chairman Greenspan. We are all looking forward to hearing what he has to say.

[Laughter.]

Chairman GRAMM. Thank you. You have heard enough and it's time to move on.

[Laughter.]

The distinguished Chairman of the Board of Governors of the Federal Reserve System, Alan Greenspan. Thank you very much for being here.

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

Chairman GREENSPAN. Thank you very much, Mr. Chairman.

I very much appreciate your opening comments, but I would like to emphasize that the Central Bank of the United States is a very substantial institution. I just happen to be sitting at the top, but what's underneath there is formidable, and were that not there, I would scarcely suggest you would be making the types of comments you're making.

Chairman GRAMM. I wish I believed that. As my grandmother used to say, the graveyards are full of indispensable men, everyone eventually has to leave the scene. I wish it were the System making these good policies and not you, Chairman Greenspan.

Go ahead.

Chairman GREENSPAN. Mr. Chairman, I have rather extended written remarks and would request that they be included for the record, and I will partially excerpt from them.

I very much appreciate, Mr. Chairman and Members of the Committee, this opportunity to present the Federal Reserve's semiannual report on monetary policy.

To date, 1999 has been an exceptional year for the American economy, but a very challenging one for American monetary policy. Through the first 6 months of this year, the U.S. economy has further extended its remarkable performance. Almost 1¼ million jobs were added to payrolls on net, and gross domestic product apparently expanded at a brisk pace, perhaps near that of the prior 3 years.

At the root of this impressive expansion of economic activity has been a marked acceleration in the productivity of our Nation's workforce. This productivity growth has allowed further healthy advances in real wages, and has permitted activity to expand at a robust clip while helping to foster price stability.

Last fall, the Federal Open Market Committee (FOMC) eased monetary policy to counter a seizing-up of financial markets that threatened to disrupt economic activity significantly. As those markets recovered, the FOMC had to assess whether that policy stance remained appropriate. By late last month, when it became apparent that much of the financial strain of last fall had eased, that foreign economies were firming, and that demand in the United States was growing at an unsustainable pace, the FOMC raised its intended Federal funds rate ¼ percentage point, to 5 percent. To have refrained from doing so, in our judgment, would have put the U.S. economy's expansion at risk.

If nothing else, the experience of the last decade has reinforced earlier evidence that a necessary condition for maximum sustainable economic growth is price stability. While product prices have remained remarkably restrained in the face of exceptionally strong demand and expanding potential supply, it is imperative that we do not become complacent.

The already shrunken pool of job-seekers and the considerable strength of aggregate demand suggest that the Federal Reserve will need to be especially alert to inflation risks. Should productivity fail to continue to accelerate and demand growth persist or strengthen, the economy could overheat. That would engender inflationary pressures and put the sustainability of this unprecedented period of remarkable growth in jeopardy. One indication that inflation risks were rising would be a tendency for labor markets to tighten further, but the FOMC also needs to continue to assess whether the existing degree of pressure in these markets is consistent with sustaining our low-inflation environment. If new data suggest it is likely that the pace of cost and price increases will be picking up, the Federal Reserve will have to act promptly and forcefully so as to preclude imbalances from arising that would only require a more disruptive adjustment later—one that could impair the expansion and bring into question whether the many gains already made can be sustained.

Data becoming available this year have tended to confirm that productivity growth has stepped up. It is this acceleration of productivity over recent years that has explained much of the surprising combination of a slowing in inflation and sustained rapid real growth. Increased labor productivity has directly limited the rise of unit labor costs and accordingly damped pressures on prices. This good inflation performance, reinforced also by falling import prices, in turn has fostered further declines in inflation expectations over recent years that bode well for pressures on costs and prices going forward.

In testimony before this Committee several years ago, I raised the possibility that we were entering a period of technological innovation which occurs perhaps once every 50 or 100 years. The evidence then was only marginal and inconclusive. Of course, tremendous advances in computing and in telecommunications were apparent, but their translations into improved overall economic efficiency and rising national productivity were conjectural at best.

That American productivity growth has picked up over the past 5 years or so has become increasingly evident. Nonfarm business productivity grew at an average rate of a bit over 1 percent per year in the 1980's. In recent years, productivity growth has picked up to more than 2 percent, with the past year averaging around 2½ percent.

To gauge the potential for similar, if not larger, gains in productivity going forward, we need to attempt to arrive at some understanding of what has occurred to date. A good deal of the acceleration in output per hour has reflected the sizable increase in the stock of labor-saving equipment. But that is not the whole story. Output has grown beyond what normally would have been expected from increased inputs of labor and capital alone. Business restructuring and the synergies of the new technologies have enhanced productive efficiencies. They have given businesses greater ability to pare costs, increase production flexibility, and expand capacity that are arguably the major reasons why inflationary pressures have been held in check in recent years.

Other factors contributing to subdued inflation have included the one-time fall in the prices of oil, other commodities, and imports more generally. In addition, a breaking down of barriers to cross-border trade and the reduction of Government restrictions on trade have intensified the pressures of competition, helping to contain prices. Coupled with the decline in military spending worldwide, this has freed up resources for more productive endeavors, especially in a number of previously nonmarket economies.

Despite the remarkable progress witnessed to date, history counsels us to be quite modest about our ability to project the future path and pace of technology and its implications for productivity and economic growth. We must remember that the pickup in productivity is relatively recent, and a key question is whether that growth will persist at a high rate, drop back toward the slower standard of much of the last 25 years, or climb even more. By the last I do not just mean that productivity will continue to grow, but that it will grow at an increasingly faster pace through a continuation of the process that has so successfully contained inflation and supported economic growth in recent years.

The business and financial community does not as yet appear to sense a pending flattening in this process of increasing productivity growth. This is certainly the widespread impression imparted by corporate executives, and it is further evidenced by the earnings forecasts of more than a thousand securities analysts who regularly follow S&P 500 companies on a firm-by-firm basis. Except for a short hiatus in the latter part of 1998, analysts' expectations of 5-year earnings growth have been revised up continually since early

1995. If anything, the pace of those upward revisions has quickened of late. Analysts and the company executives they talk to appear to be expecting that unit costs will be held in check, or even lowered, as sales expand. Hence, implicit in upward revisions of their forecasts is higher expected national productivity growth.

That said, we must also understand the limits to this process of productivity-driven growth. To be sure, the recent acceleration in productivity has provided an offset to our taut labor markets by holding unit costs in check and by adding to the competitive pressures that have contained prices. But once output-per-hour growth stabilizes, even if at a higher rate, any pickup in the growth of nominal compensation per hour will translate directly into a more rapid rate of increase in unit labor costs, heightening the pressure on firms to raise the prices of the goods and services they sell. Thus, should the increments of gains in technology that have fostered productivity slow, any extant pressures in the labor market should ultimately show through to product prices.

Meanwhile, the impressive productivity growth of recent years also has had important implications for the growth of aggregate demand. If productivity is driving up real incomes and profits—and, hence, gross domestic income—then gross domestic product must mirror this rise with some combination of higher sales of motor vehicles, other consumer goods, new homes, capital equipment, and net exports. By themselves, surges in economic growth are not necessarily unsustainable—provided they do not exceed the sum of the rate of growth in the labor force and productivity for a protracted period. However, when productivity is accelerating, it is very difficult to gauge when an economy is in the process of overheating.

In such circumstances, assessing conditions in the labor market can be helpful in forming those judgments. Employment growth has exceeded the growth in working-age population this past year by almost ½ percentage point. This implies that real gross domestic product is growing faster than its potential. To an important extent, this excess of the growth of demand over supply owes to the wealth effect as consumers increasingly perceive their capital gains in the stock and housing markets as permanent and, evidently as a consequence, spend part of them.

There can be little doubt that, if the pool of job-seekers shrinks sufficiently, upward pressures on wage costs are inevitable, short—as I have put it previously—of a repeal of the law of supply and demand. Such cost increases have invariably presaged rising inflation in the past, and presumably would in the future, which would threaten the economic expansion.

By themselves, neither rising wages nor swelling employment rolls pose a risk to sustained economic growth. Indeed, the Federal Reserve welcomes such developments and has attempted to gauge its policy in recent years to allow the economy to realize its full, enhanced potential. In doing so, however, we must remain concerned with evolving shorter-run imbalances that can constrain long-term economic expansion and job growth.

In its deliberations this year, the FOMC has had to wrestle with the issue of what policy setting has the capacity to sustain this remarkable expansion, now in its ninth year. For monetary policy to foster maximum sustainable economic growth, it is useful to preempt forces of imbalance before they threaten economic stability. But this may not always be possible—the future at times can be too opaque to penetrate. When we can be preemptive, we should be, because modest preemptive actions can obviate more drastic actions at a later date that could destabilize the economy.

Preemptive policymaking is equally applicable in both directions, as has been evident over the years both in our inclination to raise the interest rates when the potential for inflationary pressures emerged, as in the spring of 1994, or to lower rates when the more palpable risk was economic weakness, as in the fall of last year. This evenhandedness is necessary because emerging adverse trends may fall on either side of our long-run objective of price stability.

In the face of uncertainty, the Federal Reserve at times has been willing to move monetary policy based on an assessment that risks to the outlook were disproportionately skewed in one direction or the other, rather than on a firm conviction that, absent action, the economy would develop imbalances. For instance, both the modest policy tightening of the spring of 1997 and some portion of the easing of last fall could be viewed as insurance against potential adverse economic outcomes.

As I have already indicated, by its June meeting the FOMC was of the view that the full extent of this insurance was no longer needed. It also did not believe that its recent modest tightening would put the risks of inflation going forward completely into balance. However, given the many uncertainties surrounding developments on both the supply and demand side of the economy, the FOMC did not want to foster the impression that it was committed in short order to tighten further. Rather, it judged that it would need to evaluate the incoming data for more signs that further imbalances were likely to develop.

Mr. Chairman, as a result of our Nation's ongoing favorable economic performance, not only has the broad majority of our people moved to a higher standard of living, but a strong economy also has managed to bring into the productive workforce many who had for too long been at its periphery. The unemployment rate for those with less than a high school education has declined from 10¾ percent in early 1994 to 6¾ percent today, twice the percentage point decline in the overall unemployment rate. These gains have enabled large segments of our society to obtain skills on the job and the self-esteem associated with work.

The questions before us today are what macroeconomic policy settings can best extend this favorable performance. No doubt, a monetary policy focused on promoting price stability over the long run and a fiscal policy focused on enhancing national saving by accumulating budget surpluses have been key elements in creating an environment fostering the capital investment that has driven the gains to productivity and living standards. I am confident that by maintaining this discipline, policymakers in the Congress, in the Executive branch, and at the Federal Reserve will give our vital U.S. economy its best chance of continuing its remarkable progress.

Thank you very much.

Chairman GRAMM. Thank you, Chairman Greenspan.

Let me see if I can get three or four questions into my 5 minutes. I would like to try to hold everybody to 5 minutes, and then we can go back for a second round if we need to.

First of all, I am sure you are aware, Chairman Greenspan, that if you take "emergency" designations of spending that we have adopted this year and the impact in the year 2000 of "emergency" designated spending last year, we are currently spending $21 billion more than our budget cap, as a projection, for the year 2000. If you look at the new "emergency" designations for spending in the House, if they were adopted by the Senate, we would be $30 billion over our spending cap this year.

We have an active discussion in both parties of adding a major new Medicare benefit. The President has proposed allowing nonelderly onto Medicare and providing pharmaceutical benefits for everybody. The bipartisan commission proposed making reforms and taking some of the savings to pay for pharmaceutical benefits for moderate-income people. But by any definition, this would be the biggest new entitlement since Medicare.

When you look at that pattern, does that worry you about the future of price stability?

Chairman GREENSPAN. It certainly worries me about the future of surpluses.

There is little question that, implicit in the surplus projections we are looking at are presumptions of significant constraint on expenditures other than those mandated under entitlement laws. The overages you are referring to at the moment are obviously reflective in that area, and it is difficult to make a judgment as to exactly how that alters the path of discretionary outlays that are implicit in the CBO projections, and, indeed, in the OMB projections.

I do think that it is important for the Congress to be aware of precisely what it plans to do in that regard, because this is one, but not the only, area which raises questions about the viability of those projections of surpluses.

The other area is that even though both the OMB's projections and the CBO's projections about the economy and a number of the translations of the economy into outlays seem reasonable, what you don't see is the range of error that is implicit in those forecasts. We have had a very dramatic increase in the ratio of individual income tax receipts relative to the GDP, or taxable incomes, a significant part of which we cannot explain in terms of capital gains taxation, a number of standard elements in income, or changes in the distributions of income. Things are happening which we call "technical factors," which is another way of saying we don't have a clue, and tax receipts can just as readily go in the other direction. If you start to simulate a number of these things that could go wrong, those surpluses evaporate fairly rapidly, at least the size of them shrinks dramatically.

Chairman GRAMM. Let me pose this question, which is inevitable on the day we're taking up the tax cut. Let me just posit some information. Then I would like to pose a question and get your response to it.

If you accept the current estimates that we're $30 billion over the spending caps, if you accept the CBO's analysis of the President's budget that he would spend $1,033,000,000 on 81 new programs if his budget proposal were adopted over the next 10 years, so that you came to conclude that we are in the process of spending the surplus; if you believe that to be the case, would you support a tax cut?

Chairman GREENSPAN. Mr. Chairman, as I have said previously, there are two sides to this surplus forecast; namely, the one that you raise, which very significantly questions whether it will be there, but there's a range of error on both sides. It is conceivable—I don't say that it's the most likely by any means—but I can perceive of a situation in which productivity continues to accelerate beyond our expectations, and that would engender significantly higher taxable incomes, and we may end up with offsets of that sort.

It is precisely that imprecision and the uncertainty that is involved which has led me to conclude that we probably will be better off holding off on a tax cut immediately, largely because of the fact that it is apparent that the surpluses are doing a great deal of positive good to the economy in terms of long-term interest rates, in terms of the cost of capital, and the ability effectively of the American Government to borrow when it has to. As we reduce the amount of debt outstanding, the borrowing capacity of the Federal Government rises, which is a very important long-term issue relevant to the question of inflation, especially when we have such large contingent liabilities overhanging us because of unfunded liabilities in the Social Security, Medicare, and, in addition, the Civil Service Retirement Fund. I conclude, as a consequence of this, that we should be cautious in the beginning, and I think there is no problem in delay.

I have also said, however, that should it appear that effectively what is occurring is an endeavor to build up irrevocable spending programs financed by a surplus which is dubious, I think that is the worst of all possible outcomes because we have very large expenditure projections that will occur in the 10-year time frame as we get a dramatic increase in the number of retirees and an aged population.

Caution is very important in this area, and, while I certainly support tax cuts if it looks as though the surplus will be spent, it is far better to remove that tinder, if I may put it that way, by cutting taxes fairly quickly, but I hope that that's not what the ultimate conclusion will be.

Chairman GRAMM. Senator Sarbanes.

Senator SARBANES. Chairman Greenspan, if I were to urge you to urge the Fed to cut interest rates in the current circumstances, presumably you would tell me that I would be running the risk of overstimulating the economy, since we are now at 4.3 percent unemployment, and, therefore, moving us into an inflationary problem. Would I be correct in that presumption?

Chairman GREENSPAN. Yes, Senator.

Senator SARBANES. If I were to say to you, "Well, I'm in favor of a major spending buildup, a large expansion in programs," I take it that you would have the same view as the possible macroeconomic effects of that kind of stimulation in an economy that's working where we're worried about whether the labor markets are going to tighten and so forth. Would that be correct?

Chairman GREENSPAN. That is correct.

Senator SARBANES. Now, if I were to come along and say, "Well, I think we should have a major, very substantial tax cut," would that not also be open to the same response that we would run the risk of overstimulating the economy and again confronting an inflation problem?

Chairman GREENSPAN. That would certainly be the case, Senator. I would note, however, that the various tax cut proposals, because they're locked into the on-budget surplus projections, almost all are phased in at a very slow pace. So, while I would certainly argue that were we to cut taxes sharply right now we are creating a risk, which I don't think we need, I don't think that any of the programs that I have seen rise to that limit.

Senator SARBANES. How would you know, since even if I concede that point, they involve very large cuts later on? How would you know that the circumstances later on would accommodate such large cuts and not raise, again, inflation problems, particularly when the projections on which all of this is based assume an economy that's going to continue to work at pretty high levels in terms of the use of its resources?

Chairman GREENSPAN. I agree with that, Senator, and, therefore, if the Congress decides to move forward and put into place significant tax cuts in future years, I think it also has to be prepared to cut spending significantly in the event that the forecasts on which the surpluses are based are proved wrong.

Senator SARBANES. Or not to do the tax cuts.

Chairman GREENSPAN. That clearly is the alternative. What I'm trying to say, however, is that implicit in moving forward with tax cuts when there is a question with respect to the sustainability of the budget surpluses, I would submit that the Congress has to be prepared to cut spending and not raise taxes back. The reason I say that is that, if we're looking at the issue of the sustainability of long-term economic growth, the one thing we don't want to do is create tax patterns which are uncertain and variable.

Senator SARBANES. Wouldn't prudence, therefore, suggest that the best thing is to be cautious in all of these fields, now that we, for the first time, are confronting the question of what to do with the surplus?

Chairman GREENSPAN. That is precisely what I am arguing.

Senator SARBANES. We should tread lightly.

Chairman GREENSPAN. Senator, I have been saying that for 9 months, and the words I have been choosing vary little from one testimony to the other.

Senator SARBANES. Let me ask you this question. If we cannot reduce the national debt when we have unemployment down to 4.3 percent, when will we be able to reduce the national debt?

Presumably, if unemployment were to rise, we would confront assertions that we have to do something stimulative in order to bring down the unemployment, which, of course, would presumably mean draining off some of the surplus or running into a deficit, depending on what our situation is.

Isn't this the moment, in a sense, if we are concerned about working down the national debt—which I think everyone agrees, certainly in current circumstances, would strengthen the national economy—isn't this the time to try to do that?

Chairman GREENSPAN. Absolutely. This is the ideal time to do it, and I would certainly agree that if you can't do it in a significant way now, I can't imagine other circumstances being more favorable to debt reduction at this point.

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

Chairman GRAMM. Senator Mack.

OPENING COMMENTS OF SENATOR CONNIE MACK

Senator MACK. Thank you, Mr. Chairman. I, too, welcome Chairman Greenspan this morning. This follows on with the discussion about this whole debate that we're having, but it's a little bit more focused in the sense that you said you prefer debt reduction to tax cuts. But I believe, if I remember correctly, the budget plan that was put forward earlier this year, that called for the $792 billion in tax reductions, also acknowledges and sets up a $2 trillion reduction in our Nation's debt.

It seems like the discussion very seldom mentions that, while we're talking about tax cuts, there is debt reduction that's going to be taking place.

Chairman GREENSPAN. If, indeed, the Social Security trust fund is not touched, in the way that you're arguing, the debt to the public will fall by $2 trillion which is a very positive phenomenon.

Senator MACK. I'm just laying out here that, while we are talking about tax cuts, we're also making the commitment. In fact, we have even proposed that there be some lockbox mechanism to try to see that the Social Security trust fund is not touched.

Chairman GREENSPAN. Which requires that the on-budget accounts do not go into deficit.

Senator MACK. I understand. But you have also said that the best tax rate for capital gains is zero. On one hand, you talk about the need for debt reduction, but on the other, you have said that the best tax rate for capital gains is zero. I would like you to reconcile these two positions.

Do you prefer debt reduction to all kinds of tax cuts, or do you prefer debt reduction only to the kinds of tax cuts that do not have strong supply-side effects?

Chairman GREENSPAN. Over the longer run, I am strongly in favor of eliminating the capital gains tax on the grounds that I think it is a very poor means of raising revenue. I would favor cuts in marginal tax rates somewhere out in the future as we find that this particular economic expansion, which must inevitably slow, runs into some difficulty.

I don't distinguish the issue of the types of tax cuts we may need when this economy slows down. My impression would be we probably will need both significant capital gains tax cuts and marginal tax rate cuts to assist monetary policy in stabilizing an economy which, having run a long way, will very likely, when it finally retrenches, run into some difficulty. Having the availability of significant tax cuts at that point, in my judgment, will be very useful.

I am by no means against cutting taxes. On the contrary, I think that reducing the aggregate level of taxation in this country would be extremely effective in maintaining the type of technology-driven growth that we have. My discussion and argument at this particular point refers solely to this immediate period, a period in which something very unusual is going on and one in which we have the capability of reducing the debt to the public very significantly. In my judgment, if we can do that, what that will do for the issue of economic growth, for savings, in the first decade of the twenty-first century is very important.

Because we have this huge projected increase in entitlement spending, it's crucially important, in my judgment, to get a very strong fiscal structure in place as we run into what is an inevitable major acceleration in entitlement costs.

Senator MACK. Senator Sarbanes talked about the Humphrey–Hawkins reporting requirements. I, too, think it is helpful—and I believe you do as well—that the Federal Reserve Chairman come to the Congress, on a periodic basis, reporting about monetary policy and responding to other questions with respect to the economic conditions of the country. I suspect that there may very well be an effort legislatively to reenact that reporting requirement.

But I just want everyone to be on notice, as Chairman Greenspan and Chairman Gramm know, over the last several years I have talked about legislation that would amend the Humphrey–Hawkins Act, because I find it to be totally out of place.

First of all, I don't believe it ever should have been passed. I will raise just one point here. The Humphrey–Hawkins Act states the unemployment rate has to be 4 percent or less. Actually, if you read it, you will find places where reducing the rate of unemployment is set forth in this section to not more than 3 percent among individuals aged 20 and over.

It's ludicrous, I think, but I guess, maybe to make the point, by law the Federal Reserve is supposed to be pursuing a policy of reducing the unemployment rate to 4 percent or less.

Is the Federal Reserve engaged today in trying to push the unemployment rate to 4 percent or less?

Chairman GREENSPAN. I don't think that the law requires that the Federal Reserve specifically do that. Indeed, I think it's a national economic policy which is set as a goal by the Administration. I have forgotten whether that particular segment has lapsed in time, but there has not been particular discussion of that goal for a long while.

Focusing on a specific unemployment rate as an economic goal, in my judgment, is very shortsighted. I think what you try to do is to get maximum sustainable growth, which is what our policy is. What unemployment rate falls out as a consequence of that policy, in my judgment, would be the appropriate unemployment rate.

Senator MACK. And sustaining maximum economic growth over a long period of time comes primarily from price stability?

Chairman GREENSPAN. That's what we have concluded over the years, and I suspect that that was a view, which is fairly general now, which was not held at the time the Humphrey–Hawkins Act was passed.

Senator MACK. Mr. Chairman, my last point would be, as much as I would like for Chairman Greenspan to be there forever, I recognize that he won't. It seems to me that it would be appropriate to change the Humphrey–Hawkins law to make price stability the number one goal of the Fed, as opposed to giving it multiple goals as far as economic growth, unemployment, et cetera.

Thank you.

Chairman GRAMM. Thank you, Senator Mack.

Humphrey–Hawkins passed a year before I came to Congress. It was set up as a naive notion that we could pass a law and force, through inflationary policies, the Federal Reserve to drive down unemployment, as if you could really do that.

Fortunately, the Congress knocked the teeth out of it, because none of this stuff was binding. But I think the point you make, Senator Mack, that we should decide to rewrite the law, is certainly correct. We're not as ignorant now as we were in 1978, and it should be reflected in public policy.

Senator Bryan is here, so we will hear from him next.

OPENING COMMENTS OF SENATOR RICHARD H. BRYAN

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

Chairman Greenspan, given our current economic conditions—and I understand from your testimony that you believe it to be desirable at some point in time to reduce the marginal rate and to eliminate, if possible, the capital gains rate—but, given our current economic circumstances today, as we find ourselves today, what would your priority be, given these three options: pay down the national debt, give a large tax cut, or increase domestic discretionary spending?

Chairman GREENSPAN. Senator, my first choice, as I indicated previously, is to reduce the debt. My second choice is to reduce taxes, basically because if we find that we cannot prevent ourselves in one form or another from spending the surplus, we are going to end up with rising spending which will require rising taxes as a percent of taxable income. There is a limit to how far that can go before it impedes economic growth, so I very strongly would argue against using the surplus for new expenditure programs.

If that, indeed, appears to be forthcoming, I would favor tax cuts, even in the short term, because there would be far less a concern on what would happen to the economy over the longer run than were we to go the expenditure route. But my first preference is, indeed, to reduce the debt as much as we can and in as short a period as we can.

Senator BRYAN. Chairman Greenspan, I think you have provided an extraordinary service, not only to the Congress, but also to the American people. You have said it in many different ways, but this morning you say again to us, history reminds us to be cautious.

In that context, we are projecting a surplus, an on-budget non-Social Security surplus over 10 years, of approximately $1 trillion. Is that being cautious in the sense that, as a layman not as an economist, my experience has taught me that no one, no matter how erudite, no matter how well-intentioned, whatever his or her philosophical moorings may be, no one can predict with certainty what the economy is going to be like next year, much less a decade ahead.

My question is, actions taken upon a projection that's 10 years out there indeed may not occur—whether we have Democrats or Republicans in the Congress or the White House, or whether the

Whig Party comes back and assumes the leadership in any one of these distinguished bodies—is that "cautious" to make our policy actions today based upon projections over that period of time?

Chairman GREENSPAN. Senator, you raise a very important question, and I would state first that if you are required to make a best judgment projection of the surpluses, the economists at the OMB and CBO have probably done as good a job as you can do.

But as you quite correctly point out, history suggests that in retrospect, looking back from 10 years from today to the period that just preceded, the probability that the path of the economy and the budget will proceed precisely as forecast is extraordinarily low.

Senator BRYAN. My last question, if I may, Chairman Greenspan. I would like to get your reaction in terms of the credibility that the markets would have.

As you know, the proposal before the Senate contemplates a $792 billion tax cut over the 10-year period that we have just talked about. One of the assumptions—and you talked about that, I think, somewhat indirectly—is that, with respect to discretionary spending, we will not only observe the caps in place this year, we will observe the more restrictive caps of next year and the more restrictive caps of the year thereafter.

As Chairman Gramm pointed out, our colleagues in the House, this year, to avoid those caps, are contemplating expenditures in fiscal year 2000 that would exceed the current caps by $30 billion.

What kind of credibility does this plan have, if in this year we're talking about exceeding the caps by $30 billion, in terms of the probability that that surplus is actually going to materialize over the 10-year period?

Chairman GREENSPAN. Senator, that's the reason why, if the Senate, and the Congress generally, decides to go forward with a significant tax cut which has long-term positive implications for the size of the Government which, if we could do it, is very favorable, but if that is done, I would very strongly suggest that the Congress be prepared to cut spending to the extent necessary to make the forecasts of the surplus, that are implicit currently, achievable. That means that, if you're going to introduce very significant tax cuts, it is quite conceivable—and indeed I would not rule it out—that the so-called ex ante surplus, as economists like to call it, will indeed emerge. It will turn out to be an optimum policy, but I do think that contingencies are required in the event that that fails.

I do not think, as I said before, that it is viable to raise taxes back up without having significant negative effects on incentives in the system. Consequently, in order to adjust for the fact that we have an uncertain forecast of the surplus and what appears to be a fairly exact change in tax rates, I think you have to square the circle by making tax cuts in such a way that in the event that the surplus turns out to be far less than is projected, there is an implicit action to which the Congress commits. I don't necessarily say it has to be in the law; I don't see how it can be. But something should be added that implies that further curtailments in expenditures occur, and that could be both in discretionary or in entitlement outlays.

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

Chairman GRAMM. Senator Bunning.

Senator BUNNING. Thank you, Mr. Chairman.

In your testimony, you talked about the unpredictability of continued growth due to the explosion we have had in technology, and the ability of our workforce to produce more goods and services because of that explosion.

It's my understanding that, over the next 5 years, particularly as far as the Internet, computerization, and things of that sort go, we are going to have an even bigger explosion in the next 5 years than we had in the prior 5 years.

Looking forward, if we do have that type of explosion in computer technology, the Internet, and those things, do you see that as a reasonable assumption that the pressures you spoke about will not be as bad in the future as they are now?

Chairman GREENSPAN. Senator, you are raising the crucial question which we have to confront. This relates not only to monetary policy, but also fiscal policy and a lot of other things with which we're dealing.

There's virtually no chance that these advances in productivity that we have been observing in recent years will somehow stop. There are synergies which have already developed which invariably imply significant new applications, the Internet being one of them.

A number of analysts, a number of people in the high-tech area, are saying that the so-called major technological change—which essentially goes back to the integrated circuit and, before that, to the transistor—the evolution of that is still in front of us.

In other words, we like to say we have an S-curve, the run in the S-curve, and nobody yet sees this flattening out.

The crucial question is not whether very significant further advances will occur. The question, so far as policy is concerned, is the pace of that change because it is perfectly credible that we can go from, say, a very modest Internet interface with the economy to a very significant interface. But how fast that happens is very crucial to the rate of change in technology growth and, therefore, the rate of change in productivity. Over the last 4 or 5 years—5 years—we have seen the rate of productivity growth go from roughly a little over 1 percent per annum to well over 2 percent. Implicit in this technological advance that a number of those in the financial community are projecting is that that rate will continue to rise. Indeed, if it does rise, then, as I mentioned earlier, I think our tax receipts are going to be higher than they otherwise would be, and there will be lots of other positive fallout.

The crucial question, which I try to address in my prepared remarks, is that if the rate of growth of productivity ceases to grow itself and flattens out—I don't want to give a number because everybody's going to think that's exactly the number I believe—but let's say some number just flattens out, what that does is it creates pressures on the economy, and inflationary pressure potentially. So what is crucial to the outlook—indeed, crucial to the budget discussion as well, as far as I'm concerned—is whether the forecasts implicit in the earnings per share growth, which have continuously been rising, imply that productivity growth will continue to rise. Both the business community and the security analysts with whom they discuss issues seem at this stage to still be forecasting that this rate of increase of productivity growth will continue.

We have no evidence at this stage that they are wrong, but what we are very closely watching is not whether technology will continue to grow—there's no question in my mind that it will grow, and it will grow very impressively—it's to try to factor in the pace at which that is changing because it is that which is crucial to the economic outlook.

Senator BUNNING. But nobody would have predicted what has happened in the last 5 years, going from 1 to 2 percent. What is to say that it won't go from 2 to 4 percent in the next 5 years?

In projecting and trying to figure out what you're going to do, it's going to be very difficult, whether it be fiscal or monetary policy, to make those projections. The same thing happens with our $3.2 billion projected surplus over the next 10 years. They are trying to figure that out too, which makes it extremely difficult for the OMB and the CBO. What we have to do, as a Congress, is try to figure out what is conservative and what would work if certain sets of factors fit.

I thank you for your testimony.

Chairman GRAMM. Senator Schumer.

OPENING COMMENTS OF SENATOR CHARLES E. SCHUMER

Senator SCHUMER. Thank you, Mr. Chairman.

I want to thank you, Chairman Greenspan, for your testimony. I guess on this issue of tax cuts, which is the issue of the day, I'm trying to put in a sentence what you're saying, which is very hard to do. You're basically saying, "Yes, but not now."

Is that unfair?

Chairman GREENSPAN. I would say that if you forced me to be nonopaque, I guess that's where I would come out.

Senator SCHUMER. Maybe another way to put it—and I will try again since I had that success—is it's better to be safe than sorry, which is how you have conducted monetary policy, very brilliantly, in my judgment, for the last however many years you have been Chairman.

Do you think we should conduct fiscal policy in the same cautious way?

Chairman GREENSPAN. As I have been saying since late last year as the surpluses began to evolve, I said that these are exceptionally beneficial to the economy, to economic growth, price stability; that the longer we can allow them to run and run down the debt outstanding to the public, the better off we will be. Obviously, at some point, significant tax cuts would be in order, and I said that I would hope that we would move to marginal tax rates and capital gains tax reduction.

But it is a very tough call as to exactly how that works out. The one issue I would just throw into the hopper is that I do think that, despite the fact that we may be looking at a far more extended period of prosperity than any of us imagined, and if we go to this 4 percent that you are suggesting as possible, and I can't deny that—no one can, and shouldn't—then we will be looking at something which goes on for quite a significant period of time.

I think the more appropriate posture is to be cautious and recognize that history says that when you have been expanding for 9 years, somewhere out there is a slowdown, an adjustment which can occur wholly independently of the question of whether these structural, long-term productivities are continuing. At that point, to have the capability of a very major cut in marginal tax rates I think would be a useful tool for the economy; so that, if indeed you do pass a tax bill, I hope that there will be room, indeed I'm sure there will be room, to move in a manner which would be helpful in the event the economy did slow down.

Senator SCHUMER. As you know, it's much easier to pass a tax cut than a tax increase. You have always said that you err on the side of preventing inflation because, "Once the genie is out of the bottle, it's hard to get it back." I think those are almost your exact words.

I think the same is true of fiscal policy. If we go too far on the tax cut side, it's going to be hard to get the genie back in the bottle, whereas if we proceed cautiously and we need to do more later, it's a lot easier to do that.

Is that a fair statement?

Chairman GREENSPAN. I think it's self-defining.

Senator SCHUMER. I'll translate "self-defining" to be "fair" for the moment, if you won't.

[Laughter.]

Let me go to another area where I have great concern and ask for your opinion. We have just read in the last few days about the New York Stock Exchange and Nasdaq talking about going public. This has been brought about, again, because of the amazing technological changes that have occurred. One rule of the SEC, that Nasdaq had to list all trades, let the genie out of the bottle, so to speak.

We now hear talk of many markets, these so-called ECN's, as opposed to two markets, two major markets. I have a concern about these ECN's. I am concerned the market will become fragmented, that it may not be as deep and wide as it might be. I'm concerned we may run into problems in terms of regulation. I worry that, basically, the great thing about American markets—that they are not opaque, they are visible to all, they are deep, and tremendously flexible—could be lost if we see the markets broken up into lots of these ECN's. We may see a skimming, if you will, where some people can trade in these ECN's and other people can't, certainly with the information available.

Do you worry about this?

If you could, give us some of your views on how the equity markets and all markets are changing because of technology. Are there things we have to look out for, or should we just let it proceed apace?

Chairman GREENSPAN. Senator, I am not overly concerned because one of the things about markets is that they converge toward natural monopolies in the sense that it is very difficult to have fragmented markets operating efficiently. What history has demonstrated to us is that when you have markets selling the same product in different places, unless communication is lacking between the two, they will ultimately converge into one. One or the other will disappear because there is the standard issue that the liquidity in a market is essentially the bid-ask spread.

If the smaller market has a wider bid-ask spread, the business will move to the larger market, and it's a continuous process until the smaller market disappears.

That's what happened to the New Orleans Cotton Exchange. It had a contract very similar to the New York Cotton Exchange, and when communication wasn't very significant, you could run two separate markets. But as the telephone and telegraph emerged, it was inevitable that that would not happen and, therefore, I'm not concerned particularly about this type of fragmentation. It probably will occur in the early stages, but there is a tendency toward convergence, and I would hope that those who are regulating these markets are structuring the regulation in a manner to foster that because it is very obvious that you don't want a lot of markets trading in the same commodity or in the same stock.

You want the people who are trading to have access to the total market and the only way that can happen effectively is if there are single markets for these types of commodities or stocks.

Senator SCHUMER. Thank you, Mr. Chairman.

Chairman GRAMM. Thank you, Senator.

Senator Santorum.

OPENING COMMENTS OF SENATOR RICK SANTORUM

Senator SANTORUM. Thank you, Mr. Chairman.

Chairman Greenspan, it's good to have you with us. I want to take one more stab at this issue of tax cuts, and look at it in the sense of history, recent history.

Last October, we came forward with "emergency spending," new spending of $22 billion, this past spring $12 billion. Yesterday, the Democratic leader came forward with a plan for agriculture of $10 billion. This week, the House has come forward with yet another $10 billion. I think what Chairman Gramm was trying to get at is, don't we see a pattern here that is a little cause for concern?

What I'm concerned about is what I hear from you, Chairman Greenspan, which says, well, ideally I would like to spend down the debt. I think anyone who looks at what's going on in this Congress would see it's fairly apparent that if there's money sitting here in this town, it ain't going to be spent on debt. About 90 percent of the people who walk in my office ask me for more money for something, and I would suspect the percentage may be higher in other places.

I guess what I'm trying to get at, I appreciate the philosophical context from which you're giving these answers, but we are here in a very real arena where the answer is going to be we either spend it or we give it to the American public for them to spend. That's what I see happening here.

Given that analysis of some real politique, what would you prefer to have happen?

Chairman GREENSPAN. Senator, as I've been saying for the last, I guess, 7, 8, or 9 months, if it turns out to be infeasible to apply the surplus to reducing the debt, and it turns out that instead it is being spent, then I very strongly support tax cuts.

Senator SANTORUM. Thank you, Chairman Greenspan.

We have a couple of sectors in my State that are hurting during a very robust time in our economy, and that is the agricultural sector, which is the number one industry in Pennsylvania, and what we are known for in Pennsylvania, our steel industry. Both are related, for different reasons, to what's going on in the foreign markets. One is steel dumping. The other is the inability to get agricultural products outside of the United States.

I guess I would just like your comments as to those two sectors and what, in particular, we can be doing to address those problems. There is apparent prosperity everywhere, but if you go to a lot of areas in my State, and in other States across the country, we see real problems continuing.

Chairman GREENSPAN. Senator, in the agricultural area we are confounded with an extraordinary set of circumstances; namely, productivity is growing far faster than it is anyplace else in the economy. Over the last 30 years as I recall, productivity growth in agriculture broadly, and this includes crops, livestock, and dairy, is about three times the rate of increase in the nonfarm area. What that means is that we're creating very large surpluses because our ability to consume all of this domestically is limited because there are only so many people that we have, so we depend very crucially on export markets.

When Asia ran into trouble last year, there was a very dramatic drop in agricultural exports. In fact, my recollection is that maybe four-fifths of the drop was attributable to the declines in exports to Asia, which created a very substantial backing up of products and a very major weakening in prices. In soybean prices, close to $4 a bushel is something I haven't seen for who knows how long.

We're confronted with what really amounts to a necessity on our part of reinvigorating export markets. I do not believe that if we go back to some of our old practices we will find that it's to the advantage of American farming. I do not think so. It is crucial that we endeavor to find a means of expanding agricultural exports, because our ability to produce is truly awesome.

Steel is a tricky problem. As you know, we increasingly have two steel industries in this country. One is based on the old technologies of coke ovens, blast furnaces, and oxygen furnaces, and the other is the minimills which are evolving at a very dramatic pace. Indeed, the largest minimill company has the prospective of being the largest steel company in the country at some point soon.

I don't know what to do in this regard. It's a very tough problem. I would hope that we could find easy solutions to it, but I have very mixed feelings here. I used to work as a steel consultant many, many years ago, and I used to go visit the huge Homestead Works which are awesome. In fact, the whole Pittsburgh District was——

Senator SANTORUM. I understand that the Homestead Works is now a vacant lot.

Chairman GREENSPAN. That's exactly what I remember, and that is very distressing. Yet, we have to make sure that technologies continuously move forward for standards of living to rise. And the issue that I'm concerned about is that if we endeavor to try to impede trade in the process, everyone loses. As I said in a speech recently, what we really have to do is to find a means to help those people who work in industries which are technologically retreating, and through no fault of their own find themselves caught up in very large economic events.

We ought to direct our efforts to try to find how we can help those people best. I do not believe that trade protection works. The reason is that, yes, there is no question that you are likely to keep jobs in place longer, but what that does is basically prevent individuals in their 20's, their 30's, or even their 40's, from changing jobs. If you keep them in place until they are 50, they have no place to go when, inevitably, the economic forces will create significant further contraction, so I believe it is crucially important that we not use trade restrictions as a means to resolve what are very difficult issues because I don't think it helps the workers. I think it prevents them from moving when they should be moving.

Capital, which is earning less than the required rate of return, should move into higher tech areas or more productive areas because that's what's made America great. That is why our standard of living is by far the highest of any place in the world.

Our ability to have that flexibility to move capital and workers is crucial and impeding the flow of capital and workers from job to job, from industry to industry, is not to our long-term advantage and, indeed, I suspect it's not to our short-term advantage, either.

Senator SANTORUM. Thank you, Mr. Chairman.

Chairman GRAMM. Senator Bayh.

OPENING COMMENTS OF SENATOR EVAN BAYH

Senator BAYH. Thank you, Chairman Gramm.

Chairman Greenspan, it's a pleasure to have you with us once again, and I should say it's refreshing to have someone who does not have to stand for office offering some common sense to those of us who do.

I have listened to some of the comments of my colleagues here today, and am in more sympathy with them in some respects than they might imagine. But I do hope that the justification for at least one of the very large tax proposals that's moving its way through Congress is not that we cannot restrain ourselves from engaging in irresponsible spending, and therefore we should engage in irresponsible tax cuts. If paying down the debt is the right thing to do, we need to have the fortitude to do that, and I hope those of us in this Congress will summon ourselves to the correct priorities, not just the path of least resistance.

I have a few very quick questions I would like to pose. You have already addressed the first two, at least in part. The first deals with contingent revenues and contingent liabilities.

Being a former governor, we used to have 2-year budget cycles, and invariably our forecasts were in error. It seems to me that in forecasting out 10 years, what we are really doing is engaging in guesswork disguised, in some respects, as science.

Are you aware, Chairman Greenspan, of any 19-year period in our Nation's history of uninterrupted economic growth? Do the assumptions of 2.5 percent average annual GDP growth implicit in the projections we get sound reasonable?

Chairman GREENSPAN. The answer is clearly we have not. Indeed, we are on the edge of the longest expansion in American history, 9 years into it.

In fairness to the people doing the estimating, however, they try to adjust the level of their long-term growth to capture the fact that there are going to be periods when it's going to be higher than trend and lower. Effectively, the cumulative impact of the budgetary policies are supposed to capture periodic recessions without knowing in advance where they will be, so it is true that you can't forecast a long period of time without a recession credibly. I would say that the procedures the CBO and OMB use probably eliminate most of the bias that would be created in the system.

Senator BAYH. With regard to the contingent liabilities, I think you raised an excellent point. You mentioned it a couple of times, and that is the need for long-term entitlements reform.

As you may be aware, the subject of Medicare is squarely on the table in the context of this budget debate, and I think it's important for everyone here today to understand that every one of the proposals which has been put forward merely postpones the day of reckoning with regard to Medicare. Even the President's proposal only extends the solvency out to 2028.

Would you feel more comfortable with some of the tax proposals that were put forward if they were combined, at the end of the day, with some meaningful systemic restructuring of entitlements?

Chairman GREENSPAN. I'm delighted to hear that, Senator.

The issue has never been on the table, but implicit in any discussion on taxes is clearly that if you bring down spending proportionately with the tax reductions, you can do it any time. Because were you to do that right now, surplus balances are not affected and I would very strongly suggest that if that were in fact the case, the markets would like it immensely. I just don't sense that that is an issue which is on the table. It was for a while.

Senator BAYH. There are some, Chairman Greenspan, who are suggesting that as a part of the so-called compromise at the end, perhaps some Medicare systemic reform would be combined with a more aggressive tax approach than some would favor.

Chairman GREENSPAN. I would say that if that is feasible, it would be very useful.

Senator BAYH. Thank you. Your comment was very helpful in that regard.

I'm fascinated. We have discussed previously this wonderful escalation of productivity growth rates that has taken place in the private sector. We're having a debate up here about how much to set aside for nondefense discretionary spending over the next 10 years. I realize that a lot of the Federal budget is comprised of transfer payments that are not exactly analogous to the private economy, but is it not possible that some of the same trends that are taking place in the private sector might not also lend themselves to greater productivity in the public sector, thereby giving us a little extra flexibility in terms of discretionary funding, even if the nominal levels are a little lower than some people might want?

Chairman GREENSPAN. I assume that's happening, Senator.

I know within the Federal Reserve, where we can see it directly, there are very dramatic changes in the productivity of our system. We have computerized substantial parts of our operation and it has created a very large change, as far as I can judge, in certain areas of output parameters.

Senator BAYH. I agree. Some people suggest if we don't build in an automatic cost of living escalator in Government spending, that somehow or other a real cut is taking place. But I think they're missing, among other things, the possibility for increased productivity gains.

My last question—and I see I'm on the yellow light—changes the subject, which you may appreciate. We are now running balance of trade deficits on a monthly basis about, I think, at the level that we used to have on an annual basis.

I would be interested in just your very brief thoughts about what the long-term consequences of this are for our economy, perhaps with regard to our currency value, and what that might mean for inflation rates somewhere out beyond the horizon.

Chairman GREENSPAN. Senator, I tried to address that in my prepared remarks, not in full detail, but in some.

What we know about the current account deficit, which is the broader definition, including income payments as well, is that it is rising for two reasons. One, our propensity to import goods and services, relative to our incomes, is higher than our trading partners, and that, other things equal, will induce a trade deficit in the United States and a trade surplus elsewhere.

Of considerable significance recently, however, is that the very technology boom we have been discussing has raised the rates of return on prospective capital investment in the United States to a point where a great deal of investment is taking place either through securities or through direct investment here. That has the consequence of increasing the so-called capital surplus, which means that the obverse, the current account deficit, which is exactly the same size with the sign changed, is also widening.

The way you tell whether in fact the accumulation of capital is driving the current account deficit is to look at the exchange rate. The strength of the dollar over the last several years is indicative of the fact that a substantial part of the opening up in our accounts is coming from the capital investment side, but clearly not all, because import sensitivity is there. I discuss that in greater detail in my prepared remarks, and would hope you might have a chance to get to read them.

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

Senator BENNETT [presiding]. Senator Allard.

OPENING COMMENTS OF SENATOR WAYNE ALLARD

Senator ALLARD. Thank you, Mr. Chairman.

Chairman Greenspan, welcome to the Committee. I want to keep my reputation going, so I'm going to ask a question on the debt. We have recently begun to divide out the debt from a policy standpoint. You referred to it in your comments as "the debt outstanding to the public." We also have the total debt out there where we have a transfer from the general fund, from Social Security, and other funds.

When you look in terms of total debt now, and the balance of that over and above what's outstanding to the public, do you view that as of any significance to you as an economist, or is it pretty much in your view just a bookkeeping issue with the Congress?

Chairman GREENSPAN. Senator, we have found—in fact, economists generally have found—that the unified budget balance, which is essentially the net measure of savings or dissavings from the

Federal Government in the economy, has been one we find for economic analytical purposes most useful.

But there's no question that from a budgetary point of view, for determining what to do with Federal resources in the years ahead, that something which picks up the trust funds or, even more generally, accrued liabilities, is far more useful for projecting the distribution of resources of the American Government. In that sense, as a first approximation, looking at the deficit on-budget would be a preferable means because what that does is to recognize that there are long-term commitments to Social Security beneficiaries out there, and that you ought to build up a fund the same way you would do it in the private sector, and that, therefore, it should be a separate set of accounts.

But it's important to recognize that as important as that is in improving the way we look at the longer term, it still does not pick up the full funding of Social Security, Medicare, or civilian or military retirement, for all of which we have trust funds. It's certainly a very good approximation and having two budgets out there is quite useful: one to look at the analytical short-term impact on the economy, and the other to get a far better handle on what the obligations are of the Government to the American public with respect to retirement benefits. What we have in the past been doing is looking solely at the unified budget and have effectively been looking at the retirement benefits on a pay-as-you-go basis.

I suspect that we can create a major advance in budgetary policy were we to move toward two budgets, which indeed is what we have today. If future budget agreements and indeed all of the various caps which have served us so well are seen as applicable to on-budget items, I believe that would be a major improvement in budgeting for the Federal Government.

Senator ALLARD. Thank you for your comments.

In reading over your testimony, I made note of the fact that you commented that the CPI was greater this year, 1999, than it was in 1998. You recognized, in conjunction with that, what had happened to energy prices. Oil has gone from historic lows up to about $20 a barrel now.

Are you concerned about energy prices and how that might be influencing potential inflationary pressures?

Chairman GREENSPAN. The answer, Senator, is of course yes. But having said that, it's far less important than it was 20, 30, 40 years ago because, as you go back and look at the impact of energy costs on the gross domestic products say in the 1960's or 70's, it was a far greater force for both economic growth or contraction and inflation than it is today. While there is no doubt that we have seen a significant pickup as a consequence of increases in gasoline and home heating oil prices in the CPI, they have a slightly higher weight than they probably should have. Looking at the impact in the personal consumption expenditure deflator, in which they have a smaller share, is probably a better view of the impact.

But the answer to your question is, and I hopefully said it appropriately in my testimony, that the decline in energy prices when crude went to $10 a barrel had a fairly pronounced effect on measured inflation, and it reversed in this year. But the impact is far less than it used to be and our concerns about major breakdowns in the flows of crude oil, which really gave us considerable concern say in the mid-1970's, is far less a concern now than it was then.

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

Chairman GRAMM. Senator Bennett.

OPENING COMMENTS OF SENATOR ROBERT F. BENNETT

Senator BENNETT. Thank you, Mr. Chairman.

I can't resist being in this gentile tax cut debate that has been going on back and forth in the form of asking questions. I want to address the issue of the "huge" tax cut, to quote one of my colleagues, that Congress is talking about. Let me run through some numbers and see if I'm right.

Our current GDP is in excess of $8 trillion. If we expect the growth rate that is being talked about here, that means by the end of a decade, it will be over $11 trillion, or we will generate $100 trillion worth of economic activity.

Chairman GREENSPAN. In nominal dollars.

Senator BENNETT. In nominal dollars, that's correct.

The tax cut which is being attacked out of the White House as excessive is, over that same period where we are generating $100 trillion worth of economic activity, about $800 billion, or less than 1 percent. Are those numbers correct?

Chairman GREENSPAN. Yes, they sound approximately correct, Senator.

Senator BENNETT. So we are currently taking, as a percentage of GDP, the highest percentage. We're taking something like 22 percent of GDP in Federal taxes, and we're talking about cutting that from 22 percent of GDP down to 21 percent of GDP, which would still be higher than the tax take when the marginal rate was 70 percent following World War II. Is that correct?

Chairman GREENSPAN. That is correct, Senator.

Senator BENNETT. I want to make the point that we are not necessarily talking about a "huge" tax cut in view of the projections that have been made. I want to say on the record that I agree with your priorities. If we could control this as a board of directors of a responsible business, I would say that before we make a dividend to the shareholders, which is basically what the tax cut is, we should pay down the corporate debt. When we have paid down the corporate debt and we still have some left over, we should pay out a dividend to the shareholders.

The only reason you don't pay a dividend to the shareholders is that you assume the management of the business can make that money grow better than the shareholders themselves can make it grow. If the shareholders can invest it for 6 percent and you think keeping that money in the company can make it grow at 8 or 10 percent, you're doing the shareholders a favor by hanging on to it. In this case, I don't think the Federal Government does the shareholders a favor by hanging on to it, and I'm willing to take the risk of having a less than 1 percent of GDP tax cut.

Now, having made that speech, let me go to another subject that will surprise you not at all. I want to talk to you about Y2K. Coming before the Special Committee on Y2K, which I chair, last Thursday the State Department's Inspector General told our Committee, "Y2K-related disruptions in the international flow of goods and services are likely."

I believe we have the Y2K problem under control in this country to a degree that I would not have anticipated when the Special Committee was created. We have done a better job of getting that under control than I thought we would. But overseas, we are seeing some of the challenges that we had feared.

The aggregate data that she shared with our Committee showed that nine of the 39 industrialized nations surveyed were at medium to high risk of experiencing failure in telcom, energy, and water sectors, and 52 of the 68 developing nations had a similarly high level of risk in breakdowns in these sectors.

You have talked here about the impact on the United States of the "Asian flu" in our agricultural sector. I want to use that as the analogy to talk about the impact in the financial sector of a Y2K problem of this kind. I refer you to the latest Merrill Lynch study, where they talk about a major liquidity problem arising in certain parts of the world because of Y2K.

I share with you and take every opportunity I can to tell people, "Don't take your money out of the bank in the United States in anticipation of Y2K." That would be a foolish thing to do. But international investors are withholding liquidity in the international areas because of Y2K concerns.

Have you had any focus in that area, and do you have any information you can share with us?

Chairman GREENSPAN. Senator, as we have discussed before, we are confronted with what is truly a unique event. Nothing of this nature has ever happened before. And we are starting from scratch in trying to understand all of the potential.

Nonetheless, I agree with your conclusion regarding the United States. We have picked up the rate of pace to adjust for the possibilities of problems, and I feel far more comfortable now than I did 6 months ago.

It is also true, as I recall in the presentation to your Committee, that financial areas were perceived to be doing a good deal better than some of the other areas of the foreign economies. That's important to us because while we are acutely aware of all of the problems that can arise, including the liquidity type of issue which Merrill Lynch is raising, we think we're sufficiently in position to address those issues.

Indeed, one of the things we follow very closely is the implicit interest rate that's being charged over the new year, because that is not a bad measure of the extent of financial stress that the markets are perceiving as likely to emerge as a consequence of that. Indeed, we do see some of what we call butterfly effects where the interest rates go up and down. They have not yet reached a point where there is evident real stress in the system. We can conjecture a good deal about all sorts of problems, but people in the marketplace are feeling increasingly more comfortable, as best I can judge.

That should not mean that we become complacent on this issue, but I do think that a remarkable amount of effort has been put in to assure the systems in the United States, certainly in the financial areas.

And I would reiterate what you just said with respect to banks, Senator. The most risky activity that people can take is to take all the currency out of their banks because there will be a new industry that will emerge as a consequence of that, which will be millennium thievery, and I think you have a far greater chance of losing your money if you take it out than if you leave it in.

There is going to be a fairly general set of procedures where accounts are going to be made available to everybody so that in the very, very remote chance that computers break down and wipe out the evidence of people's deposits, there is physical material there. That is a concern which is being very fully addressed, and I see the concerns that a lot of people have about what's going to happen to their banks to be, at this stage, far more adverse than I think even remotely is going to be the case. I suspect, as some of the evidence shows, that the amount that a number of surveys suggest people are going to want to draw out in cash is beginning to move downward, and that's a very good sign.

Chairman GRAMM. It seems to me we should be encouraged. In the year 1000, they had to add a new digit, and yet there was no evidence of economic disruption. A millennium before, we had dates going down, and they started going up.

[Laughter.]

Yet, there was no evidence of disruption or chaos in the economy. If they could do it then, surely we can deal with it now, it seems to me.

Senator BENNETT. I have a relative, Mr. Chairman, if you will indulge me, who has a tombstone that is not Y2K-compliant. When her husband died, they carved the date of his birth and death in the tombstone and included the date of her birth, but for the date of her death they prematurely carved "19." She has outfoxed them by living into the next century, and they're going to have to replace it with "20" when she finally dies.

Chairman GRAMM. She still has another 6 months.

[Laughter.]

Senator Reed.

OPENING COMMENTS OF SENATOR JACK REED

Senator REED. Thank you, Mr. Chairman.

Chairman Greenspan, I note that at page 10 of your report, you indicate the positive role that the Federal Government is now playing in contributing to national savings.

In the context of the proposed significant tax cuts, how would that contribution be affected?

I guess, again, I'm not being an economist, but households have increased a little in their savings rate. Nevertheless, it's still lagging far below other countries.

Chairman GREENSPAN. Actually, Senator, the latest numbers we have show the savings rate is still negative.

Senator REED. So, essentially, one could analyze this as taking money from the Federal Government, which is, because of our policies, saving in the national context, and giving it to households who have net savings, which would seem to imply increased consumption, a hotter economy, and the Federal Reserve stepping in even more dramatically to cool it off.

Is that a fair analysis of the possible consequences of tax cuts?

Chairman GREENSPAN. Senator, it would be a fair analysis if the cuts were to occur immediately because, indeed, exactly what you suggest is the way it would probably start to emerge. That's not in any of the bills which I think have been thrown into the hopper. They are all working against the on-budget surplus which evolves rather slowly in the context of the projections that are being made. It's sufficiently far out that I don't particularly have that concern. My concerns have to do with the long-term fiscal structure. I'm not unduly concerned by any of the bills that I've seen creating problems. If there were significant corporate tax changes in place, even projected 5, 7, 8 years out, that could have an effect, because long-term capital investment would be impacted. But it is not likely, with the heavy emphasis on consumers in these tax bills, that that is a problem which creates difficulty for me.

Senator REED. Your major concern, Chairman Greenspan, is, over time, the mismatch between the accumulating tax cuts and the accumulating obligations we have to Social Security, to Medicare, to funding the Government?

Chairman GREENSPAN. I am not against cutting taxes. I would hope that we would put in significant cuts as we see the surplus developing, or if we were to see the surplus being dissipated by the expenditures.

Senator REED. I think, Chairman Greenspan, that your concerns are my concerns. It's a lot easier to cut taxes than it is to raise them, and cutting taxes now and then discovering a shortfall in revenues or a change in economic conditions puts us in the position of either having to dramatically cut expenditures, which is also difficult, or raise taxes. Those are not easy things to do, and I think the temptation, particularly now because of these rosy projections, is to do something which is generally pretty easy to do, cut taxes. But in the hard times that might emerge, I don't think we would have the same enthusiasm to do what you suggest must be done: significant reductions in expenditures or increasing taxes to once again balance the budget.

Thank you very much, Mr. Chairman.

Chairman GRAMM. Thank you, Senator Reed.

Senator Grams.

OPENING COMMENTS OF SENATOR ROD GRAMS

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

I just had to talk a little bit about what Senator Reed was just talking about, saying it's easy to cut taxes, hard to raise them. That's not true at all. In the last 18 years, there have been 15 tax bills; only three have dealt with tax cuts; two had no net result in the revenues; 10 were tax increases, and those ten went back and undid any tax cuts that were out there.

When they say that it's easy to cut taxes, it's the hardest thing in Washington to do. It only has to be relevant by looking at the gross domestic product and what share the Government is taking. It is a larger bite today than ever before. This fallacy that's out there and this argument that they continue to throw on the floor that, "Oh, my goodness, it's easy to cut taxes, but we don't want to do it now," is ridiculous.

Also, as Senator Bennett was saying, a $100 trillion gross economy over the next 10 years and an $800 billion tax cut is by no means huge or large. It's puny in many respects.

I think about Senator Bayh of Indiana who was asking about Government productivity. We should expect productivity like we have seen in the private sector, but not one Government budget is being cut; they are growing twice as fast as workers' wages. I'm reminded of a small computer-parts manufacturing company located in Hibbing, Minnesota. They told me that in 20 years of business, they have never raised their prices once. In fact, every year in the bidding process they have had to cut prices in order to remain competitive. That's the private sector, not double-digit increases as in the Government.

I hear these arguments all the time. This is not even a tax cut, per se; it's just giving back. We have more people paying taxes and the taxes are larger, so everybody should feel that they should get a little back or share the burden, rather than paying so much.

I'm not trying to preach to you, Chairman Greenspan. I know you know this.

One thing I wanted to talk about is the claim or the argument that we need to put some of this money aside for Social Security and Medicare. We have agreed that all the surplus in Social Security should be set aside to pay down the debt, to help make sure that Social Security is going to be solvent. Medicare is another question.

I know that I've talked to you about this before, and that is the big debate over whether general revenue sources should be used to supplement these trust funds. If we open the door, which is being proposed now by the President and the Democrats, to open this door and stick the hand into the general revenue cookie jar to support a trust fund without reforms—there have been no reforms proposed in either Social Security or Medicare—where do you come down? Should general revenues be used to prop up the system, or should we have genuine reform in Medicare and Social Security?

Chairman GREENSPAN. Senator, we confronted this problem in the 1983 Social Security Commission. I was impressed by the fact that a bipartisan Commission was very strongly opposed to the use of general revenues on the grounds that social insurance funds should be self-financing, fundamentally.

I would very much prefer that we did not move in the direction of general revenues because, in effect, once you do that, you have opened up the system completely, and the issue of what Social Security taxes are becomes utterly irrelevant. Clearly, if you don't change either the tax structure or the benefit structure of either Social Security or Medicare, and you improve the trust funds, it could only have come from general revenues. There is no other possibility. And I am not terribly certain that serves our budgetary processes in a manner which I think is appropriate.

I understand and I recognize that there are arguments to go to general revenues in the context of significant changes, but I would be cautious in that direction, and I guess I may be increasingly one of the last holdouts on this issue.

Senator GRAMS. I think the proposal is to use general revenue funds. That's what we see, I think, on the table today. But if they want to promise these benefits through these trust funds, then maybe we should get the tax reserves from those programs. I heard people say that we want to spend the money, but we're not willing to tax for it. In other words, if we need to make Medicare solvent, it should come from Medicare withholding taxes, and the same with Social Security. I hope we can take a look at that. I agree with you, I think if we open that door to general revenues, they become entitlements and the withholding taxes become irrelevant and we are just going to put them all into one pie.

I have one more question on taxes. The question, do you view tax relief as basically investment in the economy? I think it helps the economy grow because if you have more money available to either business, in the form of capital, or consumers, that's an investment in the economy and it can help the economy continue to grow. I look at it this way. If you reduce taxes, there is less money to the Government, but you keep more in the private sector.

Chairman GREENSPAN. I'm of, I guess, the old fiscal school that you raise revenue for basic Government purposes, and that if you don't have those purposes, you give the money back or you don't tax it. I don't consider that you raise taxes and invest them in Government programs to get higher rates of return. If that were indeed the case, I probably would be supportive of that, but my experience is that the private sector's rates of return tend to be significantly higher than the Government's rates of return.

That is actually the analogy that Senator Bennett raised about business, which maybe a lot of people think is a little simplistic, but it's not altogether off-track.

Senator GRAMS. I think we have a President that has no faith in the private sector, no faith in the American worker, but more faith in the Government to do this.

Thank you, Mr. Chairman.

Chairman GRAMM. Thank you, Senator Grams.

Senator Edwards.

OPENING COMMENTS OF SENATOR JOHN EDWARDS

Senator EDWARDS. Thank you, Mr. Chairman.

Good morning, Chairman Greenspan. I have to say I agree with what you just said, and it didn't seem particularly oversimplistic to me. I believe Senator Bennett's analogy actually made a great deal of sense.

I have been listening to your testimony this morning, although I have not been here. As someone who is really not partisan in terms of this tax cut issue, because I have struggled with this question tremendously and have looked at all the proposals, I start with some fundamental things that bother me. I would like to have you help me with this process that I'm going through.

One is that I think most Americans believe that there's a lot of hocus-pocus in these 10-year projections, that they're not reliable. If they're not reliable for 1 or 2 years, they're certainly not reliable for 10.

You compound that problem with the fact that we're not meeting the caps that have already been imposed. The Congress has shown we have not, at least until now, been fiscally disciplined enough to meet those caps, and I do believe that Government spending needs to be kept down.

I thought I heard you say earlier today, and I would like for you to tell me if this is right, that tax cuts, over the long haul, create incentives to keep Government spending down. I believe that's a very positive thing. I believe we very badly need to pay down the debt. I think that's a high priority.

My problem with all of this is, I think, in essence, that we're dealing with it with numbers that I have no confidence in, or a low level of confidence in, particularly over the period of time that we're talking about.

I would like to see a tax cut. This money belongs to the American people, and we need to give it back to them, but I would like to give it back to them in a real world where it makes sense to give it back to them, and not in some fantasy land.

I would like to get some comment from you about whether you have ideas about ways that we can do this where we're imposing these tax cuts, some of which I agree with some of my colleagues, even on the other side of the aisle, but we're making these tax cuts in the real world, when we know that there is a surplus, when we know that the money is really there, when we know that we have done what we need to do fiscally to pay down the debt.

I hope that question makes some sense, but I would love some comment in response from you about that.

Chairman GREENSPAN. Is it the question of whether we're giving the taxes back, in a sense?

Senator EDWARDS. Or is there a way to do it other than the way we're doing it?

Chairman GREENSPAN. There is an interesting issue here. We have a little more than $3.5 trillion in debt to the public, which means, cumulatively, over a period of generations, we have spent that much more than we have received in revenues. When you're running a surplus, there's an interesting question as to whether, in fact, you perceive that the monies that are employed there are being used to pay off previous debt, which is essentially financing deficit spending, or you're returning taxes which are excess in the process. Clearly if the debt is zero, then I would say that if you're running a surplus, it should all go back in tax cuts because, in effect, you have raised more taxes than you need for the programs that you have, and because you have more money doesn't mean you should spend it.

But I think it's a very tricky question to make a judgment as to what part of excess, meaning the surplus, goes back to the taxpayer, and what part goes back to reduce the debt. In a sense, it's the same sort of analogy that Senator Bennett was raising with respect to that same particular process.

Senator EDWARDS. From your perspective, personally, is there someplace in this spectrum, either timewise or some other way, where your confidence level would be such that you would feel comfortable saying that we have done what we need to do, we have been fiscally disciplined, we have paid down enough of the debt, or we have paid down the debt, and it's now time for a tax cut?

That's what I'm trying to get a sense of.

Chairman GREENSPAN. I would say the words "several years" strike me. In other words, 1 year, 2 years; as far as I'm concerned, the more we can do, the better. I recognize that it is very difficult to sit with a surplus without doing something with it. My preference is to go as far as we can in paying down the debt because, in the process, we increase the debt-raising capacity of the Federal Government as well, and merely delaying what we're bound to do doesn't eliminate it.

In other words——

Senator EDWARDS. Excuse me for interrupting you, but I assume in that process of several years, as you describe it, you would anticipate, if these projections turn out to be at least roughly accurate, that there would be a place at that point in time where we have done what we need to do with the national debt, and it's time to give taxpayers back their money?

Chairman GREENSPAN. Absolutely. And, indeed, many of the programs that we're now looking at do just that. It's a matter of their being enacted now, rather than a little later. I'm not terribly certain that a number of the bills that you're confronted with are the wrong bills; that is, even with the time frame they have, it is a question of when do you put them into law?

Senator EDWARDS. Absolutely. I agree with that completely.

Chairman Greenspan, if I could ask just one last question, which is really a very practical question, and it goes to the paying down the debt issue. All of us have to go back home and talk to our constituents. I will be talking to a lot of North Carolina families, who may be saying to me, for example, around the kitchen table: "Well, a tax cut was proposed that would give us back $600 a year in our taxes, and that's money we could use. It would really help out our family." What should I say to them?

Let's assume, at least for the moment, that I don't believe a tax cut is the right thing to do. What should I say to them about why it makes sense to do the kinds of things you have been talking about; using the money, for example, to pay down the national debt? How does it affect their lives is what I'm really asking?

Chairman GREENSPAN. It affects their lives because, if we pay down the national debt, mortgage interest rates would be lower than they otherwise would be, the cost of capital generally for capital investment or job-producing investments is likely to be lower than it would otherwise be, and, as I said before, the debt-raising capacity of the Federal Government improves so that in the event that we run into the necessity where significant funds are required, for tax cuts or anything else, that capacity is there.

Senator EDWARDS. Could you honestly say to them that it also increases the likelihood that they will hold their jobs, that they will have pay raises, those kinds of things?

Chairman GREENSPAN. I think that's stretching it a bit. You can promise a lot of things.

Senator EDWARDS. But you want to tell them the truth.

Chairman GREENSPAN. I would say, theoretically, you can go in that direction, but I wouldn't press it.

[Laughter.]

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

Chairman GRAMM. I note that Senators Hagel, Crapo, and Kerry are here, but have not yet had the opportunity to make an opening statement. Senator Hagel, are there any observations you would like to make?

OPENING COMMENTS OF SENATOR CHUCK HAGEL

Senator HAGEL. Thank you, Chairman Gramm.

Chairman Greenspan, thank you for your testimony, and also for your leadership. Today, our economy is in good condition. This is, in large part, due to your deft handling of the country's monetary policy. I am very appreciative of that and I thank you.

Mr. Chairman, I am going to ask that my full statement be included in the record.

Thank you.

Chairman GRAMM. Senator Crapo.

OPENING COMMENTS OF SENATOR MIKE CRAPO

Senator CRAPO. Thank you, Mr. Chairman.

I will join the remarks of those who have gone before me. Chairman Greenspan, for the great work you have done, I would like to add my praise. Thank you for your enlightening testimony.

Thank you, Mr. Chairman.

Chairman GRAMM. Senator Kerry.

OPENING COMMENTS OF SENATOR JOHN F. KERRY

Senator KERRY. Thank you, Mr. Chairman.

Chairman Greenspan, I join with everybody in thanking you for a very extraordinary job. Your stewardship is obvious to all, and I think is gaining the recognition that it appropriately deserves.

Thank you very much, Mr. Chairman.

Chairman GRAMM. Chairman Greenspan, I have a couple more questions. Senator Schumer promises me he has just one more question, and then we will end the hearing.

I would like to begin by saying that if you're going to tell the American people that you're paying down the debt and you're not going to vote for a tax cut, you had better vote against all these spending increases, or you're not telling them the truth.

Chairman GREENSPAN. Absolutely.

Chairman GRAMM. Where I'm coming from on this whole issue, if I believe we could hold the line on spending, I would much prefer to do nothing now, run down the debt for 16 months, have a Presidential election, let the issue in that election be what we do with the surplus, let the American people decide in the congressional races and the Presidential race, and make the decision. That would be my preference.

Unfortunately, I see a buildup of what could become the most rapid growth in Government spending since the 1970's. And I am concerned that we could wait around for 16 months and end up with another massive, unfunded entitlement—because all that the President's giving Medicare, as you know, is an IOU that would be cashed in 15 years from now when there's no money. The Treasury is no better off with the IOU in terms of paying the benefits than they are without it, as you, of all people, know.

I am simply driven to the tax cut now, believing the money won't be there when we elect a new President if we don't do it now. I don't have any doubt we would pass a better tax cut with the next President than we're going to pass with this one, because I know who this President is, and I think I know who the next President will be. But that, basically, is the dilemma I find myself in.

Let me give you my two questions. As you know, the House will probably name conferees today, at long last, on the Financial Services Modernization Act. As you are also aware, the Treasury has taken the extraordinary position of saying that unless we allow the banks to provide these expanded financial services within the bank structure itself, rather than outside the bank in the holding company—which is the position that you have taken—they would consider vetoing the bill.

Number one, I don't know that I believe they would veto the bill; number two, there may be some ability to compromise here. But I want to be sure I get a simple answer to this question.

As the Chairman of this Committee, and obviously the Chairman of the Senate side of the Conference, I am faced by this Administration with a choice, and the choice is either no Financial Services Modernization bill, or having the banks exercise these new powers within the bank itself, with the safety and soundness concerns and with the potential subsidy for banks in competing with other economic entities in those areas.

If I had to make the choice, no bill or allowing the so-called op-sub, if you were me, which choice would you make?

Chairman GREENSPAN. Well, Senator, I testified before the House Banking Committee—I believe it was House Banking or House Commerce—that as important as it is to get the Glass–Steagall Act repealed, it's far more important that it be done correctly. I have argued that it is a potentially destabilizing structure that would occur with the subsidies within the bank were we to have full powers in the subsidiaries of the banks because I think, with the extraordinary change in technology that is occurring and the rapid change in financial instruments that are proliferating throughout this economy and the world, that we have to be cautious when we have a significant subsidy in a financial institution to be sure that is appropriately contained.

Allowing significant powers in the subsidiary of the bank, in my judgment, would not do that.

Chairman GRAMM. I think you were sufficiently clear, but I want to be absolutely sure no one is confused. If the choice were op-subs or no bill, you would say no bill?

Chairman GREENSPAN. That is correct, Senator.

Chairman GRAMM. I hope it's not that choice, because I come down on the same side that you do on this issue. I'll ask my final question, and then turn to Senator Schumer.

I'm really worried about what we're doing in farm policy, because I look at the data. I read your speech to the independent bankers, and I have asked all of our people interested in agricultural policy to read the speech. But basically, the productivity which is driving the current economic expansion is at work in agriculture with greater focus than it is in the economy as a whole.

Productivity growth in agriculture, in the last 30 years, has outstripped productivity growth in the economy by roughly a two-to-one margin. In fact, their costs are going down in agriculture, and this rapid growth in technology, both here and worldwide, together with the loss of markets because of the Asian financial crisis and some other minor factors, has produced a decline in farm prices.

The point is that to the extent that this decline is due to technological breakthroughs, it's not going away. The bottom line is, as hard as it sounds for us, we have a proposal from Senator Daschle that we give $9.9 billion of payments to farmers to offset a decline in farm income of approximately $4 billion. The net result would be a $5 billion increase over what would have happened had prices not gone down.

The problem, it seems to me, with that proposal is that if this technological expansion continues with its downward pressure—as technological improvements produce downward pressure on prices, which is why society benefits—we are literally, through our policy, encouraging more people to go into production and driving prices down further.

Do you share those concerns? I ask this as a Senator whose State is the largest beneficiary of Federal farm payments.

Chairman GREENSPAN. I do share your concern, Senator, because the agricultural productivity revolution is even more remarkable, as you pointed out, than we see in the nonfarm area. Crop yields have gone up in the major crops extraordinarily. Herds of cattle and hogs have not changed materially, but the output of beef, pork, milk, and especially chickens and poultry has been just unbelievable. The improvements in agriculture are truly awesome.

Chairman GRAMM. And you can probably make a case that we have more of it coming than we might have in the economy as a whole.

Chairman GREENSPAN. I don't know that, but what has occurred to date shows no evidence that I'm aware of that the rate of productivity has slowed down. Indeed, in the last year or two, productivity has moved up even faster.

Chairman GRAMM. Well, the remarkable thing is when you have these farms with 275,000 pigs and the cost of production has fallen right through the floor, and they're producing more pork with fewer pigs, which is incredible, to be subsidizing people to stay in hog production just seems suicidal to me, even though I have hog producers who, because of these technological breakthroughs, will end up being driven out of business almost without regard to what we ultimately do. It's a very difficult thing to deal with.

Senator Schumer.

Senator SCHUMER. Thank you. I was tempted to say something about producing more pork with fewer pigs, but I'm going to let it drop. I thank the Chairman for his indulgence and for his always excellent questions. I have one final question which I didn't have time to ask before. It also relates to our international relationships, although not in the area of agriculture.

Since 1994, private ownership of the U.S. Government debt has remained stable. I think it's gone from $3.2 trillion to $3.3 trillion. But over the same period, foreign private ownership has increased dramatically. The numbers I have here go from $667 billion—which was about 21 percent of outstanding debt—to $1.3 trillion, which is 39 percent. Over only a 4- to 5-year period, that's a pretty big increase.

At the same time, we have seen in recent weeks that the value of our dollar, of the U.S. dollar, is dropping vis-à-vis other currencies. I think the Japanese are now actually doing the inverse of what they and we were doing several years ago, which was trying to support the dollar. We haven't been terribly successful in that support.

My question is if foreign investor attitudes about whether to hold dollars change, if they're less likely to hold dollars as they become weaker, what effect would that have on our economy? Isn't it the same as raising interest rates?

What would the effect on the bond market be? Is it reasonable to assume that capital would flee? What can we do to prevent this, if anything? How great a danger is this? What are the possible solutions?

Chairman GREENSPAN. Senator, in my prepared remarks, one of the imbalances that I discuss is precisely this question, and I do raise the issue that the expanding current account deficit is being financed, obviously, by an ever-increasing amount of ownership of claims against the United States by foreigners, both governments and private citizens. Should that propensity to hold dollars fade, then clearly one of the things that will occur is that market interest rates will tend to rise.

Indeed, a goodly part of the holdings of foreigners are in coupon issues, as I'm sure you know. The consequence of this is that, if there is a significant withdrawal—which I must say I don't really perceive; I think there's a tendency every time markets go up and down for a few weeks that it becomes a long-term trend and I think that, frankly, it's being overdone, but let's leave that aside for the moment.

Talking in the abstract, clearly, as I say in my prepared remarks, you get higher market interest rates, interest-sensitive areas of the economy under some pressure, and you bring down the rate of growth as a consequence.

I can't say I have seen anything of that amplitude or dimension even remotely pending, but it is clearly one of the issues which we at the Federal Reserve and our colleagues at the Treasury are watching very closely.

Senator SCHUMER. Right now, you're not terribly worried?

Chairman GREENSPAN. No, I'm not.

Senator SCHUMER. Thank you, Mr. Chairman.

Chairman GRAMM. Chairman Greenspan, thank you very much for coming. We appreciate your patience in being here. The market is up 10 points today, so you have said nothing that has in any way encouraged or discouraged anybody.

Perhaps that's the way it should be. Thank you very much for coming today.

The hearing is adjourned.

[Whereupon, at 12:40 p.m., Wednesday, July 28, 1999, the hearing was adjourned.]

[Prepared statements and additional material supplied for the record follow:]

PREPARED STATEMENT OF SENATOR PHIL GRAMM

Under existing law, this is the last mandated Humphrey–Hawkins hearing. As I have said, we get an opportunity to hear from Alan Greenspan on a regular basis, and he has not been selfish with his time with regard to the Congress. In fact, he probably spends more time up here than he should.

I don't see any great necessity in continuing the Humphrey–Hawkins hearings. Other of my colleagues feel differently. Obviously, while I'm Chairman, I'm going to be guided by the will of the majority of the Committee. But whether this is the last of the Humphrey–Hawkins hearings, or whether this is just one in a continuing series, I want to welcome Alan Greenspan, Chairman of the Board of Governors of the Federal Reserve System.

Alan Greenspan is the greatest central banker in the history of the United States and therefore, by definition, is the greatest central banker in the history of the world. It is an amazing thing to me, as I travel around the world and meet other central bankers, how clear it is that Alan Greenspan has become the world's standard for central banking. To the degree that imitation is the highest form of flattery, almost no matter where you go, no matter which central bankers you visit with, they tend to act and sound like Alan Greenspan. It seems to me, Mr. Greenspan, that is a great compliment to you.

Now, we have spent many hours—far more than the debate deserves—debating about who is responsible for the golden economic era we find ourselves in. I don't ever remember the economy being better than it is today; I don't ever remember the prosperity being as broadly based as it is today.

Last year, our economy not only had strong economic growth, but probably over the last 3 years the average white-collar worker in America, certainly above the age of 50, has seen the value of their financial assets grow by more than their annual income. For the first time ever last year, Americans had more financial wealth than they had in the equity value of their homes.

We have debated endlessly as to who is responsible. I give a lot of credit to Ronald Reagan in terms of planting the seeds of modernization and efficiency, holding back the forces of protectionism. In the 1980's, when General Motors was questioning whether it could stay in the automobile industry, the unions and automakers came to Washington and met with Ronald Reagan. He gave them the prescription "compete or die," and they competed.

There are many people deserving of credit for the current golden economic age we live in, but I think if there is any person currently in office who could lay a claim to having done more than any other person on the planet to produce this record level of prosperity, it is Alan Greenspan. I want to thank you, Chairman Greenspan, for the great job you have done. I want to thank you for the great service you have provided.

Your utterances have become somewhat like the Bible in the sense that everybody quotes you to prove their point, even though their quote may be counter to the quote that someone else is using to prove exactly the opposite point. I am sure that much of your time today will be spent deciding the exact meaning of Deuteronomy, or at least that section of Alan Greenspan's utterances.

In any case, we appreciate the great job you have done, and we appreciate the sacrifice you have made in keeping this position. I have tried now for several years to raise your pay. I know that you're not missing any meals, and you don't necessarily need it, but I don't want it so that you have to be rich to be the Chairman of the Board of Governors of the Federal Reserve System. I intend to continue to work until we get salaries that are comparable to what they are in other areas of the Government.

PREPARED STATEMENT OF SENATOR CONNIE MACK

Since 1982, the United States has had only 9 months of recession. This is the longest we have gone with only 9 months of recession since at least the 1850's.

Besides the great reduction in marginal tax rates in the 1980's, price stability has been one of the key reasons for this record-setting performance. During the past 17 years, inflation has been less volatile than during any other 17-year period since at least the 1820's.

With Chairman Greenspan in charge, I remain confident the Fed will keep prices stable. However, Mr. Greenspan will not be running the Federal Reserve forever. That's why I intend to reintroduce legislation that will make it explicit that long-term price stability is the Fed's primary goal. This legislation will also continue the tradition of semiannual hearings before the Banking Committee.

As always, Chairman Greenspan, I look forward to your comments.

PREPARED STATEMENT OF SENATOR CHUCK HAGEL

Today, our economy is in good condition. This is, in large part, due to Chairman Greenspan's deft handling of the country's monetary policy. We are now enjoying a combination of positive economic factors that many thought were incompatible—low inflation and low unemployment. I think that says a great deal about Chairman Greenspan's time at the Federal Reserve System.

Unfortunately, there is an important segment of our society that isn't enjoying the benefits of this economic expansion. Farmers and ranchers are suffering from low commodity prices. Some people are trying to make the Freedom to Farm Act the scapegoat for the current crisis in agriculture. I see it differently.

In large part, the problems in the agriculture economy are the result of the Government's failure to provide the open markets promised when the Freedom to Farm Act was enacted. In addition, the Government has been too slow in reforming our patchwork of unilateral sanctions and other restrictions on the free flow of agricultural products. We should be more aggressive in creating opportunities for free and fair trade—giving our farmers and ranchers new markets for their goods. We need to fulfill our promises to America's agricultural producers.

Another area I hope to engage Chairman Greenspan in deals with the issue of tax cuts. Congress is considering options for the *projected* surplus. Those opposed to tax cuts are arguing that if Congress enacts tax cuts, the Federal Reserve will be forced to raise interest rates in order to cool off the economy. I would like to hear from Chairman Greenspan on what he thinks we should do with the surplus, if in fact the projections are correct.

Finally, members of the Conference Committee are beginning the task of working out many of the difficult details encompassed in the Financial Modernization bill. Today, the United States is the global leader in financial services. We must not jeopardize this position through congressional inaction or bad choices. I would appreciate any advice Chairman Greenspan chooses to give as we navigate the tough issues during conference.

I look forward to Chairman Greenspan's testimony and thank him for appearing here today.

PREPARED STATEMENT OF ALAN GREENSPAN

CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

JULY 28, 1999

Introduction

Thank you, Mr. Chairman and Members of the Committee, for this opportunity to present the Federal Reserve's semiannual report on monetary policy.

To date, 1999 has been an exceptional year for the American economy, but a very challenging one for American monetary policy. Through the first 6 months of this year, the U.S. economy has further extended its remarkable performance. Almost 1¼ million jobs were added to payrolls on net, and gross domestic product apparently expanded at a brisk pace, perhaps near that of the prior 3 years.

At the root of this impressive expansion of economic activity has been a marked acceleration in the productivity of our Nation's workforce. This productivity growth has allowed further healthy advances in real wages, and has permitted activity to expand at a robust clip while helping to foster price stability.

Last fall, the Federal Open Market Committee (FOMC) eased monetary policy to counter a seizing-up of financial markets that threatened to disrupt economic activity significantly. As those markets recovered, the FOMC had to assess whether that policy stance remained appropriate. By late last month, when it became apparent that much of the financial strain of last fall had eased, that foreign economies were firming, and that demand in the United States was growing at an unsustainable pace, the FOMC raised its intended Federal funds rate ¼ percentage point, to 5 percent. To have refrained from doing so, in our judgment, would have put the U.S. economy's expansion at risk.

If nothing else, the experience of the last decade has reinforced earlier evidence that a necessary condition for maximum sustainable economic growth is price stability. While product prices have remained remarkably restrained in the face of exceptionally strong demand and expanding potential supply, it is imperative that we do not become complacent.

The already shrunken pool of job-seekers and considerable strength of aggregate demand suggest that the Federal Reserve will need to be especially alert to inflation risks. Should productivity fail to continue to accelerate and demand growth persist or strengthen, the economy could overheat. That would engender inflationary pressures and put the sustainability of this unprecedented period of remarkable growth in jeopardy. One indication that inflation risks were rising would be a tendency for labor markets to tighten further, but the FOMC also needs to continue to assess whether the existing degree of pressure in these markets is consistent with sustaining our low-inflation environment. If new data suggest it is likely that the pace of cost and price increases will be picking up, the Federal Reserve will have to act promptly and forcefully so as to preclude imbalances from arising that would only require a more disruptive adjustment later—one that could impair the expansion and bring into question whether the many gains already made can be sustained.

Recent Developments

A number of important forces have been shaping recent developments in the U.S. economy. One has been a recovery of financial markets from the disruptions of last fall. By the end of 1998, the extreme withdrawal from risk-taking and consequent seizing-up of markets had largely dissipated. This year, risk spreads have narrowed further—though generally not to the unrealistically low levels of a year ago—and a heavy volume of issuance in credit markets has signaled a return to their more normal functioning. Equity prices have risen to new highs and, in the process, have elevated price-earnings ratios to historic levels.

Abroad, many financial markets and economies also have improved. Brazil weathered a depreciation of its currency with limited fallout on its neighbors. In Asia, a number of the emerging-market economies seemed to be reviving after the trying adjustments of the previous year or so. Progress has not been universal, and in many economies prospects remain clouded, depending importantly on the persistence of efforts to make fundamental reforms whose necessity had been made so painfully obvious in the crises those economies endured. Nonetheless, the risks of further major disruptions to financial and trade flows that had concerned the FOMC when it eased policy last fall have clearly diminished. Improving global prospects also mean that the U.S. economy will no longer be experiencing declines in basic commodity and import prices that held down inflation in recent years.

In the domestic economy, data becoming available this year have tended to confirm that productivity growth has stepped up. It is this acceleration of productivity over recent years that has explained much of the surprising combination of a slowing in inflation and sustained rapid real growth. Increased labor productivity has directly limited the rise of unit labor costs and accordingly damped pressures on prices. This good inflation performance, reinforced also by falling import prices, in turn has fostered further declines in inflation expectations over recent years that bode well for pressures on costs and prices going forward.

In testimony before this Committee several years ago, I raised the possibility that we were entering a period of technological innovation which occurs perhaps once every 50 or 100 years. The evidence then was only marginal and inconclusive. Of course, tremendous advances in computing and telecommunications were apparent, but their translations into improved overall economic efficiency and rising national productivity were conjectural at best. While the growth of output per hour had shown some signs of quickening, the normal variations exhibited by such data in the past were quite large. More intriguing was the remarkable surge in capital investment after 1993, particularly in high-tech goods, a full 2 years after a general recovery was under way. This suggested a marked increase in the perceived prospective rates of return on the newer technologies.

That American productivity growth has picked up over the past 5 years or so has become increasingly evident. Nonfarm business productivity (on a methodologically consistent basis) grew at an average rate of a bit over 1 percent per year in the 1980's. In recent years, productivity growth has picked up to more than 2 percent, with the past year averaging about 2½ percent.

To gauge the potential for similar, if not larger, gains in productivity going forward, we need to attempt to arrive at some understanding of what has occurred to date. A good deal of the acceleration in output per hour has reflected the sizable increase in the stock of labor-saving equipment. But that is not the whole story. Output has grown beyond what normally would have been expected from increased inputs of labor and capital alone. Business restructuring and the synergies of the new technologies have enhanced productive efficiencies. American industry quite generally has shared an improved level of efficiency and cost containment through high-tech capital investment, not solely newer industries at the cutting edge of innovation. Our century-old motor vehicle industry, for example, has raised output per hour by a dramatic 4½ percent annually on average in the past 2 years, compared with a lackluster 1¼ percent on average earlier this decade. Much the same is true of many other mature industries, such as steel, textiles, and other stalwarts of an earlier age. This has confirmed the earlier indications of an underlying improvement in rates of return on the newer technologies and their profitable synergies with the existing capital stock.

These developments have created a broad range of potential innovations that have granted firms greater ability to profitably displace costly factors of production whenever profit margins have been threatened. Moreover, the accelerating use of newer technologies has markedly enhanced the flexibility of our productive facilities. It has dramatically reduced the lead times on the acquisition of new equipment and enabled firms to adjust quickly to changing market demands. This has indirectly increased productive capacity and effectively, at least for now, eliminated production bottlenecks and the shortages and price pressures they inevitably breed.

This greater ability to pare costs, increase production flexibility, and expand capacity are arguably the major reasons why inflationary pressures have been held in check in recent years. Others have included the one-time fall in the prices of oil, other commodities, and imports more generally. In addition, a breaking down of barriers to cross-border trade, owing both to the new technologies and to the reduction of Government restrictions on trade, has intensified the pressures of competition, helping to contain prices. Coupled with the decline in military spending worldwide, this has freed up resources for more productive endeavors, especially in a number of previously nonmarket economies.

More generally, the consequent erosion of pricing power has imparted an important imperative to hold down costs. The availability of new technology to each company and its rivals affords both the opportunity and the competitive necessity of taking steps to reduce costs, which translates on a consolidated basis into increased national productivity.

The acceleration in productivity owes importantly to these new information technologies. Prior to this IT revolution, most of twentieth-century business decisionmaking had been hampered by limited information. Owing to the paucity of timely knowledge of customers' needs, the location of inventories, and the status of material flows throughout complex production systems, businesses built in substantial redundancies.

Doubling up on materials and staffing was essential as a cushion against the inevitable misjudgments made in real time when decisions were based on information that was hours, days, or even weeks old. While businesspeople must still operate in an uncertain world, the recent years' remarkable surge in the availability of real-time information has enabled them to remove large swaths of inventory safety stocks, redundant capital equipment, and layers of workers, while arming them with detailed data to fine-tune specifications to most individual customer needs.

Despite the remarkable progress witnessed to date, history counsels us to be quite modest about our ability to project the future path and pace of technology and its implications for productivity and for economic growth. We must keep in mind that the pickup in productivity is relatively recent, and a key question is whether that growth will persist at a high rate, drop back toward the slower standard of much of the last 25 years, or climb even more. By the last I do not just mean that productivity will continue to grow, but that it will grow at an increasingly faster pace through a continuation of the process that has so successfully contained inflation and supported economic growth in recent years.

The business and financial community does not as yet appear to sense a pending flattening in this process of increasing productivity *growth*. This is certainly the widespread impression imparted by corporate executives, and it is further evidenced by the earnings forecasts of more than a thousand securities analysts who regularly follow S&P 500 companies on a firm-by-firm basis, which presumably embody what corporate executives are telling them. While the level of these estimates is no doubt upwardly biased, unless these biases have significantly changed over time, the revisions of these estimates should be suggestive of changes in underlying economic forces. Except for a short hiatus in the latter part of 1998, analysts' expectations of 5-year earnings growth have been revised up continually since early 1995. If anything, the pace of those upward revisions has quickened of late. True, some of that may reflect a pickup in expected earnings of foreign affiliates, especially in Europe, Japan, and the rest of Asia, but most of this year's increase almost surely owes to domestic influences.

There are only a limited number of ways that the expected long-term growth of domestic profits can increase, and some we can reasonably rule out. There is little evidence that company executives or security analysts have significantly changed their views in recent months of the longer-term outlook for continued price containment, the share of profits relative to wages, or anticipated growth of hours worked. Rather, analysts and the company executives they talk to appear to be expecting that unit costs will be held in check, or even lowered, as sales expand. Hence, implicit in upward revisions of their forecasts, when consolidated, is higher expected national productivity growth.

Independent data on costs and prices in recent years tend to confirm what aggregate data on output and hours worked indicate: that productivity growth has risen. With price inflation stable and domestic operating profit margins rising, the rate of increase in total consolidated unit costs must have been falling.

Even taking into account the evidence of declining unit interest costs of nonfinancial corporations, unit labor cost increases (which constitute three-quarters of total unit costs) must also be slowing. Because until very recently growth of compensation per hour has been rising, albeit modestly, it follows then that productivity *growth* must have been rising these past 5 years, as well. Accelerating productivity is thus evident in underlying consolidated income statements of nonfinancial corporations, as well as in our more direct, though doubtless partly flawed, measures of output and input.

With that said, we must also understand the limits to this process of productivity-driven growth. To be sure, the recent acceleration in productivity has provided an offset to our taut labor markets by holding unit costs in check and by adding to the competitive pressures that have contained prices. But once output-per-hour growth stabilizes, even if at a higher rate, any pickup in the growth of nominal compensation per hour will translate directly into a more rapid rate of increase in unit labor costs, heightening the pressure on firms to raise the prices of the goods and services they sell. Thus, should the increments of gains in technology that have fostered productivity slow, any extant pressures in the labor market should ultimately show through to product prices.

Meanwhile, the impressive productivity growth of recent years also has had important implications for the growth of aggregate demand. If productivity is driving up real incomes and profits—and, hence, gross domestic *income*—then gross domestic product must mirror this rise with some combination of higher sales of motor vehicles, other consumer goods, new homes, capital equipment, and net exports. By themselves, surges in economic growth are not necessarily unsustainable—provided they do not exceed the sum of the rate of growth in the labor force and productivity for a protracted period. However, when productivity is accelerating, it is very difficult to gauge when an economy is in the process of overheating.

In such circumstances, assessing conditions in the labor market can be helpful in forming those judgments. Employment growth has exceeded the growth in working-age population this past year by almost ½ percentage point. While somewhat less than the spread between these growth rates over much of the past few years, this excess is still large enough to continue the further tightening of labor markets. It implies that real GDP is growing faster than its potential. To an important extent, this excess of the growth of demand over supply owes to the wealth effect as consumers increasingly perceive their capital gains in the stock and housing markets as permanent and, evidently as a consequence, spend part of them, an issue to which I shall return shortly.

There can be little doubt that, if the pool of job-seekers shrinks sufficiently, upward pressures on wage costs are inevitable, short—as I have put it previously—of a repeal of the law of supply and demand. Such cost increases have invariably presaged rising inflation in the past, and presumably would in the future, which would threaten the economic expansion.

By themselves, neither rising wages nor swelling employment rolls pose a risk to sustained economic growth. Indeed, the Federal Reserve welcomes such developments and has attempted to gauge its policy in recent years to allow the economy to realize its full, enhanced potential. In doing so, we must remain concerned with evolving shorter-run imbalances that can constrain long-term economic expansion and job growth.

With productivity growth boosting both aggregate demand and aggregate supply, the implications for the real market interest rates that are consistent with sustainable economic growth are not obvious. In fact, current real rates, although somewhat high by our historical standards, have been consistent with continuing rapid growth in an environment where, as a consequence of greater productivity growth, capital gains and high returns on investment give both households and businesses enhanced incentives to spend.

Other Considerations

Even if labor supply and demand were in balance, however, other aspects of the economic environment may exhibit imbalances that could have important implications for future developments. For example, in recent years, as a number of analysts have pointed out, a significant shortfall has emerged in the private saving with which to finance domestic investment in plant and equipment and houses.

One offset to the decline in household saving out of income has been a major shift of the Federal budget to surplus. Of course, an important part of that budgetary improvement, in turn, owes to augmented revenues from capital gains and other taxes that have flowed from the rising market value of assets. Still, the budget surpluses have helped to hold down interest rates and facilitate private spending.

The remaining gap between private saving and domestic investment has been filled by a sizable increase in saving invested from abroad, largely a consequence of the technologically-driven marked increase in rates of return on U.S. investments. Moreover, in recent years, with many foreign economies faltering, U.S. investments have looked particularly attractive. As the U.S. international indebtedness mounts, however, and foreign economies revive, capital inflows from abroad that enable domestic investment to exceed domestic saving may be difficult to sustain. Any resulting decline in demand for dollar assets could well be associated with higher market interest rates, unless domestic saving rebounds.

Near-Term Outlook

Going forward, the Members of the Federal Reserve Board and Presidents of the Federal Reserve Banks believe there are mechanisms in place that should help to slow the growth of spending to a pace more consistent with that of potential output growth. Consumption growth should slow some, if, as seems most likely, outsized gains in share values are not repeated. In that event, businesses may trim their capital spending plans, a tendency that would be reinforced by the higher level of market interest rates that borrowers now face. But with large unexploited long-term profit opportunities stemming from still-burgeoning innovations and falling prices of many capital goods, the typical cyclical retrenchment could be muted.

Working to offset somewhat this anticipated slowing of the growth of domestic demand, our export markets can be expected to be more buoyant because of the revival in growth in many of our important trading partners.

After considering the various forces at work in the near term, most of the Federal Reserve Governors and Bank Presidents expect the growth rate of real GDP to be between 3½ and 3¾ percent over the four quarters of 1999 and 2½ to 3 percent in 2000. The unemployment rate is expected to remain in the range of the past 18 months.

Inflation, as measured by the four-quarter percent change in the consumer price index, is expected to be 2¼ to 2½ percent over the four quarters of this year. CPI increases thus far in 1999 have been greater than the average in 1998, but the Federal Reserve Governors and Bank Presidents do not anticipate a further pickup in inflation going forward. An abatement of the recent run-up in energy prices would contribute to such a pattern, but the policymakers' forecasts also reflect their determination to hold the line on inflation, through policy actions if necessary. The central tendency of their CPI inflation forecasts for 2000 is 2 to 2½ percent.

Preemptive Policymaking

In its deliberations this year, the FOMC has had to wrestle with the issue of what policy setting has the capacity to sustain this remarkable expansion, now in its ninth year. For monetary policy to foster maximum sustainable economic growth, it is useful to preempt forces of imbalance before they threaten economic stability. But this may not always be possible—the future at times can be too opaque to penetrate. When we are able to be preemptive, we should be, because modest preemptive actions can obviate more drastic actions at a later date that could destabilize the economy.

I should emphasize that preemptive policymaking is equally applicable in both directions, as has been evident over the years both in our inclination to raise interest rates when the potential for inflationary pressures emerged, such as in the spring of 1994, or to lower rates when the more palpable risk was economic weakness, as in the fall of last year. This evenhandedness is necessary because emerging adverse trends may fall on either side of our long-run objective of price stability. Stable prices allow households and firms to concentrate their efforts on what they do best: consuming, producing, saving, and investing. A rapidly rising or a falling general price level would confound market signals and place strains on the system that ultimately may throttle economic expansion.

In the face of uncertainty, the Federal Reserve at times has been willing to move policy based on an assessment that risks to the outlook were disproportionately skewed in one direction or the other, rather than on a firm conviction that, absent action, the economy would develop imbalances. For instance, both the modest policy tightening of the spring of 1997 and some portion of the easing of last fall could be viewed as insurance against potential adverse economic outcomes.

As I have already indicated, by its June meeting the FOMC was of the view that the full extent of this insurance was no longer needed. It also did not believe that its recent modest tightening would put the risks of inflation going forward completely into balance. However, given the many uncertainties surrounding developments on both the supply and demand side of the economy, the FOMC did not want to foster the impression that it was committed in short order to tighten further. Rather, it judged that it would need to evaluate the incoming data for more signs that further imbalances were likely to develop.

Preemptive policymaking requires that the Federal Reserve continually monitor economic conditions, update forecasts, and appraise the setting of its policy instrument. Equity prices figure importantly in that forecasting process because equity prices influence aggregate demand. As I testified last month, the central bank cannot effectively directly target stock or other asset prices. Should an asset bubble arise, or even if one is already in train, monetary policy properly calibrated can doubtless mitigate at least part of the impact on the economy. And, obviously, if we could find a way to prevent or deflate emerging bubbles, we would be better off. But identifying a bubble in the process of inflating may be among the most formidable challenges confronting a central bank, pitting its own assessment of fundamentals against the combined judgment of millions of investors.

By itself, the interpretation that we are currently enjoying productivity acceleration does not ensure that equity prices are not overextended. There can be little doubt that if the Nation's productivity growth has stepped up, the level of profits and their future potential would be elevated. That prospect has supported higher stock prices. The danger is that in these circumstances, an unwarranted, perhaps euphoric, extension of recent developments can drive equity prices to levels that are unsupportable even if risks in the future become relatively small. Such straying above fundamentals could create problems for our economy when the inevitable adjustment occurs. It is the job of economic policymakers to mitigate the fallout when it occurs and, hopefully, ease the transition to the next expansion.

Century Date Change Preparations

I would be remiss in this overview of near-term economic developments if I did not relay the ongoing efforts of the Federal Reserve, other financial regulators, and the private sector to come to grips with the rollover of their computer systems at the start of the upcoming century. While I have been in this business too long to promise that 2000 will open on an entirely trouble-free note, the efforts to address potential problems in the banking and financial system have been exhaustive. For our part, the Federal Reserve System has completed remediation and testing of all its mission-critical applications, including testing its securities and funds-transfer systems with our thousands of financial institution customers.

As we have said previously, while we do not believe consumers need to hold excess cash because we expect the full array of payment options to work, we have taken precautions to ensure that ample currency is available. Further, the Federal Reserve established a special liquidity facility at which sound depository institutions with good collateral can readily borrow at a slight penalty rate in the months surrounding the rollover. The availability of this back-stop funding should make depository institutions more willing to provide loans and lines of credit to other financial institutions and businesses and to meet any deposit withdrawals as this century closes.

The banking industry is also working hard, and with evident success, to prepare for the event. By the end of May, 98 percent of the Nation's depository institutions that were examined by Federal Financial Institutions Examination Council agencies were making satisfactory progress on their Year 2000 preparations. The agencies are now in the process of examining supervised institutions for compliance with the June 30 milestone date for completing testing and implementation of remediated mission-critical systems. Supervisors also expect institutions to prepare business resumption contingency plans and to maintain open lines of communication with customers and counterparties about their own readiness. The few remaining laggards among financial institutions in Year 2000 preparedness have been targeted for additional followup and, as necessary, will be subject to formal enforcement actions.

Conclusion

As a result of our Nation's ongoing favorable economic performance, not only has the broad majority of our people moved to a higher standard of living, but a strong economy also has managed to bring into the productive workforce many who had for too long been at its periphery. The unemployment rate for those with less than a high school education has declined from 10¾ percent in early 1994 to 6¾ percent today, twice the percentage point decline in the overall unemployment rate. These gains have enabled large segments of our society to obtain skills on the job and the self-esteem associated with work.

The questions before us today are what macroeconomic policy settings can best extend this favorable performance. No doubt, a monetary policy that is focused on promoting price stability over the long run and a fiscal policy focused on enhancing national saving by accumulating budget surpluses have been key elements in creating an environment fostering the capital investment that has driven the gains to productivity and living standards. I am confident that by maintaining this discipline, policymakers in the Congress, in the Executive branch, and at the Federal Reserve will give our vital U.S. economy its best chance of continuing its remarkable progress.

For use at 11:00 a.m., E.D.T.
Thursday
July 22, 1999

Board of Governors of the Federal Reserve System

Monetary Policy Report to the Congress
Pursuant to the
Full Employment and Balanced Growth Act of 1978

July 22, 1999

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM
Washington, D.C., July 22, 1999

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 the Full Employment and Balanced Growth Act of 1978.

Sincerely,

Alan Greenspan, Chairman

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Monetary Policy Report to the Congress

Report submitted to the Congress on July 22, 1999, pursuant to the Full Employment and Balanced Growth Act of 1978

MONETARY POLICY AND THE ECONOMIC OUTLOOK

The U.S. economy has continued to perform well in 1999. The ongoing economic expansion has moved into a near-record ninth year, with real output expanding vigorously, the unemployment rate hovering around lows last seen in 1970, and underlying trends in inflation remaining subdued. Responding to the availability of new technologies at increasingly attractive prices, firms have been investing heavily in new capital equipment; this investment has boosted productivity and living standards while holding down the rise in costs and prices.

Two of the major threats faced by the economy in late 1998—economic downturns in many foreign nations and turmoil in financial markets around the world—receded over the first half of this year. Economic conditions overseas improved on a broad front. In Asia, activity picked up in the emerging-market economies that had been battered by the financial crises of 1997. The Brazilian economy—Latin America's largest—exhibited a great deal of resilience with support from the international community, in the wake of the devaluation and subsequent floating of the *real* in January. These developments, along with the considerable easing of monetary policy in late 1998 and early 1999 in a number of regions, including Europe, Japan, and the United States, fostered a markedly better tone in the world's financial markets. On balance, U.S. equity prices rose substantially, and in credit markets, risk spreads receded toward more typical levels. Issuance of private debt securities ballooned in late 1998 and early 1999, in part making up for borrowing that was postponed when markets were disrupted.

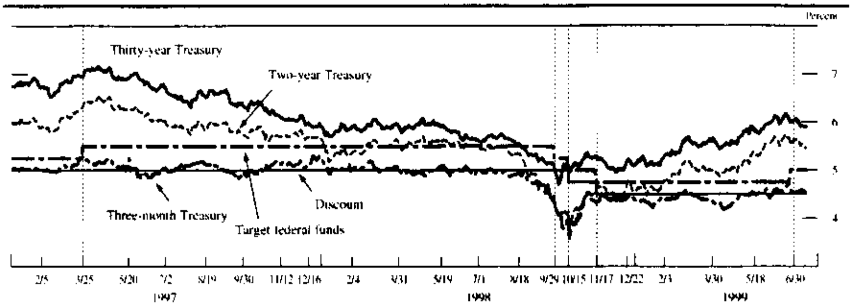
As these potentially contractionary forces dissipated, the risk of higher inflation in the United States resurfaced as the greatest concern for monetary policy. Although underlying inflation trends generally remained quiescent, oil prices rose sharply, other commodity prices trended up, and prices of non-oil imports fell less rapidly, raising overall inflation rates. Despite improvements in technology and business processes that have yielded striking gains in efficiency, the robust growth of aggregate demand, fueled by rising equity wealth and readily available credit, produced even tighter labor markets in the first half of 1999 than in the second half of 1998. If this trend were to continue, labor compensation would begin climbing increasingly faster than warranted by productivity growth and put upward pressure on prices. Moreover, the Federal Open Market Committee (FOMC) was concerned that as economic activity abroad strengthened, the firming of commodity and other prices might also foster a less favorable inflation environment. To gain some greater assurance that the good inflation performance of the economy would continue, the Committee decided at its June meeting to reverse a portion of the easing undertaken last fall when global financial markets were disrupted; the Committee's target for the overnight federal funds rate, a key indicator of money market conditions, was raised from 4¾ percent to 5 percent.

Monetary Policy, Financial Markets, and the Economy over the First Half of 1999

The FOMC met in February and March against the backdrop of continued rapid expansion of the U.S. economy. Demand was strong, employment growth was brisk, and labor markets were tight. Nonetheless, price inflation was still low, held in check by a substantial gain in productivity, ample manufacturing capacity, and low inflation expectations.

Activity was supported by a further settling down of financial markets in the first quarter after a period of considerable turmoil in the late summer and fall of 1998. In that earlier period, which followed Russia's moratorium on a substantial portion of its debt payments in mid-August, the normal functioning of U.S. financial markets had been impaired as investors cut back sharply their credit risk exposures and market liquidity dried up. The Federal Reserve responded to these developments by trimming its target for the overnight federal funds rate by 75 basis points in three steps. In early 1999, the devaluation and subsequent floating of the Brazilian *real* in mid-January

Selected interest rates



NOTE. The data are daily. Vertical lines indicate the days on which the Federal Reserve announced a monetary policy action. The dates on the horizontal axis are those on which either the FOMC held a scheduled meeting or a policy action was announced. Last observations are for July 19, 1999.

heightened concerns for a while, but market conditions overall improved considerably.

At its February and March meetings, the FOMC left the stance of monetary policy unchanged. The Committee expected that the growth of output might well slow sufficiently to bring production into close enough alignment with the economy's enhanced potential to forestall the emergence of a trend of rising inflation. Although domestic demand was still increasing rapidly, it was anticipated to moderate over time in response to the buildup of large stocks of business equipment, housing units, and durable goods and more restrained expansion in wealth in the absence of appreciable further increases in equity prices. Furthermore, the FOMC, after taking account of the near-term effects of the rise in crude oil prices, saw few signs that cost and price inflation was in the process of picking up. The unusual combination of very high labor resource utilization and sustained low inflation suggested considerable uncertainty about the relationship between output and prices. In this environment, the Committee concluded that it could wait for additional information about the balance of risks to the economic expansion.

By the time of the May FOMC meeting, demand was still showing considerable forward momentum, and growth in economic activity still appeared to be running in excess of the rate of increase of the economy's long-run capacity to expand output. Borrowers' heavy demands for credit were being met on relatively favorable terms, and wealth was further boosted by rapidly rising equity prices. Also, the economic and financial outlook for many emerging-market countries was brighter. Trends in inflation were still subdued, although consumer prices—even apart from a big jump in energy prices—were reported to have registered a sizable rise in April.

At its May meeting, the FOMC believed that these developments tilted the risks toward further robust growth that would exert additional pressure on already taut labor markets and ultimately show through to inflation. Moreover, a turnaround in oil and other commodity markets meant that prices of these goods would no longer be holding down inflation, as they had over the past year. Yet, the economy to date had shown a remarkable ability to accommodate increases in demand without generating greater underlying inflation trends, as the continued growth of labor productivity had helped to contain cost pressures. The uncertainty about the prospects for prices, demand pressures, and productivity was large, and the Committee decided to defer any policy action. However, in light of its increased concern about the outlook for inflation, the Committee adopted an asymmetric directive tilted toward a possible firming of policy. The Committee also wanted to inform the public of this significant revision in its view, and it announced a change in the directive immediately after the meeting. The announcement was the first under the Committee's policy of announcing changes in the tilt of the domestic directive when it wants to communicate a major shift in its view about the balance of risks to the economy or the likely direction of its future actions.

In the time leading up to the FOMC's June meeting, economic activity in the United States continued to move forward at a brisk pace, and prospects in a number of foreign economies showed additional improvement. Labor markets tightened slightly further. The federal funds rate, however, remained at the lower level established in November 1998, when the Committee took its last of three steps to counter severe financial market strains. With those strains largely gone, the Committee believed that the time had come to reverse some of that accommodation, and it raised the targeted overnight federal funds rate 25 basis points, to 5 percent. Looking ahead, the Committee expected demand to remain strong, but it also noted the possibility that a further pickup in productivity could allow the economy to accommodate this demand for some time without added inflationary pressure. In light of these conflicting forces in the economy, the FOMC returned to a symmetric directive. Nonetheless, with labor markets already tight, the Committee recognized that it needed to stay especially alert to signs that inflationary forces were emerging that could prove inimical to the economic expansion.

Economic Projections for 1999 and 2000

The members of the Board of Governors and the Federal Reserve Bank presidents see good prospects for sustained, solid economic expansion through next year. For this year, the central tendency of their forecasts of growth of real gross domestic product is 3½ percent to 3¾ percent, measured as the change between the fourth quarters of 1998 and 1999. For 2000, the forecasts of real GDP are mainly in the 2½ percent to 3 percent range. With this pace of expansion, the civilian unemployment rate is expected to remain close to the recent 4¼ percent level over the next six quarters.

The increases in income and wealth that have bolstered consumer demand over the first half of this year and the desire to invest in new high-technology equipment that has boosted business demand during the same period should continue to stimulate spending over the quarters ahead. However, several factors are expected to exert some restraint on the economy's momentum by next year. With purchases of durable goods by both consumers and businesses having risen still further and running at high levels, the stocks of such goods probably are rising more rapidly than is likely to be desired in the longer run, and the growth of spending should moderate. The increase in market interest rates should help to damp spending as well. And unless the extraordinary gains in equity prices of the past few years are extended, the impetus to spending from increases in wealth will diminish.

Federal Reserve policymakers believe that this year's rise in the consumer price index (CPI) will be larger than that in 1998, largely because of the rebound in retail energy prices that has already occurred. Crude oil prices have moved up sharply, reversing the decline posted in 1998 and leading to a jump in the CPI this spring. For next year, the FOMC participants expect the increase in the CPI to remain around this year's pace, with a central tendency of 2 percent to 2½ percent. Futures market quotes suggest that the prevailing expectation is that the rebound in oil prices has run its course now, and ample industrial capacity and productivity gains may help limit inflationary pressures in coming months as well. With labor utilization very high, though, and demand still strong, significant risks remain even after the recent policy firming that economic and financial conditions may turn out to be inconsistent with keeping costs and prices from escalating.

Although interest rates currently are a bit higher than anticipated in the economic assumptions underlying the budget projections in the Administration's Mid-Session Review, there is no apparent tension between the Administration's plans and the Federal Reserve policymakers' views. In fact, Federal Reserve officials project somewhat faster growth in real GDP and slightly lower unemployment rates into 2000 than the Administration does, while the Administration's projections for inflation are within the Federal Reserve's central tendencies.

1. Economic projections for 1999 and 2000

Percent

Indicator	Federal Reserve governors and Reserve Bank presidents: Range	Federal Reserve governors and Reserve Bank presidents: Central tendency	Administration[1]
	1999		
Change, fourth quarter to fourth quarter[2]			
Nominal GDP	4¾–5½	5–5½	4.8
Real GDP	3¼–4	3½–3¾	3.2
Consumer price index[3]	1¾–2½	2¼–2½	2.4
Average level, fourth quarter			
Civilian unemployment rate	4–4½	4–4¼	4.3
	2000		
Change, fourth quarter to fourth quarter[2]			
Nominal GDP	4–5½	4–5	4.2
Real GDP	2–3¼	2½–3	2.1
Consumer price index[3]	1½–2½	2–2½	2.4
Average level, fourth quarter			
Civilian unemployment rate	4–4½	4¼–4½	4.7

1. From the Mid-Session Review of the budget.

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

3. All urban consumers.

2. Ranges for growth of monetary and debt aggregates
Percent

Aggregate	1998	1999	Provisional for 2000
M2	1–5	1–5	1–5
M3	2–6	2–6	2–6
Debt	3–7	3–7	3–7

NOTE. Change from average for fourth quarter of preceding year to average for fourth quarter of year indicated.

Money and Debt Ranges for 1999 and 2000

At its meeting in late June, the FOMC reaffirmed the ranges for 1999 growth of money and debt that it had established in February: 1 percent to 5 percent for M2, 2 percent to 6 percent for M3, and 3 percent to 7 percent for debt of the domestic nonfinancial sectors. The FOMC set the same ranges for 2000 on a provisional basis.

As has been the case since the mid-1990s, the FOMC views the ranges for money growth as benchmarks for growth under conditions of price stability and the historically typical relationship between money and nominal income. The disruption of the historically typical pattern of the velocities of M2 and M3 (the ratio of nominal GDP to the aggregates) during the 1990s implies that the Committee cannot establish, with any confidence, specific target ranges for expected money growth for a given year that will be consistent with the economic performance that it desires. However, persistently fast or slow money growth can accompany, or even precede, deviations from desirable economic outcomes. Thus, the behavior of the monetary aggregates, evaluated in the context of other financial and nonfinancial indicators, will continue to be of interest to Committee members in their policy deliberations.

The velocities of M2 and M3 declined again in the first half of this year, albeit more slowly than in 1998. The Committee's easing of monetary policy in the fall of 1998 contributed to the decline, but only to a modest extent. It is not clear what other factors led to the drop, although the considerable increase in wealth relative to income resulting from the substantial gains in equity prices over the past few years may have played a role. Investors could be rebalancing their portfolios, which have become skewed toward equities, by reallocating some wealth to other assets, including those in M2.

Even if the velocities of M2 and M3 were to return to their historically typical patterns over the balance of 1999 and in 2000, M2 and M3 likely would be at the upper bounds of, or above, their longer-term price-stability ranges in both years, given the Committee's projections of nominal GDP growth. This relatively rapid expansion in nominal income reflects faster expected growth in productivity than when the price-stability ranges were established in the mid-1990s and inflation that is still in excess of price stability. The more rapid increase in productivity, if it persists for a while and is sufficiently large, might in the future suggest an upward adjustment to the money ranges consistent with price stability. However, considerable uncertainty attends the trend in productivity, and the Committee chose not to adjust the ranges at its most recent meeting.

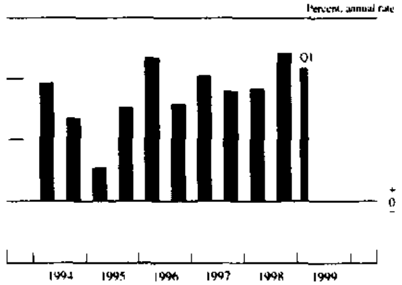
Debt of the nonfinancial sectors has expanded at roughly the same pace as nominal income this year—its typical pattern. Given the stability of this relationship, the Committee selected a growth range for the debt aggregate that encompasses its expectations for debt growth in both years. The Committee expects growth in nominal income to slow in 2000, and with it, debt growth. Nonetheless, growth of this aggregate is projected to remain within the range of 3 percent to 7 percent.

ECONOMIC AND FINANCIAL DEVELOPMENTS IN 1999

The economy has continued to grow rapidly so far this year. Real gross domestic product rose more than 4 percent at an annual rate in the first quarter of 1999, and available data point to another significant gain in the second quarter.[1] The rise in activity has been

1. All figures from the national income and product accounts cited here are subject to change in the quinquennial benchmark revisions slated for this fall.

Change in real GDP



NOTE. In this chart and in subsequent charts that show the components of real GDP, changes are measured from the final quarter of the previous period to the final quarter of the period indicated.

brisk enough to produce further substantial growth of employment and a reduction in the unemployment rate to 4¼ percent. Growth in output has been driven by strong domestic demand, which in turn has been supported by further increases in equity prices, by the continuing salutary effects of government saving and inflows of foreign investment on the cost of capital, and by more smoothly functioning financial markets as the turbulence that marked the latter part of 1998 subsided. Against the background of the easing of monetary policy last fall and continuing robust economic activity, investors became more willing to advance funds to businesses; risk spreads have receded and corporate debt issuance has been brisk.

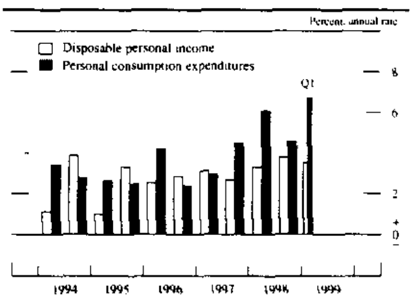
Inflation developments were mixed over the first half of the year. The consumer price index increased more rapidly owing to a sharp rebound in energy prices. Nevertheless, price inflation outside of the energy area generally remained subdued despite the slight further tightening of labor markets, as sizable gains in labor productivity and ample industrial capacity held down price increases.

The Household Sector

Consumer Spending

Real personal consumption expenditures surged 6¾ percent at an annual rate in the first quarter, and more recent data point to a sizable further advance in the second quarter. The underlying fundamentals for the household sector have remained extremely favorable. Real incomes have continued to rise briskly with strong growth of employment and real wages, and consumers have benefited from substantial gains in wealth. Not surprisingly, consumer confidence—

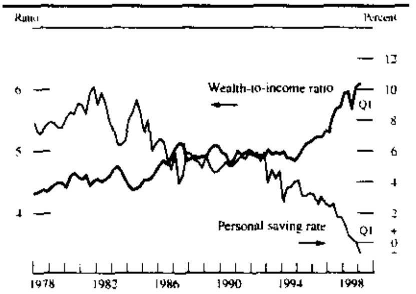
Change in real income and consumption



as measured, for example, by the University of Michigan Survey Research Center (SRC) and Conference Board surveys—has remained quite upbeat in this environment.

Growth of consumer spending in the first quarter was strong in all expenditure categories. Outlays for durable goods rose sharply, reflecting sizable increases in spending on electronic equipment (especially computers) and on a wide range of other goods, including household furnishings. Purchases of cars and light trucks remained at a high level, supported by declining relative prices as well as by the fundamentals that have buoyed consumer spending more generally. Outlays for nondurable goods were also robust, reflecting in part a sharp increase in expenditures for apparel. Finally, spending on services climbed steeply as well early this year, paced by sizable increases in spending on recreation and brokerage services. In the second quarter, consumers apparently boosted their purchases of motor vehicles further. In all, real personal consumption expenditures rose at more than a 4 percent annual rate in April and May, an increase that is below the first-quarter pace but is still quite rapid by historical standards.

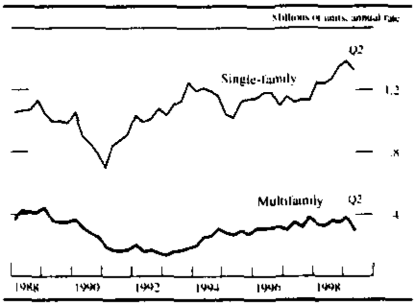
Wealth and saving



NOTE. The wealth-to-income ratio is the ratio of net worth of households to disposable personal income.

Real disposable income increased at an annual rate of 3½ percent in the first quarter, with the strong labor market generating marked increases in wages and salaries. Even so, income grew less rapidly than expenditures, and the personal saving rate declined further; indeed, by May the saving rate had moved below negative 1 percent. Much of the decline in the saving rate in recent years can be explained by the sharp rise in household net worth relative to disposable income that is associated with the appreciation

Private housing starts



of households' stock market assets since 1995. This rise in wealth has given households the wherewithal to spend at levels beyond what current incomes would otherwise allow. As share values moved up further in the first half of this year, the wealth-to-income ratio continued to edge higher despite the absence of saving out of disposable income.

Residential Investment

Housing activity remained robust in the first half of this year. In the single-family sector, positive fundamentals and unseasonably good weather helped boost starts to a pace of 1.39 million units in the first quarter—the highest level of activity in twenty years. This extremely strong level of building activity strained the availability of labor and some materials; as a result, builders had trouble achieving the usual seasonal increase in the second quarter, and starts edged off to a still-high pace of 1.31 million units. Home sales moderated in the spring: Sales of both new and existing homes were off some in May from their earlier peaks, and consumers' perceptions of homebuying conditions as measured by the Michigan SRC survey have declined from the very high marks recorded in late 1998 and early this year. Nonetheless, demand has remained quite robust, even in the face of a backup in mortgage interest rates: Builders' evaluations of new home sales remained very high at mid-year, and mortgage applications for home purchases showed strength into July.

With strong demand pushing up against limited capacity, home prices have risen substantially, although evidence is mixed as to whether the rate of increase is picking up. The quality-adjusted price of new homes rose 5 percent over the four quarters ended in 1999:Q1, up from 3¼ percent over the preceding four-quarter period. The repeat sales index of existing home prices also rose about 5 percent between 1998:Q1 and 1999:Q1, but this series posted even larger increases in the year-earlier period. On the cost side, tight supplies have led to rising prices for some building materials; prices of plywood, lumber, gypsum wallboard, and insulation have all moved up sharply over the past twelve months. In addition, hourly compensation costs have been rising relatively rapidly in the construction sector.

Starts of multifamily units surged to 384,000 at an annual rate in the first quarter and ran at a pace a bit under 300,000 units in the second quarter. As in the single-family sector, demand has been supported by strong fundamentals, builders have been faced with tight supplies of some materials, and prices have been rising briskly: Indeed, apartment property values have been increasing at around a 10 percent annual rate for three years now.

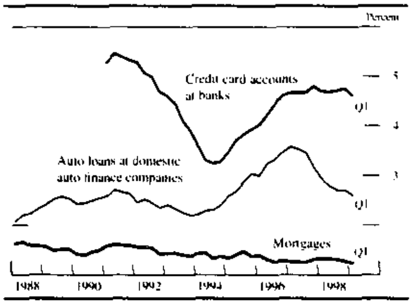
Household Finance

In addition to rising wealth and rapid income growth, the strong expenditures of households on housing and consumer goods over the first half of 1999 were encouraged by the decline in interest rates in the latter part of 1998. Households borrowed heavily to finance spending. Their debt expanded at a 9½ percent annual rate in the first quarter, up from the 8¾ percent pace over 1998, and preliminary data for the second quarter indicate continued robust growth. Mortgage borrowing, fueled by the vigorous housing market and favorable mortgage interest rates, was particularly brisk in the first quarter, with mortgage debt rising at an annual rate of 10 percent. In the second quarter, mortgage rates moved up considerably, but preliminary data indicate that borrowing was still substantial.

Consumer credit growth accelerated in the first half of 1999. It expanded at about an 8 percent annual rate compared with 5½ percent for all of 1998. The growth of nonrevolving credit picked up, reflecting brisk sales and attractive financing rates for automobiles and other consumer durable goods. The expansion of revolving credit, which includes credit card loans, slowed a bit from its pace in 1998.

Households apparently have not encountered added difficulties meeting the payments associated with their greater indebtedness, as measures of household financial stress improved a bit on balance in the first quarter. Personal bankruptcies dropped off considerably, although part of the decline may reflect

Delinquency rates on household loans



NOTE. The data are quarterly.
SOURCE. Data on credit card delinquencies are from bank Call Reports; data on auto loan delinquencies are from the Big Three automakers; data on mortgage delinquencies are from the Mortgage Bankers Association.

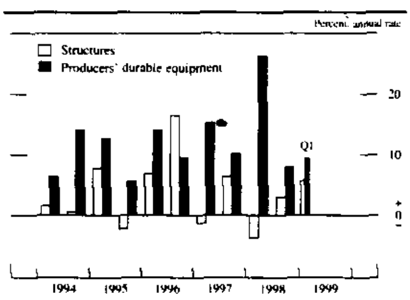
the aftermath of a surge in filings in late 1998 that occurred in response to pending legislation that would limit the ability of certain debtors to obtain forgiveness of their obligations. Delinquency rates on several types of household loans edged lower. Delinquency and charge-off rates on credit card debt moved down from their 1997 peaks but remained at historically high rates. A number of banks continued to tighten credit card lending standards this year, as indicated by banks' responses to Federal Reserve surveys.

The Business Sector

Fixed Investment

Real business fixed investment appears to have posted another huge increase over the first half of

Change in real business fixed investment

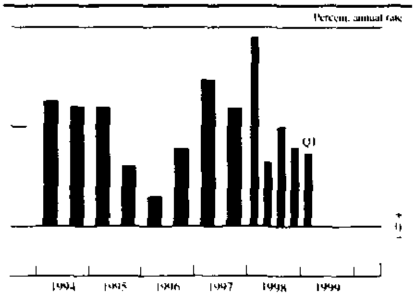


1999. Investment spending continued to be driven by buoyant expectations of sales prospects as well as by rapidly declining prices of computers and other high-tech equipment. In recent quarters, spending also may have been boosted by the desire to upgrade computer equipment in advance of the rollover to the year 2000. Real investment has been rising rapidly for several years now; indeed, the average increase of 10 percent annually over the past five years represents the most rapid sustained expansion of investment in more than thirty years. Although a growing portion of this investment has gone to cover depreciation on purchases of short-lived equipment, the investment boom has led to a notable upgrading and expansion of the capital stock and in many cases has embodied new technologies. These factors likely have been important in the nation's improved productivity performance over the past few years.

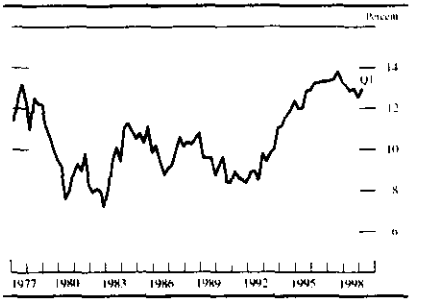
Real outlays for producers' durable equipment increased at an annual rate of 9½ percent in the first quarter of the year, after having surged nearly 17 percent last year, and may well have re-accelerated in the second quarter. Outlays on communications equipment were especially robust in the first quarter, driven by the ongoing effort by telecommunications companies to upgrade their networks to provide a full range of voice and data transmission services. Purchases of computers and other information processing equipment were also up notably in the first quarter, albeit below last year's phenomenal spending pace, and shipments of computers surged again in April and May. Shipments of aircraft to domestic carriers apparently soared in the second quarter, and business spending on motor vehicles, including medium and heavy trucks as well as light vehicles, has remained extremely strong as well.

Real business spending for nonresidential structures has been much less robust than for equipment, and spending trends have varied greatly across sectors of the market. Real spending on office buildings and lodging facilities has been increasing impressively, while spending on institutional and industrial structures has been declining—the last reflecting ample capacity in the manufacturing sector. In the first quarter of this year, overall spending on structures was reported in the national income and product accounts to have moved up at a solid 5¾ percent annual rate, reflecting a further sharp increase in spending on office buildings and lodging facilities. However, revised source data indicate a somewhat smaller first-quarter increase in nonresidential construction and also point to a slowing in activity in April and May from the first-quarter pace.

Change in nonfarm business inventories



Before-tax profits of nonfinancial corporations as a share of GDP



NOTE. Profits from domestic operations, with inventory valuation and capital consumption adjustments, divided by the gross domestic product of the nonfinancial corporate sector.

Inventory Investment

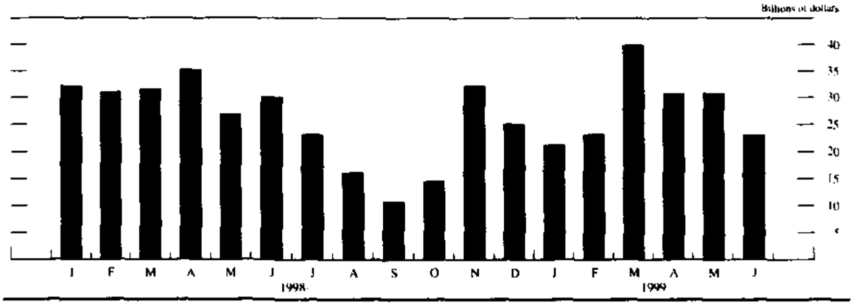
Inventory–sales ratios in many industries dropped considerably early this year, as the pace of stockbuilding by nonfarm businesses, which had slowed notably over 1998, remained well below the surge of consumer and business spending in the first quarter. Although production picked up some in the spring, final demand remained quite strong, and available monthly data suggest that businesses accumulated inventories in April and May at a rate not much different from the modest first-quarter pace.

In the motor vehicle sector, makers geared up production in the latter part of 1998 to boost inventories from their low levels after last summer's strikes. Nevertheless, as with the business sector overall, motor vehicle inventories remained on the lean side by historical standards in the early part of this year as a result of surprisingly strong vehicle sales. As a consequence, manufacturers boosted the pace of assemblies in the second quarter to the highest level in twenty years. With no noticeable signs of a slowing in demand, producers have scheduled third-quarter output to remain at the lofty heights of the second quarter.

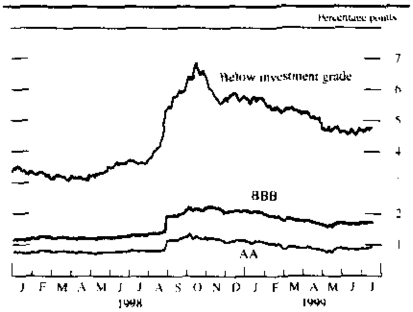
Corporate Profits and Business Finance

The economic profits of nonfinancial U.S. corporations rose considerably in the first quarter, even after allowing for the depressing effect in the fourth quarter of payments associated with the settlement between the tobacco companies and the states. Despite the growth of profits, capital expenditures by nonfinancial businesses continued to outstrip internal cash flow. Moreover, borrowing requirements were enlarged by the net reduction in equity outstanding, as the substantial volume of retirements from merger

Gross corporate bond issuance



Spreads of corporate bond yields over Treasury security yields



NOTE. The data are daily. The spread for below-investment-grade bonds compares the yield on the Merrill Lynch Master II high-yield bond index composite with the yield from the seven-year Treasury constant-maturity series; the other two spreads compare yields on the appropriate Merrill Lynch indexes with that on a ten-year Treasury security. Last observations are for July 19, 1999.

activity and share repurchase programs exceeded the considerable volume of gross issuance of both initial and seasoned public equities. As a result, businesses continued to borrow at a brisk pace: Aggregate debt of the nonfinancial business sector expanded at a 9½ percent annual rate in the first quarter. As financial market conditions improved after the turmoil of the fall, businesses returned to the corporate bond and commercial paper markets for funding, and corporate bond issuance reached a record high in March. Some of the proceeds were used to pay off bank loans, which had soared in the fall, and these repayments curbed the expansion of business loans at banks. Partial data for the second quarter indicate that borrowing by nonfinancial businesses slowed somewhat.

Risk spreads have receded on balance this year from their elevated levels in the latter part of 1998. From the end of December 1998 through mid-July, investment-grade corporate bond yields moved up from historically low levels, but by less than yields on comparable Treasury securities, and the spread between these yields narrowed to a level somewhat above that prevailing before the Russian crisis. The rise in investment-grade corporate bond yields was restrained by investors' apparently increased willingness to hold such debt, as growing optimism about the economy and favorable earnings reports gave investors more confidence about the prospective financial health of private borrowers. Yield spreads on below-investment-grade corporate debt over comparable Treasury securities, which had risen considerably in the latter part of 1998, also retreated. But in mid-July, these spreads were still well above the thin levels prevailing before the period of financial turmoil but in line with their historical averages.

In contrast to securities market participants, banks' attitudes toward business lending apparently became somewhat more cautious over the first half of the year, according to Federal Reserve surveys. The average spread of bank lending rates over the FOMC's intended federal funds rate remained elevated. On net, banks continued to tighten lending terms and standards this year, although the percentage that reported tightening was much smaller than in the fall.

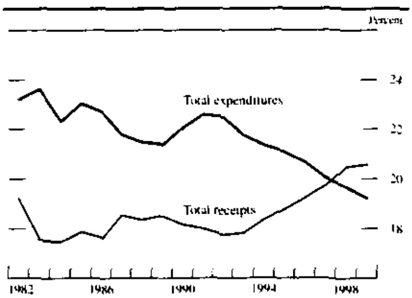
The overall financial condition of nonfinancial businesses was strong over the first half of the year, although a few indicators suggested a slight deterioration. In the first quarter, the ratio of net interest payments to corporate cash flow remained close to the modest levels of 1998, as low interest rates continued to hold down interest payments. Delinquency rates for commercial and industrial loans from banks ticked up, but they were still modest by historical standards. Similarly, over the first half of the year, business failures—measured as the ratio of liabilities of failed businesses to total liabilities—stepped up from the record low in 1998. The default rate on below-investment-grade bonds rose to its highest level in several years, an increase stemming in part from defaults by companies whose earnings were impaired by the drop in oil and other commodity prices last year. The total volume of business debt that was downgraded exceeded slightly the volume of debt that was upgraded.

The Government Sector

Federal Government

The incoming news on the federal budget continues to be quite favorable. Over the first eight months of fiscal year 1999—the period from October through May—the unified budget registered a surplus of about $41 billion, compared with $16 billion during the comparable period of fiscal 1998. If the latest projections from the Office of Management and Budget and the Congressional Budget Office are realized, the unified budget for fiscal 1999 as a whole will show a surplus of around $100 billion to $120 billion, or more than 1 percent of GDP—a striking turnaround from the outsized budget deficits of previous years, which approached 5 percent of GDP in the early 1990s.

Federal receipts and expenditures as a share of nominal GDP

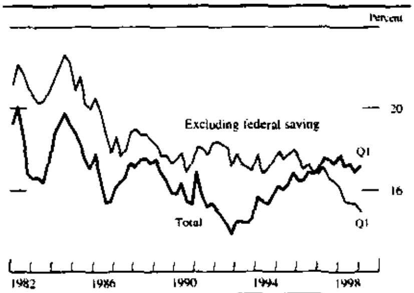


NOTE. Data on receipts and expenditures are from the unified budget. Values for 1999 are estimates from the CBO's July 1 economic and budget update.

As a result of this turnaround, the federal government is now contributing positively to the pool of national saving. In fact, despite the recent drop in the personal saving rate, gross saving by households, businesses, and governments has remained above 17 percent of GDP in recent quarters—up from the 14 percent range that prevailed in the early 1990s. This well-maintained pool of national savings, together with the continued willingness of foreigners to finance our current account deficits, has helped hold down the cost of capital, thus contributing to our nation's investment boom.

This year's increase in the federal surplus has reflected continued rapid growth of receipts in combination with a modest increase in outlays. Federal receipts were 5 percent higher in the first eight months of fiscal 1999 than in the year-earlier period. With profits leveling off from last year, receipts of corporate taxes have stagnated so far this fiscal year.

National saving as a share of nominal GDP

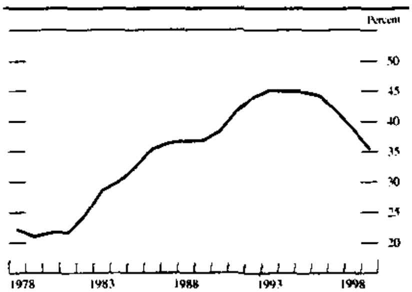


NOTE. National saving comprises the gross saving of households, businesses, and governments.

However, individual income tax payments are up appreciably, reflecting the solid gains in household incomes and perhaps also a rise in capital gains realizations large enough to offset last year's reduction in capital gains tax rates. At the same time, federal outlays increased only 2½ percent in nominal terms and barely at all in real terms during the first eight months of the fiscal year, relative to the comparable year-earlier period. Spending growth has been restrained in major portions of both the discretionary (notably, defense) and nondiscretionary (notably, net interest, social security, and Medicare) categories—although this year's emergency supplemental spending bill, at about $14 billion, was somewhat larger than similar bills in recent years.

As for the part of federal spending that is counted in GDP, real federal outlays for consumption and gross investment, which had changed little over the past few years, declined at a 2 percent annual rate in the first quarter of 1999. A drop in real defense outlays more than offset a rise in nondefense expenditures in the first quarter. And despite the military action in the Balkans and the recent emergency spending bill, defense spending appears to have declined in the second quarter as well.

Federal debt held by private investors as a share of nominal GDP



NOTE. Federal debt held by private investors is gross federal debt less debt held by federal government accounts and the Federal Reserve System. The value for 1999 is an estimate based on the CBO's July 1 economic and budget update.

The budget surpluses of the past two years have led to a notable decline in the stock of federal debt held by private investors as a share of GDP. Since its peak in March 1997, the total volume of Treasury debt held by private investors has fallen by nearly $130 billion. The Treasury has reduced its issuance of interest-bearing marketable debt in fiscal 1999.

The decrease has been concentrated in nominal coupon issues; in 1998, by contrast, the Treasury retired both bill and coupon issues in roughly equal measure. Offerings of inflation-indexed securities have remained an important part of the Treasury's overall borrowing program: Since the beginning of fiscal 1999, the Treasury has sold nearly $31 billion of such securities.

State and Local Governments

The fiscal condition of state and local governments has remained quite positive as well. Revenues have been boosted by increases in tax collections due to strong growth of private-sector incomes and expenditures—increases that were enough to offset an ongoing trend of tax cuts. Meanwhile, outlays have continued to be restrained. In all, at the state level, fiscal 1999 looks to have been the seventh consecutive year of improving fiscal positions; of the forty-six states whose fiscal years ended on June 30, all appear to have run surpluses in their general funds.

Real expenditures for consumption and gross investment by states and localities, which had been rising only moderately through most of 1998, jumped at a 7¾ percent annual rate in the first quarter of this year. This increase was driven by a surge in construction expenditures that was helped along by unseasonably favorable weather, and spending data for April and May suggest that much of this rise in construction spending was offset in the second quarter. As for employment, state and local governments added jobs over the first half of the year at about the same pace as they did last year.

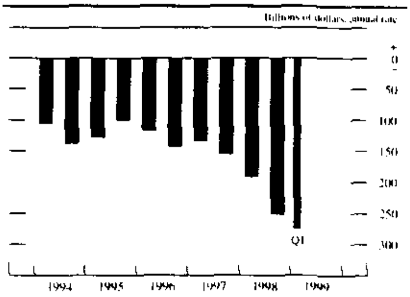
Debt of state and local governments expanded at a 5½ percent rate in the first quarter. The low interest rate environment and strong economy encouraged the financing of new projects and the refunding of outstanding higher-rate debt. Borrowing slowed to a more modest pace in the second quarter, as yields on long-dated municipal bonds moved up, but by less than those on comparable Treasury securities. The credit quality of municipal securities improved further over the first half of the year, with more issues being upgraded than downgraded.

External Sector

Trade and the Current Account

The current account deficit reached $274 billion at an annual rate in the first quarter of 1999, a bit more than 3 percent of GDP, compared with $221 billion and 2½ percent of GDP for 1998. A widening of the deficit on trade in goods and services, to $215 billion at an annual rate in the first quarter from $173 billion in the fourth quarter of 1998, accounted for the deterioration in the current account balance. Data for April and May indicate that the trade deficit increased further in the second quarter.

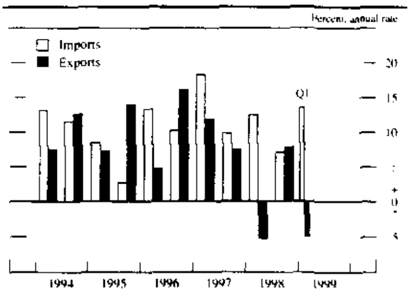
U.S. current account



The quantity of imports of goods and services again grew vigorously in the first quarter. The annual rate of growth of imports, at 13½ percent, continued the rapid pace seen over 1998 and reflected the strength of U.S. domestic demand and the effects of past dollar appreciation. Imports of consumer goods, automotive products, computers, and semiconductors were particularly robust. Preliminary data for April and May suggest that real import growth remained strong, as nominal imports rose steadily and non-oil import prices posted a moderate decline.

The volume of exports of goods and services declined at an annual rate of 5 percent in the first quarter. The decline partially reversed the strong increase in the fourth quarter of last year. The weak-

Change in real imports and exports of goods and services



ness of economic activity in a number of U.S. trading partners and the strength of the dollar damped demand for U.S. exports. Declines were registered in aircraft, machinery, industrial supplies, and agricultural products. Exports to Asia generally turned down in the first quarter from the elevated levels recorded in the fourth quarter, when they were boosted by record deliveries of aircraft to the region. Preliminary data for April and May suggest that real exports advanced slightly.

Capital Account

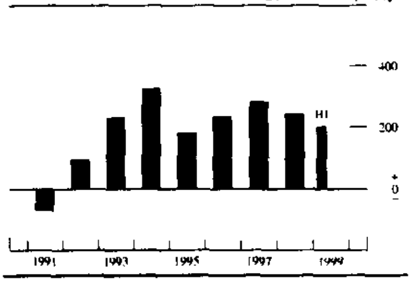
Foreign direct investment in the United States and U.S. direct investment abroad remained robust in the first quarter, reflecting brisk cross-border merger and acquisition activity. On balance, net capital flows through direct investment registered a modest outflow in the first quarter compared with a huge net inflow in the fourth quarter. Fourth-quarter inflows were swollen by several large mergers. Net foreign purchases of U.S. securities also continued to be quite sizable but again were well below the extraordinary pace of the fourth quarter. Most of the slowdown in the first quarter is attributable to a reduced demand for Treasury securities on the part of private investors abroad. But capital inflows from foreign official sources also slowed in the first quarter. U.S. residents on net sold foreign securities in the first quarter, but at a slower rate than in the previous quarter.

The Labor Market

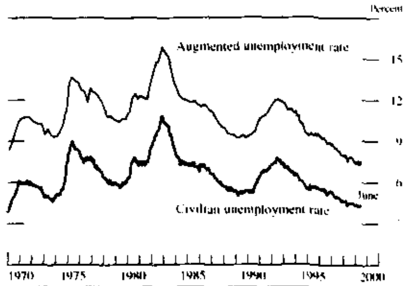
Employment and Labor Supply

Labor demand remained very strong during the first half of 1999. Payroll employment increased about

Change in total nonfarm payroll employment



Measures of labor utilization



NOTE. The augmented unemployment rate is the number of unemployed plus those who are not in the labor force and want a job, divided by the civilian labor force plus those who are not in the labor force and want a job. The break in data at January 1994 marks the introduction of a redesigned survey; data from that point on are not directly comparable with those of earlier periods.

200,000 per month on average, which, although less rapid than the 244,000 pace registered over 1998, is faster than the growth of the working-age population. With the labor force participation rate remaining about flat at just over 67 percent, the unemployment rate edged down further from an average of 4½ percent in 1998 to 4¼ percent in the first half of this year—the lowest unemployment rate seen in the United States in almost thirty years. Furthermore, the pool of potential workers, including not just the unemployed but also individuals who are out of the labor force but report that they want a job, declined late last year to the lowest share of the labor force since collection of these data began in 1970—and it has remained near that low this year. Not surprisingly, businesses in many parts of the country have perceived workers to be in very short supply, as evidenced by high levels of help-wanted advertising and surveys showing substantial difficulties in filling job openings.

Employment gains in the private service-producing sector remained sizable in the first six months of the year and more than accounted for the rise in nonfarm payrolls over this period. Payrolls continued to rise briskly in the services industry, with firms providing business services (such as help supply services and computer services) adding jobs especially rapidly. Job gains were quite sizable in retail trade as well. Within the service-producing sector, only the finance, insurance, and real estate industry has slowed the pace of net hiring from last year's rate, reflecting, in part, a slower rate of job gains in the mortgage banking industry as the refinancing wave has ebbed.

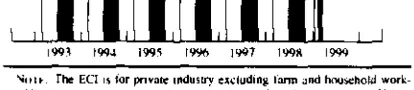
Within the goods-producing sector, the boom in construction activity pushed payrolls in that industry higher in the first six months of this year. But in manufacturing, where employment began declining more than a year ago in the wake of a drop in export demand, payrolls continued to fall in the first half of 1999; in all, nearly half a million factory jobs have been shed since March 1998. Despite these job losses, manufacturing output continued to rise in the first half of this year, reflecting large gains in labor productivity.

Labor Costs and Productivity

Growth in hourly compensation, which had been on an upward trend since 1995, appears to have leveled off and, by some measures, has slowed in the past year. According to the employment cost index (ECI), hourly compensation costs increased 3 percent over the twelve months ended in March, down from 3½ percent over the preceding twelve-month period. Part of both the earlier acceleration and more recent deceleration in the ECI apparently reflected swings in commissions, bonuses, and other types of "variable" compensation, especially in the finance, insurance, and real estate industry. But in addition, part of the recent deceleration probably reflects the influence of restrained price inflation in tempering nominal wage increases. Although down from earlier increases, the 3 percent rise in the ECI over the twelve months ended in March was well above the rise in prices over this period and therefore was enough to generate solid gains in workers' real pay.

The deceleration in the ECI through March has been most pronounced in the wages and salaries

Measures of the change in hourly compensation



NOTE. The ECI is for private industry excluding farm and household workers. Nonfarm compensation per hour is for the nonfarm business sector. Values for 1999:Q1 are percent changes from 1998:Q1 to 1999:Q1.

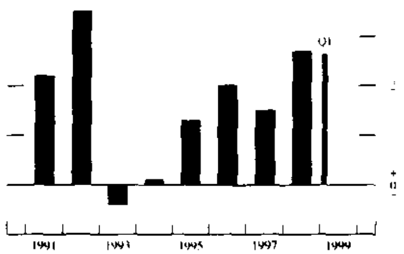
component, whose twelve-month change slowed ¼ percentage point from a year earlier. More recently, data on average hourly earnings of production or nonsupervisory workers may point to a leveling off, but no further slowing, of wage growth: This series was up at about a 4 percent annual rate over the first six months of this year, about the same as the increase over 1998. Growth in the benefits component of the ECI slowed somewhat as well in the year ended in March, to a 2¼ percent increase. However, employers' costs for health insurance are one component of benefits that has been rising more rapidly of late. After showing essentially no change from 1994 through 1996, the ECI for health insurance accelerated to a 3¼ percent pace over the twelve months ended in March.

A second measure of hourly compensation—the Bureau of Labor Statistics' measure of compensation per hour in the nonfarm business sector, which is derived from compensation information from the national accounts—has been rising more rapidly than the ECI in the past few years and has also decelerated less so far this year. Nonfarm compensation per hour increased 4 percent over the four quarters ended in the first quarter of 1999, 1 percentage point more than the rise in the ECI over this period. One reason these two compensation measures may diverge is that the ECI does not capture certain forms of compensation, such as stock options and hiring, retention, and referral bonuses, whereas nonfarm compensation per hour does measure these payments.[2] Although the two compensation measures differ in numerous other respects as well, the series' divergence may lend support to anecdotal evidence that these alternative forms of compensation have been increasing especially rapidly in recent years. However, because nonfarm compensation per hour can be revised substantially, one must be cautious in putting much weight on the most recent quarterly figures from this series.

Rapid productivity growth has made it possible to sustain these increases in workers' compensation without placing great pressure on businesses' costs. Labor productivity in the nonfarm business sector posted another sizable gain in the first quarter of 1999, and the increase over the four quarters ended in the first quarter of 1999 was 2½ percent. Indeed, productivity has increased at a 2 percent pace since 1995—well above the trend of roughly 1 percent per

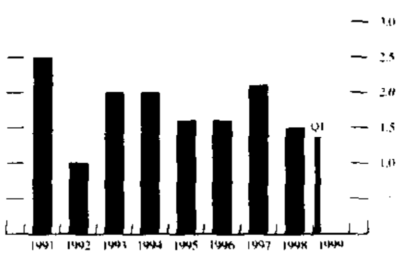
2. However, nonfarm compensation per hour captures the gains from the actual *exercise* of stock options, whereas for analyzing compensation trends, one might prefer to measure the value of the options at the time they are *granted*.

Change in output per hour



NOTE. Nonfarm business sector. The value for 1999:Q1 is the percent change from 1998:Q1 to 1999:Q1.

Change in unit labor costs



NOTE. Nonfarm business sector. The value for 1999:Q1 is the percent change from 1998:Q1 to 1999:Q1.

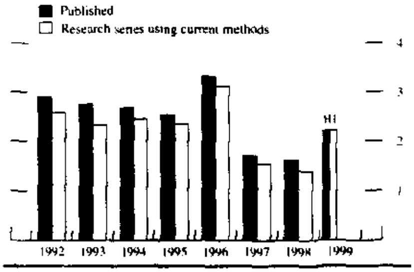
year that had prevailed over the preceding two decades.[3] This recent productivity performance is all the more impressive given that businesses are reported to have had to divert considerable resources toward avoiding computer problems associated with the century date change, and given as well that businesses may have had to hire less-skilled workers than were available earlier in the expansion when the pool of potential workers was not so shallow. Part of the strength in productivity growth over the past few years may have been a cyclical response to the rapid growth of output over this period. But productivity may also be reaping a more persistent payoff from the boom in business investment and the accompanying introduction of newer technologies that have occurred over the past several years.

Even these impressive gains in labor productivity may not have kept up fully with increases in firms' real compensation costs of late. Over the past two years, real compensation, measured by the ECI relative to the price of nonfarm business output, has increased the same hefty 2½ percent per year as labor productivity; however, measured instead using nonfarm compensation per hour, real compensation has increased somewhat more than productivity over this period, implying a rising share of compensation in total national income. A persistent period of real compensation increases in excess of productivity growth would reduce firms' capacity to absorb further wage gains without putting upward pressure on prices.

Prices

Price inflation moved up in early 1999 from a level in 1998 that was depressed by a transitory drop in energy and other commodity prices. After increasing only about 1½ percent over 1998, the consumer price index rose at a 2¼ percent annual rate over the first six months of this year, driven by a sharp turnaround in prices of gasoline and heating oil. However, the so-called "core" CPI, which excludes food and energy items, rose at an annual rate of only 1.6 percent over this period—a somewhat smaller increase than that registered over 1998 once adjustment is

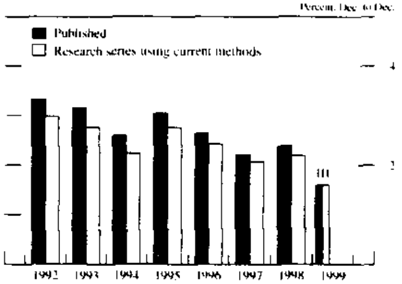
Change in consumer prices



NOTE. Consumer price index for all urban consumers. The research series has been extended into 1999 using the published CPI. Values for 1999:H1 are percent changes from December 1998 to June 1999 at an annual rate.

3. About ¼ percentage point of the improvement in productivity growth since 1995 can be attributed to changes in price measurement. The measure of real output underlying the productivity figures since 1995 is deflated using CPI components that have been constructed using a geometric-means formula; these components tend to rise less rapidly than the CPI components that had been used in the output and productivity data before 1995. These smaller CPI increases translate into more rapid growth of output and productivity in the later period.

Change in consumer prices excluding food and energy



NOTE. Consumer price index for all urban consumers. The research series has been extended into 1999 using the published CPI. Values for 1999 H1 are percent changes from December 1998 to June 1999 at an annual rate.

made for the effects of changes in CPI methodology: According to a new research series from the Bureau of Labor Statistics (BLS), the core CPI would have increased 2.2 percent over 1998 had 1999 methods been in place in that year.[4]

The moderation of the core CPI in recent years has reflected a variety of factors that have helped hold inflation in check despite what has been by all accounts a very tight labor market. Price increases have been damped by substantial growth in manufacturing capacity, which has held plant utilization rates in most industries at moderate (and in some cases subpar) levels, thereby reinforcing competitive pressures in product markets. Furthermore, rapid productivity growth helped hold increases in unit labor costs to low levels even as compensation growth was picking up last year. The rise in compensation itself has been constrained by moderate expectations of inflation, which have been relatively stable. According to the Michigan SRC survey, the median of one-year-ahead inflation expectations, which was about 2½ percent late last year, averaged 2¾ percent in the first half of this year.

The quiescence of inflation expectations, at least through the early part of this year, in turn may have come in part from the downward movement in overall inflation last year resulting from declines in prices of imports and of oil and other commodities. These price declines have not been repeated more recently. This year's rise in energy prices is the clearest example, but commodity prices more generally have been turning up of late. The Journal of Commerce industrial price index has moved up about 6 percent so far this year after having declined about 10 percent last year, with especially large increases posted for prices of lumber, plywood, and steel. These price movements are starting to be seen at later stages of processing as well: The producer price index for intermediate materials excluding food and energy, which gradually declined about 2 percent over the fifteen months through February 1999, retraced about half of that decrease by June. Furthermore, non-oil import prices, although continuing to fall this year, have moved down at a slower rate than that of the past couple of years when the dollar was rising sharply in foreign exchange markets. Non-oil import prices declined at a 1¼ percent annual rate over the first half of 1999, after having fallen at a 3 percent rate, on average, over 1997 and 1998.

Some other broad measures of prices also showed evidence of acceleration early this year. The chain-type price index for GDP—which covers prices of all goods and services produced in the United States—rose at about a 1½ percent annual rate in the first quarter, up from an increase of about 1 percent last year. A portion of this acceleration reflected movements in the chain-type price index for personal consumption expenditures (PCE) that differed from movements in the CPI.

3. Alternative measures of price change

Percent, annual rate

Price measure	1996:Q4 to 1997:Q4	1997:Q4 to 1998:Q4	1998:Q4 to 1999:Q1
Fixed-weight			
Consumer price index	1.9	1.5	1.5
Excluding food and energy	2.2	2.4	1.6
Chain-type			
Gross domestic product	1.7	.9	1.6
Gross domestic purchases	1.3	.4	1.2
Personal consumption expenditures	1.5	.7	1.2
Excluding food and energy	1.6	1.2	1.3

NOTE. A fixed-weight index uses quantity weights from the base year to aggregate prices from each distinct item category. A chain-type index is the geometric average of two fixed-weight indexes and allows the weights to change each year. Changes are based on quarterly averages.

Although the components of the CPI are key inputs into the PCE price index, the two price measures differ in a variety of respects: They use different aggregation formulas; the weights are derived from different sources; the PCE measure does not utilize all components of the CPI; and the PCE measure is

4. The most important change this year was the introduction of the geometric-means formula to aggregate price quotes within most of the detailed item categories. (The Laspeyres formula continues to be used in constructing higher-level aggregates.) Although these geometric-means CPIs were introduced into the official CPI only in January of this year, the BLS generated the series on an experimental basis going back several years, allowing them to be built into the national income and product accounts back to 1995.

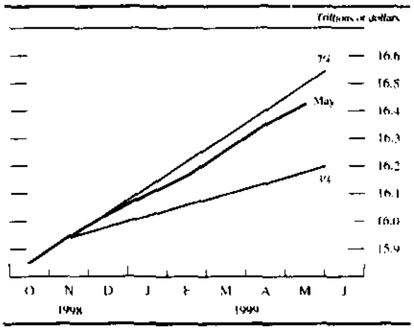
broader in scope, including not just the out-of-pocket expenditures by households that are captured by the CPI, but also the portion of expenditures on items such as medical care and education that are paid by insurers or governments, consumption of items such as banks' checking services that are provided without explicit charge, and expenditures made by nonprofit institutions. Although PCE prices typically rise a bit less rapidly than the CPI, the PCE price measure was unusually restrained relative to the CPI in the few years through 1998, reflecting a combination of the above factors.

Last year's sharp drop in retail energy prices and the subsequent rebound this spring reflected movements in the price of crude oil. The spot price of West Texas intermediate (WTI) crude oil, which had stood at about $20 per barrel through most of 1997, dropped sharply over 1998 and reached $11 per barrel by the end of the year, reflecting in part a weakening in demand for oil from the distressed Asian nations and increases in supply from Iraq and other countries. But oil prices jumped this year as the OPEC nations agreed on production restraints aimed at firming prices, and the WTI spot price reached $18 per barrel in April and has moved still higher more recently. As a result, gasoline prices, which dropped 15 percent over 1998, reversed almost all of that decline over the first six months of this year. Prices of heating fuel also rebounded after dropping in 1998. In all, the CPI for energy rose at a 10 percent annual rate over the December-to-June period.

Consumer food prices increased moderately over the first six months of the year, rising at a 1¾ percent annual rate. Despite the upturn in commodity prices generally, farm prices have remained quite low and have helped to hold down food price increases. Spot prices of wheat, soybeans, and sugar have moved down further this year from already depressed levels at the end of 1998, and prices of corn and coffee have remained low as well.

The CPI for goods other than food and energy declined at about a ½ percent annual rate over the first six months of 1999, after having risen 1¼ percent over 1998. The 1998 increase reflected a sharp rise in tobacco prices in December associated with the settlement of litigation between the tobacco companies and the states; excluding tobacco, the CPI for core goods was about flat last year. The decline in the first half of this year was concentrated in durable goods, where prices softened for a wide range of items, including motor vehicles. The CPI for nonenergy services increased about 2½ percent at an annual rate in the first half, down a little from the increase over 1998. Increases in the CPI for rent of shelter have slowed thus far in 1999, rising at a 2½ percent annual rate versus a 3¼ percent rise last year. However, airfares and prices of medical services both have been rising more rapidly so far this year.

Domestic nonfinancial debt: Annual range and actual level



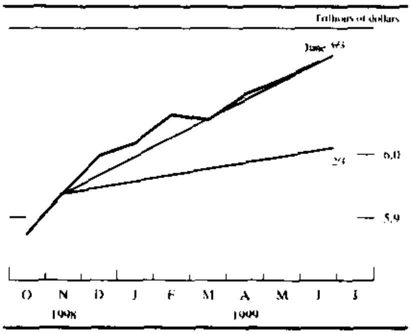
Debt and the Monetary Aggregates

Debt and Depository Intermediation

The total debt of the U.S. household, government, and nonfinancial business sectors increased at about a 6 percent annual rate from the fourth quarter of 1998 through May, a little above the midpoint of its growth range of 3 percent to 7 percent. Nonfederal debt expanded briskly at about a 9 percent annual pace, in association with continued strong private domestic spending on consumer durable goods, housing, and business investment. By contrast, federal debt contracted at a 3 percent annual rate, as budget surpluses reined in federal government financing needs.

Credit extended by depository institutions slumped over the first half of 1999, after having expanded quite briskly in 1998. A fair-sized portion of the expansion in 1998 came in the fourth quarter and stemmed from the turmoil in financial markets. In that turbulent environment, depository institutions postponed securitization of mortgages, and businesses shifted their funding demand from securities markets to depository institutions, where borrowing costs in some cases were governed by pre-existing lending commitments. Depository institutions also acquired mortgage-backed securities and other private debt instruments in volume, as their yields evidently rose relative to depository funding costs. As

M3: Annual range and actual level

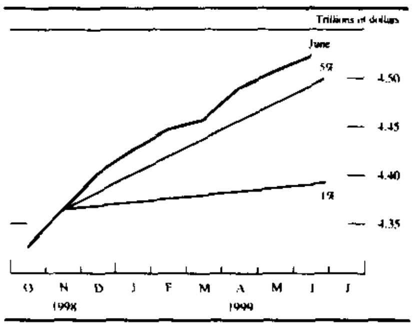


financial stresses unwound, securitization resumed, business borrowers returned to securities markets, and net purchases of securities slowed. From the fourth quarter of 1998 through June, bank credit rose at a 3 percent annualized pace, after adjusting for the estimated effects of mark-to-market accounting rules.

Monetary Aggregates

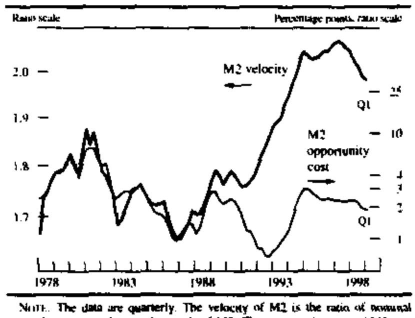
The growth of M3, the broadest monetary aggregate, slowed appreciably over the first half of 1999. M3 expanded at a 6 percent annual pace from the fourth quarter of 1998 through June of this year, placing this aggregate at the top of the 2 percent to 6 percent price-stability growth range set by the FOMC at its February meeting. With depository credit growing modestly, depository institutions trimmed the managed liabilities included in M3, such as large time deposits. Growth of institutional money market mutual funds also moderated from its rapid pace in 1998. Rates on money market funds tend to lag the movements in market rates because the average rate of return on the portfolio of securities held by the fund changes more slowly than market rates. In the fall, rates on institutional money market funds did not decline as fast as market rates after the Federal Reserve eased monetary policy, and the growth of these funds soared. As rates on these funds moved back into alignment with market rates this year, growth of these funds ebbed.

M2: Annual range and actual level



M2 advanced at a 6¼ percent annual rate from the fourth quarter of 1998 through June. M2 growth had been elevated in late 1998 by unsettled financial conditions, which raised the demand for liquid money balances, and by the easing of monetary policy, which reduced the opportunity costs of holding the assets included in the monetary aggregates. M2 growth moderated over the first half of 1999, as the heightened demand for money waned; in June this aggregate was above its 1 percent to 5 percent price-stability growth range. The growth in M2 over the first half of the year again outpaced that of nominal income, although the decline in M2 velocity—the ratio of nominal income to M2—was at a slower rate than in 1998. The decline this year reflected in part a continuing lagged response to the policy easing in the fall; however, the drop in M2 velocity was again larger than predicted on the basis of the historical relationship between the velocity of M2 and the opportunity costs of holding M2—measured as the difference between the rate on three-month Treasury bills and the average return on M2 assets. The reasons for the decline of M2 velocity this year are not

M2 velocity and the opportunity cost of holding M2



NOTE. The data are quarterly. The velocity of M2 is the ratio of nominal gross domestic product to the stock of M2. The opportunity cost of 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.

4. Growth of money and debt

Percent

Period	M1	M2	M3	Domestic nonfinancial debt
Annual[1]				
1989	.6	5.2	4.1	7.5
1990	4.2	4.2	1.9	6.7
1991	8.0	3.1	1.2	4.5
1992	14.3	1.8	.6	4.5
1993	10.6	1.3	1.0	4.9
1994	2.5	.6	1.7	4.9
1995	−1.6	3.9	6.1	5.4
1996	−4.5	4.6	6.8	5.1
1997	−1.2	5.8	8.8	4.8
1998	1.8	8.5	10.9	6.3
Quarterly (annual rate)[2]				
1999:1	2.8	7.2	7.3	5.9
2	3.4	5.7	5.0	
Year-to-date[3]				
1999	2.0	6.2	6.0	6.1

NOTE. M1 consists of currency, travelers checks, demand deposits, and other checkable deposits. M2 consists of M1 plus savings deposits (including money market deposit accounts), small-denomination time deposits, and balances in retail money market funds. M3 consists of M2 plus large-denomination time deposits, balances in institutional money market funds, RP liabilities (overnight and term), and Eurodollars (overnight and term). Debt consists of the outstanding credit market debt of the U.S. government, state and local governments, households and nonprofit organizations, nonfinancial businesses, and farms.

1. From average for fourth quarter of preceding year to average for fourth quarter of year indicated.

2. From average for preceding quarter to average for quarter indicated.

3. From average for fourth quarter of 1998 to average for June (May in the case of domestic nonfinancial debt).

clear; the drop extends a trend in velocity evident since mid-1997 and may in part owe to households' efforts to allocate some wealth to the assets included in M2, such as deposits and money market mutual fund shares, after several years of substantial gains in equity prices that greatly raised the share of wealth held in equities.

M1 increased at a 2 percent annualized pace from the fourth quarter of 1998 through June, in line with its advance in 1998. The currency component of M1 expanded quite rapidly. The strength appeared to stem from domestic, rather than foreign, demand, perhaps reflecting vigorous consumer spending, although currency growth was more robust than might be expected for the rise in spending. The deposits in M1—demand deposits and other checkable deposits—contracted further, as retail sweep programs continued to be introduced. These programs, which first began in 1994, shift funds from a depositor's checking account, which is subject to reserve requirements, to a special-purpose money market deposit account, which is not. Funds are then shifted back to the checking account when the depositor's account balance falls below a given level. The depository institution benefits from a retail sweep program because the program cuts its reserve requirement and thus the amount of non-interest-bearing reserve balances that it must hold at its Federal Reserve Bank. New sweep programs depressed the growth of M1 by about 5¼ percentage points over the first half of 1999, somewhat less than in previous years because most of the depository institutions that would benefit from such programs had already implemented them.

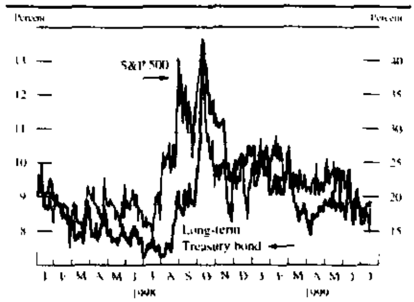
As a consequence of retail sweep programs, the balances that depository institutions are required to hold at the Federal Reserve have fallen about 60 percent since 1994. This development has the potential to complicate reserve management by the Federal Reserve and depository institutions and thus raise the volatility of the federal funds rate. It would do so by making the demand for balances at the Federal Reserve more variable and less predictable. Before the introduction of sweeps, the demand for balances was high and stable because reserve balance requirements were large, and the requirements were satisfied by the average of daily balances held over a maintenance period. With sweep programs reducing required balances to low levels, depository institutions have found that they target balances in excess of their required balances in order to gain sufficient protection against unanticipated debits that could leave their accounts overdrawn at the end of the day. This payment-related demand for balances varies more from day to day than the requirement-related demand. Thus far, the greater variation in the demand for balances has not made the federal funds rate appreciably more volatile, in part reflecting the successful efforts of depository institutions and the Federal Reserve to adapt to lower balances. For its part, the Federal Reserve has conducted more open market operations that mature the next business day to better align daily supply with demand. Nonetheless, required balances at the Federal Reserve could drop to levels at which the volatility of the funds rate becomes pronounced. One way to address the problem of declining required balances would be to permit the Federal Reserve to pay interest on the reserve balances that depository institutions hold. Paying interest on reserve balances would reduce considerably the incentives of depository institutions to develop reserve-avoidance practices that may complicate the implementation of monetary policy.

U.S. Financial Markets

Yields on Treasury securities have risen this year in response to the ebbing of the financial market strains of late 1998, surprisingly strong economic activity, concerns about the potential for increasing inflation, and the consequent anticipation of tighter monetary policy. In January, yields on Treasury securities moved in a narrow range, as lingering safe-haven demands for dollar-denominated assets, owing in part to the devaluation and subsequent floating of the Brazilian *real*, about offset the effect on yields of stronger-than-expected economic data. Over subsequent months, however, yields on Treasury securities, especially at intermediate and long maturities, moved up substantially. The demand for the safest and most liquid assets, which had pulled down Treasury yields in the fall, abated as the strength in economic activity and favorable earnings reports engendered optimism about the financial condition of private borrowers and encouraged investors to buy private securities. In addition, rising commodity prices, tight labor markets, and robust economic activity led market participants to conclude that monetary policy would need to be tightened, perhaps in a series of steps. This view, accentuated by the FOMC's announcement after its May meeting that it had adopted a directive tilted toward tightening policy, also boosted yields. Between the end of 1998 and mid-July, Treasury yields added about 80 basis points to 110 basis points, on balance, with the larger increases in the intermediate maturities. The rise in Treasury bill rates, anchored by the modest upward move in the FOMC's target federal funds rate, was much less, about 10 basis points to 40 basis points.

The recovery in fixed-income markets over the first half of the year was evident in a number of indicators of market conditions. Market liquidity was generally better, and volatility was lower. The relative demand for the most liquid Treasury securities—the most recently auctioned security at each maturity—was

Implied volatilities

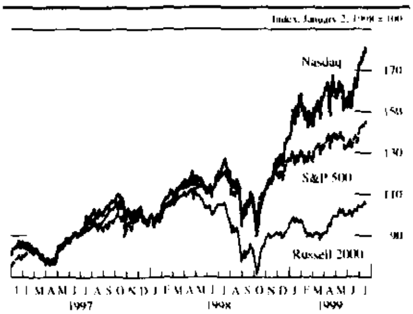


NOTE. The data are daily. Implied volatilities are calculated from options prices. Last observations are for July 19, 1999.

not so acute, and yields on these securities were in somewhat closer alignment with yields on issues that had been outstanding longer. Dealers were more willing to put capital at risk to make markets, and bid–asked spreads in Treasury securities narrowed somewhat, though, in June they were still a bit wider than had been typical. Market expectations of asset price volatility, as reflected in prices on Treasury bond options contracts, receded on balance. The implied volatility of bond prices dropped off until April and then turned back up, as uncertainty about the timing and extent of a possible tightening of monetary policy increased.

Yields on inflation-indexed Treasury securities have only edged up this year, and the spreads between yields on nominal Treasury securities and those on comparable inflation-indexed securities have widened considerably. Yields on inflation-indexed securities did not decline in late 1998 like those of their nominal counterparts, in part because these securities were not perceived as being as liquid as nominal Treasury securities. Thus, as the safe-haven demand for nominal Treasury securities unwound and nominal yields rose, yields on inflation-indexed securities did not move up concomitantly. Moreover, these yields were held down by some improvement in the liquidity of the market for inflation-indexed securities, as suggested by reports of narrower bid–asked spreads, which provided additional impetus for investors to acquire these securities. Because of such considerations, the value of the yield spread between nominal and inflation-indexed Treasury securities as an indicator of inflation expectations is limited. Nonetheless, the widening of the spread this year may have reflected some rise in inflation expectations.

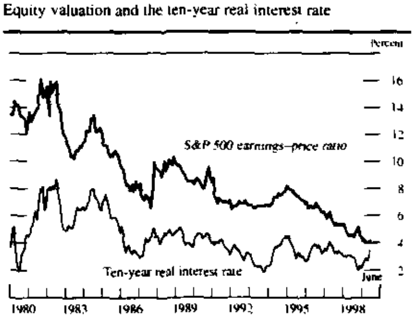
Major stock price indexes



NOTE. The data are daily. Last observations are for July 19, 1999.

Equity prices have climbed this year. Major equity price indexes posted gains of 10 percent to 31 percent, on balance, between the end of 1998 and July 16, when most of them established record highs. The lift to prices from stronger-than-anticipated economic activity and corporate profits apparently has offset the damping effect of rising bond yields. Prices of technology issues, especially Internet stocks, have risen considerably on net, despite some wide swings in sentiment. Share prices of firms producing primary commodities, which tumbled in the fall, rebounded to post large price gains, perhaps because of the firming of commodity prices amid perceptions that Asian economies were improving. Consensus estimates of earnings over the coming twelve months have strengthened, but in June the ratio of these estimates

Equity valuation and the ten-year real interest rate



NOTE. The data are monthly. The earnings–price ratio is based on the I/B/E/S International, Inc., consensus estimate of earnings over the coming twelve months. The real interest rate is the yield on the ten-year Treasury note less the measure of ten-year inflation expectations from the Federal Reserve Bank of Philadelphia Survey of Professional Forecasters.

to prices, as measured by the S&P 500 index, was near the record low established in May. Meanwhile, real interest rates, measured as the difference between the yield on the nominal ten-year Treasury note and a survey-based measure of inflation expectations, moved up. Consequently, the risk premium for holding equities remained quite small by historical standards.

Year 2000 Preparedness

The Federal Reserve and the banking system have largely completed preparing technical systems to ensure that they will function at the century date change and are taking steps to deal with potential contingencies. The Federal Reserve successfully completed testing all of its mission-critical computer systems for year 2000 compliance, including its securities and funds transfer systems. As a precaution to assure the public that sufficient cash will be available in the event that demand for U.S. currency rises in advance of the century date change, the Federal Reserve will increase considerably its inventory of currency by late 1999. In addition, the Federal Reserve established a Century Date Change Special Liquidity Facility to supply collateralized credit freely to depository institutions at a modest penalty to market interest rates in the months surrounding the rollover. This funding should help financially sound depository institutions commit more confidently to supplying loans to other financial institutions and businesses in the closing months of 1999 and early months of 2000.

All depository institutions have been subject to special year 2000 examinations by their banking supervisors to ensure their readiness. Banks, in turn, have worked with their customers to encourage year 2000 preparedness by including a review of a customer's year 2000 preparedness in their underwriting or loan-review standards and documentation. According to the Federal Reserve's May 1999 Senior Loan Officer Opinion Survey, a substantial majority of the respondent banks have largely completed year 2000 preparedness reviews of their material customers. Most banks reported that only a small portion of their customers have not made satisfactory progress.

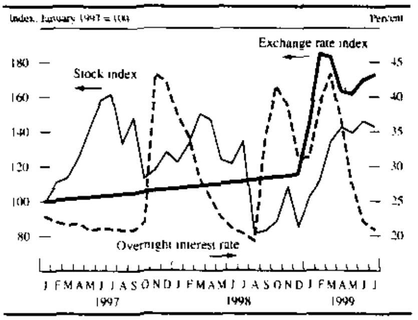
Banks in the Federal Reserve's survey reported little demand from their clients for special contingency lines of credit related to the century date change, although many expect demand for such lines to increase somewhat as the year progresses. Almost all domestic respondents reported that they are willing to extend such credit lines, although in some cases with tighter standards or terms.

International Developments

Global economic prospects look considerably brighter than they did only a few months ago. To an important degree, this improvement owes to the rebound in the Brazilian economy from the turmoil experienced in January and February and to the fact that the fallout from Brazil on other countries was much less than it might have been. The fear was that the collapse of the Brazilian *real* last January would unleash a spiral of inflation and further devaluation and lead to a default on government domestic debt, destabilizing financial markets and triggering an intensified flight of capital from Brazil. In light of events following the Russian debt moratorium and collapse of the ruble last year, concern existed that a collapse of the *real* could also have negative repercussions in Latin America more broadly, and possibly even in global financial markets.

Developments in Brazil turned out better than expected over the weeks after the floating of the *real* in January. Between mid-January and early March, the *real* lost 45 percent of its value against the dollar, reaching a low of 2.2 per dollar, but then started to recover after the Brazilian central bank raised the overnight interest rate from 39 percent to 45 percent and made clear that it gave a high priority to fighting inflation. By mid-May, the *real* had strengthened to 1.65 per dollar, even while the overnight rate had

Brazilian financial indicators



NOTE. The stock index is the Bovespa index from the Sao Paolo Exchange, last trading day of the month. The overnight interest rate is the average monthly SELIC rate. The exchange rate index is the average monthly bilateral exchange rate with the U.S. dollar.

been cut, in steps, from its March high. The overnight rate was reduced further, to 21 percent by the end of June, but the *real* fell back only modestly and stood at about 1.80 per dollar in mid-July. Brazil's stock market also rose sharply and was up by about 65 percent in the year to date.

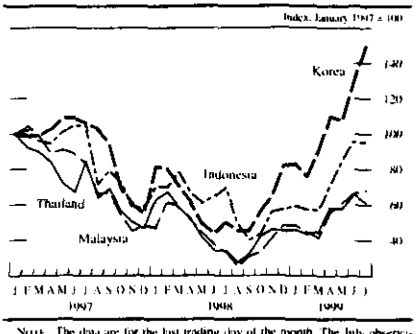
Several favorable developments have worked to support the *real* and equity prices over the past few months. Inflation has been lower than expected, with consumer price inflation at an annual rate of around 8 percent for the first half of the year. Greater-than-expected real GDP growth in the first quarter, though attributable in part to temporary factors, provided some evidence of a bottoming out, and possible recovery, in economic activity over the first part of this year. And in the fiscal arena, the government posted a primary surplus of more than 4 percent of GDP in the first quarter—well above the goal in the International Monetary Fund program. The positive turn of events has facilitated a return of the Brazilian government and private-sector borrowers to international bond markets, albeit on more restrictive terms than those of a year ago.

Since the middle of May, however, the road to recovery in Brazil has become bumpier. The central government posted a fiscal deficit in May that was bigger than had been expected. In addition, court challenges have called into question fiscal reforms enacted earlier this year that were expected to improve the government's fiscal balance by about 1 percent of GDP. In May, the rise in U.S. interest rates associated with the anticipated tightening in the stance of U.S. monetary policy helped push Brady bond yield spreads up more than 200 basis points. Although they narrowed some in June they widened recently on concerns about Argentina's economic situation.

The Brazilian crisis did trigger renewed financial stress throughout Latin America, as domestic interest rates and Brady bond yield spreads increased sharply in January from levels that had already been elevated by the Russian crisis. Nonetheless, these increases were generally smaller than those that had followed the Russian crisis, and as developments in Brazil proved more positive than expected, financial conditions in the rest of the region stabilized rapidly. Even so, the combination of elevated risk premiums and diminished access to international credit markets, as well as sharp declines in the prices of commodity exports, had significant consequences for GDP growth, which began to slow or turn negative throughout the region in late 1998 and early 1999.

Mexico appears to have experienced the least diminution in economic growth, likely because of its strong trade links with the United States, where growth has been robust. A flattening in Mexican GDP in the final quarter of 1998 has given way to renewed, but moderate, growth more recently, and the Mexican peso has appreciated by about 5½ percent relative to the dollar since the start of the year. By contrast, economic activity in Argentina declined sharply in the first quarter, in part because of the devaluation and relatively weak economic activity in Brazil, Argentina's major trading partner. More recently the earlier recovery in Argentina's financial markets appears to have backtracked as concern has increased about the medium- to long-run viability of the currency peg to the dollar. Several countries in the region, including Venezuela, Chile, and Colombia, also experienced sharp declines in output in the first quarter, stemming in part from earlier declines in oil and other commodity prices.

Stock prices in developing Asian countries



NOTE. The data are for the last trading day of the month. The July observations are for July 19. Indexes are capitalization-weighted averages of all stocks traded on a country's stock exchange.

In emerging Asia, signs of recovery in financial markets and in real activity are visible in most of the countries that experienced financial crises in late 1997. However, the pace and extent of recovery is uneven across countries. The strongest recovery has been in Korea. In 1998, the Korean won reversed nearly half of its sharp depreciation of late 1997. It has been little changed on balance this year, as Korean monetary authorities have intervened to moderate its further appreciation. Korean stock prices have also staged an impressive recovery—moving up about 75 percent so far in 1999. In the wake of its financial crisis, output in Korea fell sharply, with industrial production down about 15 percent by the middle of last year. Since then, however, production has bounced back. With the pace of the recovery accelerating this year, all of the post-crisis drop in production has been reversed. This turnaround reflects both the improvement in Korea's external position, as the trade balance has swung into substantial surplus, and the government's progress in addressing the structural problems in the financial and corporate sectors that contributed to the crisis.

Financial markets in the Southeast Asian countries that experienced crises in 1997 (Thailand, Singapore, Malaysia, Indonesia, and the Philippines) apparently were little affected by spillover from Brazil's troubles earlier this year and have recovered on balance over the past year, with exchange rates stabilizing and stock prices moving higher. Financial conditions have been weakest in Indonesia, in large part a result of political uncertainty; but even so, domestic interest rates have dropped sharply, and the stock market has staged an impressive rebound since April. The recovery of economic activity in these countries has been slower and less robust than in Korea, possibly reflecting slower progress in addressing structural weaknesses in the financial and corporate sectors. However, activity appears to have bottomed out and has recently shown signs of starting to move up in these countries.

Financial markets in China and Hong Kong experienced some turbulence at the start of the year when Chinese authorities put the Guangdong International Trust and Investment Corporation (GITIC) into bankruptcy, leading to rating downgrades for some Chinese financial institutions, including the major state commercial banks. The GITIC bankruptcy also raised concerns about Hong Kong financial institutions, which are heavy creditors to Chinese entities. These concerns contributed to a substantial increase in yield spreads between Hong Kong government debt and U.S. Treasury securities and to a fall in the Hong Kong stock market of about 15 percent. Spreads have narrowed since, falling from about 330 basis points on one-year debt in late January to about 80 basis points by mid-May, and have remained relatively stable since then. Equity prices also rebounded sharply, rising nearly 50 percent between mid-February and early May. Despite sizable volatility in May and June, they are now roughly unchanged from early May levels.

In Japan, a few indicators suggest that recovery from a prolonged recession may be occurring. Principally, first-quarter GDP growth at an annual rate of 7.9 percent was recorded—the first positive growth in six quarters. This improvement reflects in part a shift toward more stimulative fiscal and monetary policies. On the fiscal front, the government announced a set of measures at the end of last year that were slated for implementation during 1999 and included permanent cuts in personal and corporate income taxes, various investment incentives, and increases in public expenditures. The large-scale fiscal expansion and concern about increases in the supply of government bonds caused bond yields to more than double late last year and early this year, to a level of about 2 percent on the ten-year bond.

In mid-February, primarily because of concern about the prolonged weakness in economic activity and pronounced deflationary pressures but also in response to the rising bond yields, the Bank of Japan announced a reduction in the target for the overnight call-money rate and subsequently guided the rate to its present level of 3 basis points by early March. This easing of monetary policy had a stimulative effect on Japanese financial markets, with the yield on the ten-year government bond falling more than 75 basis points, to 1.25 percent by mid-May. More recently, the yield has risen to about 1.8 percent, partially in response to the release of unexpectedly strong first-quarter GDP growth. Supportive monetary conditions, coupled with restructuring announcements from a number of large Japanese firms and growing optimism about the economic outlook, have fueled a rise in the Nikkei from around 14,400 over the first two months of the year to over 18,500 in mid-July.

The improved economic performance in Japan also reflects some progress on addressing persistent problems in the financial sector. In March the authorities injected 7½ trillion yen of public funds into large financial institutions and began to require increased provisioning against bad loans as well as improved financial disclosure. Although much remains to be done, these actions appear to have stabilized conditions, at least temporarily, in the banking system, and the premium on borrowing rates paid by leading Japanese banks declined to zero by March.

The yen strengthened in early January, supported by the runup in long-term Japanese interest rates, reaching about 110 per dollar—its highest level in more than two years. However, amid apparent intervention by the Japanese authorities, the yen retreated to a level above 116 per dollar, and it remained near that level until the mid-February easing of monetary policy and the subsequent decline of interest rates when it depreciated to about 120 per dollar. In mid-June, the Japanese authorities intervened in the foreign exchange market in an effort to limit appreciation of the yen after the surprisingly strong first-quarter GDP release increased market enthusiasm for that currency. The authorities noted that a premature strengthening of the yen was undesirable and would weigh adversely on economic recovery.

In the other major industrial countries, the pace of economic growth this year has been mixed. Economic developments in Canada have been quite favorable. GDP rose 4½ percent at an annual rate in the first quarter after a fourth-quarter gain of 4¼ percent, with production fueled by strong demand for Canadian products from the United States. Core inflation remains low, near the lower end of the Bank of Canada's target range of 1 percent to 3 percent, although overall inflation rose some in April and May. Oil prices and other commodity prices have risen, and the current account deficit has narrowed considerably. These factors have helped the Canadian dollar appreciate relative to the U.S. dollar by about 4 percent this year and have facilitated a cut in short-term interest rates of 50 basis points by the Bank of Canada. Along with rising long-term interest rates elsewhere, long rates have increased in Canada by about 30 basis points over the course of this year. Even so, equity prices have risen about 12 percent since the start of the year, although the rise in long-term rates has undercut some of the momentum in the stock market.

In the United Kingdom, output was flat in the first quarter, coming off a year in which GDP growth had already slowed markedly. However, the effects of aggressive interest rate reductions undertaken by the Bank of England in late 1998 and earlier this year appear to have emerged in the second quarter, with gains in industrial production, retail sales volume, and business confidence. Inflationary pressures have been well contained, benefiting in part from the continued strength in sterling; the Bank of England cut interest rates, most recently in June, to reduce the likelihood of inflation undershooting its target of 2½ percent. Consistent with expectations of an upturn in growth, equity prices have risen more than 15 percent, and long-term bond yields have climbed nearly 80 basis points since the end of last year.

First-quarter growth in the European countries that have adopted a common currency (euro area) regained some momentum from its slow pace in late 1998 but was nevertheless below potential, as production continued to react to the decline in export orders registered over the course of 1998 and in early 1999. Still, the drag on overall production from weak export demand from Asia and eastern Europe appears to have lifted a bit in the past few months, although the signs of a pickup in growth were both tentative and uneven across the euro area. In Germany, industrial production was higher in April and May than in the preceding two months, and export orders were markedly higher in those months than they had been at any time since the spring of 1998. But in France, which had been the strongest of the three largest euro-area economies in 1998, GDP growth was a meager 1¼ percent at an annual rate in the first quarter, and industrial production slipped in April.

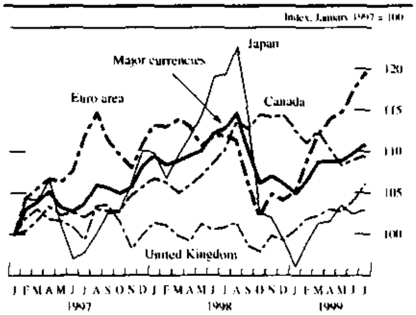
On average in the euro area, inflation has remained quite tame, even as rising oil prices, a declining euro, and, at least in Germany, an acceleration in wage rates have raised inflationary pressures this year. The low average rate of inflation as well as the still sluggish pace of real activity in some of the euro-area countries led the European Central Bank to lower the overnight policy rate by 50 basis points in April, on top of cuts in short-term policy rates made by the national central banks late last year that, on average, were worth about 60 basis points.

Notwithstanding the easing of the policy stance, long-term government bond yields have risen substantially from their January lows in the largest economies of the euro area. Ten-year rates spiked in early March along with U.S. rates, fell back some through mid-May, and then resumed an upward course around the time the FOMC adopted a tightening bias in mid-May. Since the middle of June, a relatively sharp increase in yields has pushed them to about 100 basis points above their values at the start of the year and has narrowed what had been a growing interest rate differential between U.S. and European bonds. In addition to the pressure provided by the increase in U.S. rates, the runup in European yields likely reflects the belief that short-term rates have troughed, as the incipient recovery in Asia not only reduces the drag on European exports but also attenuates deflationary pressures on European import prices. Concern about the fall in the exchange value of the euro may also have contributed to an assessment that the next move in short-term rates would be up. Gains in equity prices so far this year—averaging about 12½ percent—are also suggestive of the belief that economic activity may be picking up, although the range in share price movements is fairly broad, even considering only the largest economies: French equity prices have risen about 20 percent, German prices are up 13 percent, and Italian prices are up only 5 percent.

The new European currency, the euro, came into operation at the start of the year, marking the beginning of Stage Three of European Economic and Monetary Union. The rates of exchange between the euro and the currencies of the eleven countries adopting the euro were set on December 31; based on these rates, the value of the euro at the moment of its creation was $1.16675. Trading in the euro opened on January 4, and after jumping on the first trading day, its value has declined relative to the dollar almost steadily and is now about 13 percent below its initial value. The course of the euro–dollar exchange rate likely has reflected in part the growing divergence in both the cyclical positions and, until recently, long-term bond yields of the euro-area economies and the United States. Concerns about fiscal discipline in Italy—the government raised its 1999 deficit-to-GDP target from 2.0 percent to 2.4 percent—and about progress on structural reforms in Germany and France have also been cited as contributing to weakness in the euro, with the European Central Bank recently characterizing national governments' fiscal policy plans as "unambitious."

On balance the dollar has appreciated more than 4½ percent against an index of the major currencies since the end of last year, owing mainly to its strengthening relative to the euro. Nevertheless, it remains below its recent peak in August of last year when the Russian debt moratorium and subsequent financial market turmoil sent the dollar on a two-month downward slide.

Nominal dollar exchange rate indexes



NOTE. The data are monthly averages. The euro-area exchange rate uses the restated German mark before January 1999. The major currency index is the trade-weighted average of the exchange value of the dollar against major currencies.