FEDERAL RESERVE'S SECOND MONETARY POLICY REPORT FOR 1998

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BEFORE THE

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

ONE HUNDRED FIFTH CONGRESS

SECOND SESSION

ON

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

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CONTENTS

TUESDAY, JULY 21, 1998

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TUESDAY, JULY 21, 1998

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

The Committee met at 10:30 a.m., in room SD-106 of the Dirksen Senate Office Building, Senator Alfonse M. D'Amato (Chairman of the Committee) presiding.

OPENING STATEMENT OF CHAIRMAN ALFONSE M. D'AMATO

The CHAIRMAN. The Committee is pleased to welcome Chairman Greenspan this morning to give the Federal Reserve's semiannual report to Congress on our Nation's economy.

As many have noted on countless occasions, the Fed has done a remarkable job under Chairman Greenspan's tenure. Our economic expansion is in its eighth year, making it the third longest in the post-World War II period.

I'm going to ask that the full text of my remarks be included in the record as if read in its entirety because we really are here to listen to Chairman Greenspan.

I also might note that a number of our colleagues are at a Finance Committee markup which is taking place at the same time as this hearing. At some point, I'm going to have to leave to participate in that markup.

I would ask my colleagues, with respect to Chairman Greenspan and his time constraints, to see if we can't limit our remarks so that we can hear from the Chairman. Then, we will pose whatever questions we would like to put to him.

With that, I will recognize Senator Boxer.

OPENING COMMENT OF SENATOR BARBARA BOXER

Senator BOXER. I'm anxious to hear from Chairman Greenspan. I will pass at this time.

The CHAIRMAN. Senator Reed.

OPENING COMMENT OF SENATOR JACK REED

Senator REED. Mr. Chairman, I think we should proceed right to Chairman Greenspan.

The CHAIRMAN. I thank my colleagues.

Chairman Greenspan, I think this is the quickest you have ever gotten on. Before anyone else gets here, we would like to hear your remarks.

[Laughter.]

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

Chairman GREENSPAN. I have just been thinking over the last 20 times that I have been here, and I guess you are unquestionably correct; there's nothing even close.

Anyway, thank you very much, Mr. Chairman. I have a rather extensive prepared statement from which I will be excerpting significantly. I request that the full text be included in the record.

The CHAIRMAN. So ordered.

Chairman GREENSPAN. I appreciate this opportunity to present the Federal Reserve's semiannual report on monetary policy.

Overall, the performance of the U.S. economy continues to be impressive. Over the first part of the year, we experienced further gains in output and in employment, subdued prices, and moderate long-term interest rates. Important crosscurrents, however, have been impacting the economy. With labor markets very tight and domestic final demand retaining considerable momentum, the risks of a pickup in inflation remain significant.

Inventory investment, which was rapid late last year and early this year, appears to have slowed, perhaps appreciably. Moreover, the economic and financial troubles in Asian economies are now demonstrably restraining demands for U.S. goods and services—and those troubles could intensify and could spread further. Weighing these forces, the Federal Open Market Committee chose to keep the stance of policy unchanged over the first half of 1998. However, should pressures on labor resources begin to show through more impressively in cost increases, policy action may need to counter any associated tendency for prices to accelerate before it undermines this extraordinary expansion.

When I last appeared before your Committee on February 25, I noted that a key question for monetary policy was whether the consequences of the turmoil in Asia would be sufficient to check inflationary tendencies that might otherwise result from the strength of domestic spending and tightening labor markets.

In the event, the contraction of output and incomes in a number of Asian economies has turned out to be more substantial than most had anticipated. Moreover, financial markets in Asia and in the emerging market economies generally have remained unsettled, portending further difficult adjustments. The contraction in Asian economies, along with the rise in the foreign exchange value of the dollar over 1997, prompted a sharp deterioration in the U.S. balance of trade in the first quarter. Nonetheless, the American economy proved to be unexpectedly robust in that period. Evidently, optimism about jobs, incomes, and profits, about high and rising wealth-to-income ratios, low financing costs, and falling prices for high-tech goods fed the appetites of households and businesses for consumer durables and capital equipment. In addition, inventory investment contributed significantly to growth in the first quarter. As evidence piled up that the economy continued to run hot during the winter, the Federal Reserve's concerns about inflationary pressures mounted.

The robust expansion of demand tightened labor markets further, giving additional impetus to the upward trend in labor costs.

Inflation was low—though, given the lags with which monetary policy affects the economy and prices, we had to be mainly concerned not with conditions at the moment, but with those likely to prevail many months ahead.

Although national income and product data for the second quarter have not yet been published, growth of U.S. output appears to have slowed sharply. Indeed, readings on the elements that make up the real GDP have led many analysts to anticipate a decline in that measure in the second quarter, after the first-quarter surge.

It is worth noting that some of the other indicators of output, including worker hours and manufacturing production, show a somewhat steadier, though slowing, path over the first half of the year. And underlying trends in domestic final demand have remained strong, imparting impetus to the continuing economic expansion.

Labor markets became increasingly taut during the first half of the year, but, at least through the first quarter, the effects of tight labor markets and a rising wage bill on production costs were moderated by strong gains in productivity.

Indeed, inflation stayed remarkably damped throughout the first quarter. The Consumer Price Index, as well as broader measures of prices, indicate that inflation moved down further, even as the economy strengthened. The most recent price data suggest that overall consumer price inflation moved up in the second quarter, but, even so, the increase remained moderate.

In any event, it would be a mistake for monetary policymakers to focus on any single index in gauging inflation pressures in the economy. Although much public attention is directed to the CPI, the Federal Reserve monitors a wide variety of aggregate price measures. Price pressures appear especially absent in some of the measures in the national income accounts, which are available through the first quarter.

So far this year, Mr. Chairman, our economy has continued to enjoy a virtuous cycle. Evidence of accelerated productivity has been bolstering expectations of future corporate earnings, thereby fueling still further increases in equity values, and the improvements in productivity have been helping to reduce inflation. In the context of subdued price increases and generally supportive credit conditions, rising equity values have provided impetus to spending and, in turn, expansion of output, employment, and productivity-enhancing capital investment.

The essential precondition for the emergence, and persistence, of this virtuous cycle is arguably the decline in the rate of inflation to near price stability. In recent years, continued low product price inflation and expectations that it will persist have promoted stability in financial markets and fostered perceptions that the degree of risk in the financial outlook has been moving ever lower.

These perceptions, in turn, have reduced the extra compensation that investors require for making loans to, or taking ownership positions in, private firms. With risks in the domestic economy judged to be low, credit and equity capital have been readily available for many businesses, fostering strong investment. And low mortgage interest rates have allowed many households to purchase homes and to refinance outstanding debt.

To a considerable extent, investors seem to be expecting that low inflation and stronger productivity growth will allow the extraordinary growth of profits to be extended into the distant future. Indeed, expectations of earnings growth over the longer term have been undergoing continual upward revision by security analysts since early 1995. These rising expectations have, in turn, driven stock prices sharply higher and credit spreads lower, perhaps in both cases to levels that will be difficult to sustain unless the virtuous cycle continues.

Probably only a few percent of these largely unrealized capital gains have been transformed into the purchase of goods and services in consumer markets. But that increment to spending, combined with the sharp increase in equipment investment, which has stemmed from the low cost of both equity and debt relative to expected profits on capital, has been instrumental in propelling the economy forward.

The consequences for the American worker have been dramatic and, for the most part, highly favorable. A great many chronically underemployed people have been given the opportunity to work, and many others have been able to upgrade their skills.

Government finances have been enhanced as well. In the Federal sector, taxes paid on huge realized capital gains and other incomes related to stock market advances, coupled with taxes on markedly higher corporate profits, have joined with restraint on spending to produce a unified budget surplus for the first time in nearly three decades. The important steps taken by Congress and the Administration to put Federal finances on a sounder footing have added to national saving, relieving pressures on credit markets. Maintaining this disciplined budget stance would be most helpful in supporting a continuation of our current robust economic performance in the years ahead.

The fact that economic performance has strengthened as inflation subsided should not have been surprising, given that risk premiums and economic disincentives to invest in productive capital diminish as the economy approaches price stability. But the extent to which strong growth and high labor force utilization have been joined with low inflation over an extended period is, nevertheless, exceptional. So far, at least, the adverse wage-price interactions that played so central a role in pressuring inflation higher in many past business expansions—eventually bringing those expansions to an end—have not played a significant role in this expansion.

For one thing, increases in hourly compensation have been much slower to pick up than in most other recent expansions, although, to be sure, wages have started to accelerate in the past couple of years as the labor market has become progressively tighter. In the first few years of the expansion, the subdued rate of rise in hourly compensation seemed to be, in part, a reflection of greater concerns among workers about job security. We now seem to have moved beyond that phase of especially acute concern, though the flux of technology may still be leaving many workers with fears of job skill obsolescence and a willingness to trade wage gains for job security.

A couple of years ago—almost at the same time that increases in total hourly compensation began trending up in nominal terms—evidence of a long-awaited pickup in the growth of labor productivity began to show through more strongly in the data; and this accelerated increase in output per hour has enabled firms to raise workers' real wages while holding the line on price increases. Signs of technological improvements are all around us, and the benefits are evident not only in high-tech industries but also in production processes that have long been part of our industrial economy.

Those technological innovations and the rapidly declining cost of capital equipment that embodies them in turn seem to be a major factor behind the recent enlarged gains in productivity. Evidently, plant managers who were involved in planning capital investments anticipated that a significant increase in the real rates of return on facilities could be achieved by exploiting these emerging new technologies.

Notwithstanding a reasonably optimistic interpretation of the recent productivity numbers, it would not be very prudent to assume that even strongly rising productivity, by itself, can ensure a noninflationary future. Certainly wage increases, per se, are not inflationary, unless they exceed productivity growth, thereby creating pressure for inflationary price increases that can eventually undermine economic growth and employment.

Because the level of productivity is tied to an important degree to the stock of capital, which turns over only gradually, increases in the trend growth of productivity most likely also occur rather gradually. By contrast, the potential for an abrupt acceleration of nominal hourly compensation is surely greater.

As I have noted in previous appearances before Congress, economic growth at rates experienced on average over the past several years would eventually run into constraints as the reservoir of unemployed people available to work is drawn down. The annual increase in the working-age population (from 16 to 64 years of age), including immigrants, has been approximately 1 percent a year in recent years. Yet employment, measured by the count of persons who are working rather than by the count of jobs, has been rising 2 percent a year since 1995, despite the acceleration in the growth of output per hour.

This gap between the growth in employment and that of the working-age population will inevitably close. What is crucial to sustaining this unprecedented period of prosperity is that it close reasonably promptly, given already stretched labor resources, and that the labor markets find a balance consistent with sustained growth marked by compensation gains in line with productivity advances. Whether these adjustments will occur without monetary policy action remains an open question.

While the United States has been benefiting from a virtuous economic cycle, a number of other economies unfortunately have been spiraling in quite the opposite direction. The United States, as well as Canada and Western Europe, have been enjoying solid economic growth, with relatively low inflation and declining unemployment, but the economic performance in many developing and transition nations and Japan has been deteriorating. How quickly the latter erosion is arrested and reversed will be a key factor in shaping U.S. economic and financial trends in the period ahead. With all that is at stake, it would be difficult to overstate how crucial it is that the authorities in the relevant economies promptly implement effective policies to correct the structural problems underlying recent weaknesses and to promote sustainable economic growth before patterns of reinforcing contraction become difficult to contain.

Responses in countries that are currently experiencing difficulties have varied considerably. Some have reacted quickly and, in general terms, appropriately. In others, a variety of political considerations appear to have militated against prompt and effective action. As a consequence, the risks of further adverse developments in these economies remain substantial, and given the pervasive interconnections of virtually all economies and financial systems in the world today, the associated uncertainties for the United States and other developed economies remain substantial as well.

In the current circumstances, we need to be aware that monetary policy tightening actions in the United States could have outsized effects on very sensitive financial markets in Asia, a development that could have substantial adverse repercussions on U.S. financial markets and, over time, on our own economy. But while we must take account of such foreign interactions, we must also be careful that our responses ultimately are consistent with a monetary policy aimed at optimal performance of the U.S. economy.

Our main objectives relate to domestic economic performance, and price stability and maximum sustainable economic growth here at home would best serve the long-term interests of troubled financial markets and economies abroad.

The Federal Open Market Committee believes that conditions for continued growth with low inflation are in place here in the United States. As I noted previously, an important issue for policy is how the imbalance of recent years between the demand for labor and the growth of the working-age population is resolved. In that regard, we see a slowing of aggregate demand as a necessary element in the mix.

At this time, some of the key factors that have supported strong final demand by domestic purchasers remain favorable. With their incomes and wealth having been on a strong upward track, American consumers remain upbeat. For businesses, decreasing costs of and high rates of return on investment, as well as the scarcity of labor, could keep capital spending elevated. These factors suggest some risk that the labor market could get even tighter. And even if it does not, under prevailing tight labor markets, increasingly confident workers might place escalating pressures on wages and costs, which would eventually feed through to prices.

But a number of factors will likely serve to damp growth in aggregate demand, helping to foster a reasonably smooth transition to a more sustainable rate of growth and reasonable balance in labor markets.

The CHAIRMAN. Chairman Greenspan, we are in the process of completing a vote. That's why my colleagues left. I just want to call this to your attention.

There are only 2½ minutes remaining for the vote. I'm going to ask that we take a 5-minute recess so my colleagues can come back and hear this testimony and proceed with the hearing.

We will recess for just 5 minutes.

[Recess.]

OPENING COMMENTS OF SENATOR WAYNE ALLARD

Senator ALLARD [presiding]. I call the hearing back to order.

Chairman D'Amato just stepped on the elevator to go to vote. He asked if I would call the hearing back to order. Let's continue with the testimony.

Chairman Greenspan, would you finish your testimony.

Chairman GREENSPAN. Thank you, Senator.

A number of factors will likely serve to damp growth in aggregate demand, helping to foster a reasonably smooth transition to a more sustainable rate of growth and reasonable balance in labor markets. We have yet to see the full effects of the crisis in East Asia on U.S. employment and income. Residential and business fixed investment already have reached such high levels that any further gains approaching those experienced recently would imply very rapid growth of the stocks of housing and plant and equipment relative to income trends. Moreover, business investment will be damped if recent indications of a narrowing in domestic operating profit margins prompt a reassessment of the expected rates of return on investment in plant and equipment. Reduced prospects for the return to capital would not only affect investment directly but could also affect consumption if stock prices adjust to a less optimistic view of earnings prospects.

Thus, members of the Board of Governors and presidents of the Federal Reserve Banks anticipate a slowing in the rate of economic growth. The central tendency of their forecasts is that real GDP will rise 3 to 3.25 percent over 1998 as a whole and 2 to 2.5 percent in 1999. With the rise in the demand for workers coming into line with that of the labor force, the unemployment rate is expected to change very little from its current level, finishing next year in the neighborhood of 4.5 to 4.75 percent.

Inflation performance will be affected by developments abroad as well as by those here at home. The extent and pace of the recovery of Asian economies currently experiencing a severe downturn will have important implications for prices of energy and other commodities, the strength of the dollar, and competitive conditions on world product markets.

On a more fundamental level, it is the balance of supply and demand in labor and product markets in the United States that will have the greatest effect on inflation rates here. As I noted previously, wage and benefit costs have been remarkably subdued in the current expansion. Nonetheless, an accelerating trend in wages has been apparent for some time.

In addition, a gradual upward tilt in benefit costs has become evident of late. Given that compensation costs are likely to accelerate at least a little further, productivity trends and profit margins will be key to determining price performance in the period ahead. We will be closely monitoring a variety of indicators to assess the degree to which productivity is on a stronger, long-run track, after what is likely to appear in the data as a weak second quarter.

Monetary policymakers see the most likely outcome as modestly higher inflation rates in the next 1½ years. The central tendency of monetary policymakers' CPI inflation forecasts is for an increase of 1.75 to 2 percent during 1998 and 2 to 2.5 percent next year. As noted, the ebbing of the special factors reducing inflation over the past year or so, such as the decline in oil prices, will account for some of this uptick. But the Federal Open Market Committee will need to remain particularly alert to the possibility that more fundamental imbalances are increasing inflationary pressures. The Committee would need to resist very vigorously any tendency for an upward trend, which could become embedded in the inflationary process.

The Committee recognizes that significant risks attend the outlook: One is that the impending constraint from domestic labor markets could bind more abruptly than it has to date, intensifying inflation pressures. The other is the potential for further adverse developments abroad, which could then reduce the demand for U.S. goods and services more sharply than anticipated and which would thereby ease pressures on labor markets. While we expect that the situation will develop relatively smoothly, the Committee believes that, given the current tightness in labor markets, the potential for accelerating inflation is probably much greater than the risk of protracted, excessive weakness in the economy.

In any case, the Committee will need to continue to observe the evolving circumstances closely, and adjust the stance of monetary policy as appropriate, in order to help establish conditions that are consistent with progress toward the Federal Reserve's goals of price stability and maximum sustainable economic growth.

As I have stated in previous testimony, the recent economic performance, with its combination of strong growth and low inflation, is as impressive as any I have witnessed in my near half-century of daily observation of the American economy. Although the reasons for this development are very complex, much of our success can be attributed in part to sound economic policy. Congress and the Administration have successfully balanced the budget and, indeed, achieved a near-term surplus, a development that tends to boost national saving and investment.

The Federal Reserve has pursued monetary conditions consistent with maximum sustainable long-term growth by seeking price stability. These policies have helped to bring about a healthy macroeconomic environment for productivity-boosting investment and for innovation, factors that have lifted living standards for most Americans. The task before us is to maintain disciplined economic policies and to thereby contribute to maintaining and extending these gains in the years ahead.

Thank you, Mr. Chairman. I'm available for questions.

Senator ALLARD. Chairman Greenspan, thank you for your testimony. I have a few questions, then I will yield to Senator Sarbanes from Maryland.

There is some talk about what's happening in the Far East, and it seems to me that the Japanese economy certainly is important, and we need to be aware of what is taking place.

If you were to be an advisor to the new Prime Minister, what kind of advice would you give him in order to strengthen the economy of Japan?

Chairman GREENSPAN. First, Senator, the issue is what's wrong with Japan? There are a number of things which are wrong, but by far the most significant is the fact that following the bursting of the bubble in the early 1990's, which precipitated a very sharp decline in both real estate and equity values, essentially the collateral underlying borrowing in the banking system, a huge increase in nonperforming loans was allowed to accelerate and fester in the banking system for a number of years, essentially unaddressed.

This has created an erosion in the financial intermediary system which has created significant slow growth for a number of years, and now under pressures of continuing erosion in the banking system, a weakness has occurred which has now tilted the Japanese economy downward.

It's clear that they need to do two things: The first is to address their banking situation expeditiously and in dramatic ways, which perhaps would even go against the prevailing culture of the way things are done in Japan. Second, having done that, what they need to do is to engage in more stimulative fiscal policies, specifically reducing taxes.

Senator ALLARD. Thank you.

Now I would like to turn to our economy here, and ask you a question with regard to the Congressional Budget Office, who once again dramatically increased their estimates of the budget surplus over the next several years.

I don't like to refer to them as surpluses when we have this big debt still hanging over us, but at least we have revenues that are continuing to exceed expenditures.

What is the likelihood that this phenomenon the Congressional Budget Office has predicted will materialize, and what are the greatest threats to it not materializing?

Chairman GREENSPAN. Senator, that is really the crucial question. As the experience of the last several years has indicated, the ability to forecast the trend of fiscal balances in the United States is not easy. And one of the reasons, of course, is because we're dealing with large receipts and outlays, and small changes in either of them, especially in opposite directions, can move the budget deficit, the budget balance, or surplus, in a very dramatic manner.

What has occurred in the last couple of years is a really quite remarkable acceleration in personal income tax receipts which are not fully understood by analysts who have full data available to them. It is pretty clear that in 1996, the last annual set of data which we have in detail, a substantial amount of the so-called income tax receipt "surprises" of that year were attributable to an underestimate of the extent of realized capital gains and the taxes that were paid on them.

There were also very substantial increased incomes which were engendered by the rise in stock prices. We have seen a substantial increase in stock options, in bonus payments, and a number of related types of incomes, largely to upper-income individuals who are paying very large taxes on them. That has very markedly bolstered the receipt side of the budget.

The key problem we have in projecting forward is how much of that to presume will continue, and how one answers that question can very dramatically alter the outlook. The most general forecasts which are being made largely by OMB and CBO, for example, tend to assume that a good part of the increased rates on a number of these different personal taxes will increase, and that productivity acceleration, which seems to have been in the works, will continue into that period.

If that occurs—and there are no other policy actions—obviously the surpluses will occur. It's important to recognize that a major force in the forecast is once you start on what is clearly a virtuous cycle of surpluses, you bring down the level of debt which brings down the interest cost of that debt, which makes the surplus even larger, which makes the debt even lower, and you get a fairly dramatic reduction in aggregate debt, which has some very important and very positive consequences.

But to answer the bottom line of your question, I think you have to realize that a number of these projections are very tentative and, indeed, can reverse just as dramatically as the estimates made 2 or 3 years ago have been reversed.

Senator ALLARD. Thank you.

I will now yield to the Senator from Maryland, Senator Sarbanes.

OPENING STATEMENT OF SENATOR PAUL S. SARBANES

Senator SARBANES. Thank you very much, Senator Allard.

First of all, Chairman D'Amato and I have received a statement from the AFL–CIO to be entered into the record. If that's not yet been done, I would like to do that at this point, Mr. Chairman.

Senator ALLARD. Without objection.

Senator SARBANES. I would note that in that statement they say it is good news for America's workers that the Nation's unemployment rate is edging closer to our historic full employment targets than at any other time since the Humphrey-Hawkins legislation was adopted in 1978. This, of course, would fit in with your observation, Chairman Greenspan, about this being the—I forget exactly how you put it—strongest economy you have seen in 50 years. Is that what you stated?

Chairman GREENSPAN. This is the strongest economy I have seen in nearly 50 years of watching the economy daily. It's really quite a remarkable exhibition by a complex economy such as ours.

Senator SARBANES. I would like to make this observation: I can remember at the time Humphrey-Hawkins was passed and thereafter, everyone saying, it is absolutely ridiculous; how can you have a 4 percent unemployment rate. Yet we're now down to 4.5 percent with still no significant inflation. That goal now seems a lot more realistic and credible than it did in the past when people were criticizing it.

Chairman Greenspan, I would like to ask you first about the IMF funding. It's asserted by some that the IMF has enough resources that they don't need a general quota reserve.

The observation is made that they have about $45 billion, but my understanding is that $30–35 billion of that $45 billion has to be set aside by the IMF in order for it to be in a position to meet the right of member countries to make demand withdrawals of their reserve deposits, so that the figure looks larger than it really is.

Actually, the IMF has only $10–15 billion of usable resources in its general quota reserve and, in fact, reflected this squeeze in that the Russian package took only $2.8 billion out of the general quota reserve, and the balance came out of the general arrangements to borrow. This means the IMF now has only $7–12 billion of its own effectively loanable quota reserves.

First of all, is this analysis correct, in your estimation, in terms of what's available to the IMF, which seems to me to be a disturbingly low amount? My understanding is that it's the lowest amount that they have ever had on hand.

If the analysis is correct, what does that say in terms of the urgency for Congress to act on the IMF quota increase?

Chairman GREENSPAN. Those numbers, Senator, are very close to the ones that we use. I would certainly agree with you that they're down to rock-bottom, and while I have considerable sympathy for a number of the arguments about how we should change some of our international financial institutions, that's an issue which I feel should be put aside while we confront a crisis which continues to mount.

In my judgment, approving the quota is crucial to put the IMF in a position to address potential other crises which may arise in the short term.

After the particular period of disruption has passed, I think it would be perfectly appropriate to go back and relook at the way the whole structure of how our financial institutions are positioned is working out, largely because we are in a different type of global financial system in the sense that, since the beginning of this decade, the alterations in the types of markets that have evolved, and the types of products that have been constructed, have given us a new, very dynamic, productive, but, in a certain sense, somewhat worrisome set of relationships.

In other words, money moves at paces which are far quicker than anything we had seen before, and we have to address our system and our structure in that context so that at that point, we would be well served to look at the IMF, its structure, and see whether it serves the purposes of a new global financial system. But not at this point.

Senator SARBANES. Now, part of the total picture is not only the money the IMF has available to meet crises, but also the likelihood that crises will occur, or how fragile the current international situation is.

I'm struck by the fact that this statement from the AFL–CIO, as I mentioned earlier, is almost entirely devoted to the East Asian crisis, the financial crisis, and the impact of that potentially on the U.S. economy.

I'm a little hard put to understand why what's going on in Asia seems to be being discounted to the extent it is in the workings of our own markets and economic thinking in this country.

It's as though these very serious developments are taking place which any analyst will tell you have the potential for consequences of very far-reaching proportions, yet most people seem to be going blissfully along as though there's little danger that it will have any impact on us.

Do you have any observations at all as to why that seems to be the case?

I know you, Secretary Rubin, and others have been sounding the warning bells, but why is it that people seem not to be hearing these warnings?

Chairman GREENSPAN. It's obviously difficult for me to judge, but I will comment on the fact that the initial impact of the Asian crisis has, in a certain sense, been to stabilize some of the hot spots in the American economy and, indeed, probably has contributed to stronger growth, lower inflation, and greater stability than would otherwise have been the case.

It appears that the initial response to the Asian crisis has been positive, not adverse. The major concern that I have is that it obviously cannot continue indefinitely. At some point, it ceases to be other than adverse.

While the probability that it will markedly impact the United States is, as I have said in the past, quite small, the consequences of that occurring, even though the probability is small, would be of such a nature that we should not be taking the risk, even with the relatively small probability of an adverse event.

Senator ALLARD. Thank you.

I will now yield to the Chairman, who is back from voting. I think he may have a few questions for you.

The CHAIRMAN. Thank you very much, Senator.

Chairman Greenspan, let me follow up on something that Senator Sarbanes raised, and that is the situation in Japan. We need to discuss just how serious that situation is, and how acute the problem is for their banks.

We have many estimates on the amount of problem loans, and those estimates are quite significant. Some say that their problem loans are more than three times the size of the problem we had in the S&L crisis. Do we have sufficient transparency of data to get a legitimate estimate on the true size of the banking problem taking place in Japan?

Chairman GREENSPAN. The Japanese authorities I believe are increasingly becoming aware of the issue of the need to become far more transparent than they have, and they are now moving in that direction.

The problem, however, is that with the real estate markets still essentially moribund, and the volume of transactions going on still quite small, it's very difficult to get values on real estate which is the major collateral underlying a lot of those loans.

The ability to judge how poor a particular loan portfolio is is actually even difficult for the banks themselves because they do not fully sense what the underlying value is of what they hold.

One of the issues that we have argued strenuously with our Japanese colleagues is to try to sell properties into the real estate markets which are currently in the hands of the Japanese government to do effectively what we did with the RTC, that is, galvanize the real estate market so you get real prices, you get real markets, and you can make far better judgments about the underlying collateral of the loans, which is a necessary condition for making a judgment of how bad they are.

The numbers that the Japanese authorities are publishing are very large, and the size of the problem is unquestionably substantial. One needs only to look at the vast amounts of public funds—taxpayer funds—which they are bringing to bear to try to resolve this issue.

The difficulty is large, and I think that's the reason why, as I said earlier, allowing the problem to fester as long as it has been allowed to fester has been a major mistake which has made it far more difficult to resolve than it would have been 5 or 6 years ago.

The CHAIRMAN. Let's come closer to home and discuss the concern that you and others have expressed about the possibility that credit underwriting standards at our own institutions may be less stringent than advisable.

What level of concern is that to you and to the Fed?

Chairman GREENSPAN. Mr. Chairman, what our experience over the years clearly demonstrates is that it is in a period such as now that bad loans are made.

The CHAIRMAN. You mean when things are booming?

Chairman GREENSPAN. You do not have very much risk of creating a poor loan portfolio at the bottom of the business cycle. Nobody makes bad loans—they don't make any loans—but they surely don't make bad ones at the bottom of the business cycle.

It's now when the loans which will ultimately run into trouble are being extended in a very competitive race, one bank against the other, to lower their loan rates and yield spreads.

What we know is that—and there's almost no data—the loans being made today will have a nonperforming ratio to total loans much higher than currently exists. We don't know how much, but we do know that if history is any guide, now is the time to be circumspect. On the basis of certain studies we have done, we have concluded that there has been less circumspection than seems to be appropriate for this time period.

Some of my colleagues have raised the issue, both at the staff level and at the Governors level, and to state that we find the issue somewhat discomforting is to underemphasize the potential problems that may emerge.

The CHAIRMAN. Let me then follow up with one more question on that issue.

What specifically are your examiners doing about these underwriting concerns? Are we trying to get ahead of this problem, recognizing the difficulties that we have experienced in the past?

Chairman GREENSPAN. Obviously, we can't induce people not to be foolish in certain loan practices, but we can bring to bear and try to indicate to loan officers and to the senior management of the banks that, in our judgment, on the basis of our experience and our evaluation, the practices have become somewhat looser than they should be.

I don't want to say, because it's not true, that we have evidence at this particular point that there is a mounting degree of loan losses. On the contrary, if you look at the data, it is really quite remarkable how few losses there are and how few of the loans are in delayed payment. In fact, it's that very process which is creating some let down of people's guard, and it is precisely that concern which we are trying to effectively arouse concern about.

The CHAIRMAN. I applaud your efforts in that area because we have experienced these problems in the past. I particularly commend you for calling this to our attention and to the attention of those in the banking industry.

Bankers need to be concerned about the quality of new loans, as you have indicated. It's something that's so obvious that we tend not to think about it. Lower quality loans tend to be made when you have this great prosperity, not when you have a tightening of credit.

Thank you very much, Chairman Greenspan.

Chairman GREENSPAN. Thank you.

Senator ALLARD. I now recognize Senator Kerry.

OPENING STATEMENT OF SENATOR JOHN F. KERRY

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

Chairman Greenspan, welcome.

This is a remarkable document. You have stated in your last paragraph and reemphasized the degree to which this represents an extraordinary set of perceptions on your part in the years you have been watching.

But as I read through the document, I was struck by the fact that, paragraph for paragraph, in each place where there was a sense of a cloud or potential transition, you seem to have an economic countervailing force addressing it. The market obviously is doing what it's supposed to do, and an extraordinary job at that.

I wanted to ask you some questions about the virtuous cycle you describe and the notes you have made about the future.

You particularly pointed to the working-age population increase, growing at about 1 percent per year, but I gather that the 2 percent a year rise in the number of people working, which is really quite fascinating, comes about principally because the productivity increases?

Chairman GREENSPAN. No. Actually, because the number of people going into jobs is rising at 2 percent a year, and the working-age population, including immigration, is only rising 1 percent, we are getting those additional people from (1) reduced unemployment as counted officially, and (2) the significant number of people who are not in the labor force because they're not actively seeking jobs but who would nonetheless like to work.

The combination of both of those groups of people who want jobs but don't have them has been going down gradually year by year, and in a sense we are dipping into a reservoir which ultimately is going to be probably at a minimal level, unless we close this gap between the increased working-age population and the rate of increase in the number of people working.

Senator KERRY. That's precisely what I wanted to get to, because you say the gap between growth and employment and the working-age population will inevitably close, and that what is crucial to sustaining this unprecedented period of prosperity and growth is that it close reasonably promptly, especially given the already stretched labor resources.

Could you share with us what trend line you view as essential with respect to that?

I mean, how reasonably promptly must you expect that to close in order to sustain this, and what are the dangers that you see in terms of that gap not closing?

Chairman GREENSPAN. That's a good question, Senator, and it's not easy to answer. The reason I say that is that clearly the sooner it can be closed, the better, because that will immediately relieve the increasing pressure on labor resources, although the market is still very taut at this particular time.

If we continue for another year under these pressures, the risks go up. But I cannot say to you when, because we still have approximately 10 million people who are in these two groups in a ratio to the population which is at the lowest level in the data series that goes back to 1970.

Senator KERRY. Do you have a breakdown on the nature of that group, to what degree there are people within that group that are in fact employable versus conceivably chronically unemployable?

Chairman GREENSPAN. Yes. Those data are published by the Bureau of Labor Statistics, and if I can shuffle through these papers I will give you——

Senator KERRY. But that breakdown, I assume you would agree, could considerably affect the rate at which that gap can close?

Chairman GREENSPAN. Certainly.

Senator KERRY. I would assume also that it may affect what we might need to do with respect to helping to keep it moving, i.e., transitional training, or even entry-level training?

Chairman GREENSPAN. Yes. Absolutely.

One of the characteristics that we are seeing in this particular recovery is that, because of the tightness of the labor markets, the value of on-the-job training and the remarkable expansion in community colleges which have been giving courses to people, trying to upgrade their skills, is something which has had a major positive effect on our workforce and probably would not have occurred to the extent that it has if we didn't have the tightness in the labor market that we have.

Incidentally, I have the breakdown of the two elements that we use for the working-age population, age 16 to 64. As of June, total unemployment was 6.1 million, and those not in the labor force but who nonetheless want a job was 4.5 million. We are somewhat over 10 million, and that number has been progressively falling for the last several years.

Senator KERRY. I see the light is on. I would like to come back, if I could.

Senator ALLARD. How many more questions do you have?

Senator KERRY. Just a couple more.

Senator ALLARD. Why don't you finish your two questions.

In the meantime, I'm going to turn the Chair over to Senator Grams, the Senator from Minnesota.

Senator KERRY. Chairman Greenspan, I appreciate your answers on that. The other questions I have deal with this virtuous cycle of our economy. You described the virtuous cycle, and I think I understand the context to be that the evidence of accelerated productivity raises the expectations of future corporate earnings, which in turn then fuels further increases in equity values, and ultimately the improvements in productivity reduce inflation.

Now, the question is, is there a reality check in the expectations that you refer to as central to what is fueling this?

Is there a point where the values may be exceeding the reality, where you may have an artificial bubble that somehow is riding the back of the tiger, so to speak? Do you sense that at all?

Chairman GREENSPAN. Senator, there are two ways of responding to that question. The first one is, as I indicated in my prepared remarks, a significant part of the rise in equity prices has resulted from the continuous increase in long-term expected earnings starting from evaluations of security analysts in early 1995, virtually continuously since. In other words, the analysts have raised their long-term expectations virtually month after month, and the current rate, which is well over 13 percent of an annual rate, is suggested indefinitely in the future and projects a very marked rise in profit margins and the share of profits in the national income.

History tells us that is going to run into some difficulty sooner rather than later, which suggests that these 3- to 5-year projections of analysts are unrealistic, and that the real world will somehow converge and suggest that to them in no uncertain terms.

Failing that, there is an ultimate element which you cannot go beyond, which essentially is the extent to which human beings discount the future, in the sense that the stock market value is broken down into expected long-term earnings and the discount factor one applies to that to get a present value which is effectively the stock price.

That number has been falling quite consistently, which is essentially a combination of long-term interest rates, plus what we call the equity premium. That can go down just so far. At some point, we are discounting the hereafter, and the markets at that point will fail to move further.

Which happens first I do not know.

Senator KERRY. That will be interesting to find out. I hope we are not there when we do.

You also point to the special relationship in the labor market itself, the pressure on wage-price increase and the productivity input that has reduced some of that pressure, as well as the good behavior of the consumer price component.

My question is, is there a sooner-rather-than-later confrontation with that component of the good behavior on both sides because there's been a wearing out, if you will, of this experience of older and more traditional manufacturing and service-oriented industry workers, having used up their fear of the transition into the information market age, and with a huge influx of younger, more highly skilled, and much more expectant, demanding workers, there's a clash then of the two and you lose the good will of people being willing to take wage benefits in order to simply have a job?

Is that a potential fly in the ointment?

Chairman GREENSPAN. That is a very interesting view, Senator. There is unquestionably something in what you're saying. The only issue is how long it takes before that process occurs.

We do observe that the job skill obsolescence, to which I refer in my prepared remarks, tends to be far more prominent among older segments in the workforce, people who have not been brought up with word processors, with complex computers, or with the technologies which seem so obvious and sensible to somebody coming out of college today. It's being assuaged, however, in part by this fairly dramatic back-to-school attitude of numbers of workers.

One of the most fascinating statistics that we have seen in the last several years is that the average age of people who are full-time undergraduate students in college has gone up 3 or 4 years. It suggests that the fear of this new technological world, which is inducing this shift toward job security relative to wage gains, is also creating a major impetus to go back to school.

That's where the big expansion in, on the one hand, on-the-job training courses and, on the other, community colleges and other institutes which endeavor to increase skills, is coming from.

For the moment, that crunch that you raised is partly being met by this shift in educational processes and in educational markets, which has presumably markedly increased the skills of many people in our labor force and maybe forestalled this confrontation that you raise for a while.

The truth of the matter is I don't know how we would know for sure when that was arising.

Senator KERRY. I thank you very much, Chairman Greenspan. Mr. Chairman, thank you for your courtesy.

OPENING STATEMENT OF SENATOR ROD GRAMS

Senator GRAMS [presiding]. Thank you.

Mr. Greenspan, welcome.

I have just a couple of quick questions, and I see we have been joined by Senator Dodd.

I don't want to be the pessimist, but I want to look beyond this bubble of good economic news a little bit. Clearly, I think our short-term economic and fiscal outlook has improved in recent years, due to what you call the "delicate equilibrium" that has allowed the United States to enjoy fast economic growth, high employment, and low inflation.

A recent estimate from the Congressional Budget Office shows that we may have as much as $1.5 trillion unified budget surplus and nearly $170 billion on budget surplus over the next decade, and I think you should share in a lot of that credit because of your very prudent monetary policy.

However, many long-term imbalances are still hanging over our heads, and without addressing these future risks, I think steady growth is impossible.

A major risk, I believe, is the imbalance between the Government's entitlement promises and the funds it will have available to pay for them, specifically, Social Security.

Now, Chairman Greenspan, if we don't fix our Social Security problems such as the unfunded liabilities, and I don't know if you have a handle on those numbers, how much unfunded liability is out there——

Chairman GREENSPAN. It's about $9 trillion.

Senator GRAMS. How much?

Chairman GREENSPAN. About $9 trillion.

Senator GRAMS. Unfunded liability for Social Security is about $9 trillion. With that in mind, what will the consequences be for our economy in our long-term monetary policy, our interest rates, inflation, et cetera?

Chairman GREENSPAN. Senator, one thing that's come out of a lot of these long-term projections of the budget is that over the very long run, given the types of commitments, as you put it, for entitlement programs, it's very difficult to close the gap between the long-term commitments and long-term revenues.

What is crucial in this regard is to make sure that when we think in terms of retirement programs, we set aside the issue of what these types of projections are showing us, and remember that there is a fundamental question which has evolved here; namely, that when you have a significant increase in the proportion of your population which is retired, it means you're going to have to create a greater volume of goods to sustain both the working-age population and the retired population in the future, but it is produced by the working-age population by definition. Which is another way of saying, you need a significant increase in productivity.

One aspect of running these very large unified budget surpluses is that they tend to create a fairly marked decline in the Federal budget debt, in long-term interest rates, and a fairly important increase in national savings, which will in turn ultimately feed into capital investment and the higher productivity which is required to sustain the retired population at anywhere near the real wage that those people had at their point of retirement.

As a consequence of this, we should not be mesmerized into these very major mega-sized apparent surpluses because if we take out of them, as you put it, some amortized estimate of the unfunded liability for all of our entitlement programs, that surplus will then disappear.

While I have argued in the past, and I would still argue today, that from the point of view of the budget that we would look at to analyze its direct immediate impact on the economy, the unified budget balance is the appropriate number, but to look at the commitments in the future, as to whether the intergenerational transfers are appropriately being funded, then we would have to look at something which excludes at least the Social Security budget to get a sense of what the longer-term outlook is.

I do think in the debate which is inevitably going to occur as a consequence of these new numbers, and I must say it's the type of problem that is nice to have compared to what we were dealing with 10 years ago, we should recognize that one, as I indicated earlier, we have to be a little careful about the certainty we may have about whether these surpluses will rise at the levels which are being projected, but two, even if they do, what it is we wish to do with them. I would say that reducing the debt is a very high priority that we should look toward as a major component of what we do with these surpluses.

We should be cautious about new entitlement programs which, once in place, will eat up revenues at the pace that we have seen in the past, and it becomes very difficult to reverse.

To the extent that people make judgments that it's very difficult to sit there with a huge surplus in the unified account, and that it will be spent if we don't do something with it, then I would say the second highest priority is to give it back to the taxpayer.

But it's the type of problem, I must say, that is a pleasant type of problem to be confronted with.

Senator GRAMS. But we should watch the spending levels?

Chairman GREENSPAN. The one thing that can go wrong in this whole process is that we think we have a big bundle of cash, we commit it to the future, and find out that most of it isn't there.

Senator GRAMS. I have another question, but I will now recognize Senator Dodd.

OPENING STATEMENT OF SENATOR CHRISTOPHER J. DODD

Senator DODD. Thank you very much.

I appreciate, Chairman Greenspan, your presence today, and congratulations again on the tremendous job that you and the Fed are doing for our country.

On the last question the Chairman raised, your concern here is to be careful of the deficit?

Chairman GREENSPAN. Yes.

Senator DODD. That's really the underlying issue. It's a question of, if we have revenues, trying to decide what to do with them—whether we should spend them or take them off the table through tax expenditures.

The point is, we should be careful about assuming a surplus that we have today is going to be there for any length of time because of the fiscal responsibility that's underlying.

Chairman GREENSPAN. Yes, sir.

Senator DODD. Chairman Greenspan, if someone has raised this, please interrupt me. There's no point in having you repeat answers to questions that may have been raised by others. I apologize for not being here, but the Labor Committee held a hearing I briefly wanted to attend.

I know you have spent some time, I gather, talking about Japan, and obviously that is important. I wonder if you might share with us some thoughts about China.

We have been talking about Japan's difficulties and the Asian problems in general and how they are affecting us. I wonder if you might share with us, to the extent you feel is worthwhile, how the Asian economy is affecting China and to what extent, if at all, that places us in any longer-term risk?

I believe it has been pointed out, at least I hope it has, how much we appreciate the fact that the Chinese have not devalued their currency and how important that has been to us.

I was stunned by some of the trade numbers reported. Exports were down 1.2 percent in the first quarter. In the last quarter, they were actually up 8.3 percent. Imports were up 17.1 percent. In the last quarter, they had been 5.3 percent.

I wonder if you might comment on that?

Chairman GREENSPAN. Are you citing Chinese numbers at the moment, or ours?

Senator DODD. Ours.

Chairman GREENSPAN. Are you referring to our bilateral trade with China?

Senator DODD. No, these figures were from global trade.

Chairman GREENSPAN. Oh, our global ones.

Senator DODD. I would go back to my question just about China specifically.

Chairman GREENSPAN. Senator, the growth rate of the Chinese economy is slowing down. The official objective that they perceive to be necessary to maintain economic reform and stable labor markets is a growth rate of about 8 percent per year.

The growth rate has slipped, so far, according to their official figures just recently released, to 6.8 percent annual rate in the second quarter, and there are those who believe that the pressures from the economies contiguous to China are really creating problems.

Obviously, their exports to a number of the so-called tigers—we used to call them tigers, I don't know what they would be called at this particular stage—are down quite appreciably, as they are to Japan. This has created internal financial problems among the state-owned enterprises where their earnings and cash flows have been under severe pressure.

It has clearly been the case that as a consequence of the weakening Asian situation and its impact on China, the full thrust of the reforms that have been underway are in some jeopardy, and when you are confronting a short-term crisis, you tend to push longer-term things somewhat aside.

Nonetheless, there's no doubt that they see the great advantages of moving increasingly toward a market economy, and the benefits that they have fully perceived as a consequence.

There's no evidence of which I'm aware that would suggest that they were in any way backing away from the longer-term thrust of their policies, but the current situation is giving them some concern, and I think rightfully so. But when you sit right in the middle of an East Asian economy that is undergoing fairly significant contraction, that it would have little or no effect on China is obviously most unrealistic.

Senator DODD. We speak of the impact of what's taking place in Japan on our own economy. We read about the difficulty with the IMF issues regarding Russia, but I think most people think about it in terms of an IMF-Russia issue. I'm not sure they think about it in broader terms.

As Japan is to the United States, I suppose Russia is to Europe. Given the European exposure in Russia, to what extent does the Russian economic condition pose any longer-term problems viz-a-viz the European economy and, again, to what extent does that pose some longer-term risk for us?

Chairman GREENSPAN. Remember that the Russian economy is far smaller than the Japanese economy, and that is an element of importance. The actual ties of Europe directly to Russia through the trade accounts are not all that large. There's not a great deal of trade. Indeed, one of the fascinating characteristics of the demise of the Soviet Union is the extent to which all of those inter-Soviet bloc states' trade virtually evaporated.

Nonetheless, there are very significant financial ties. The German banks, for example, have fairly substantial commitments as indeed the German government, through the banks, has also. Difficulties in Russia do spread through the financial system and, to a limited extent, through the product markets, but that can have a negative impact on Europe, and I think it's giving concern to a number of European analysts for exactly that reason.

Senator DODD. I see the light is on, Mr. Chairman. I thank you. I have another question or two, but I will——

Senator GRAMS. Why don't you go ahead and finish.

Senator DODD. Thank you very much.

Again, if these issues have been raised, Chairman Greenspan, please interrupt me.

You commented on the underwriting standards used by banks, and I gather that issue has been addressed.

I was intrigued about the numbers affecting consumer personal consumption. The numbers were up, and I presume much of that is attributed to the increase in real disposable income in the first quarter.

We are going to be asked to vote fairly soon on a bill on bankruptcy reform issues. I'm not asking you to comment on the bill, but I would like to hear your views on the subject. I think all of us are inclined to want to do something about it. There has been a tremendous increase. In just my State of Connecticut alone, over the last 3 or 4 years, as cited in an article in the paper the other day, the number of bankruptcies has went from 8,000 to approximately 13,000.

But I also want to make note of the fact that last year, banks sent out some 3 billion solicitations for credit cards, and many of them were pre-approved. It's a very competitive market, and a very lucrative one.

I'm worried about this rise in consumer debt, and the extent to which we may be looking at personal consumption related to consumer obligations. Without commenting on the bill, are we in some danger here?

I don't want to ask you to comment on a bill, but to what extent should we be looking at the issue of this explosion in plastic as a potential threat to longer economic stability?

Chairman GREENSPAN. We are acutely aware of it because this plastic, as you put it, is everywhere, except as a big number in our financial statistics.

Actually, credit card debt, while growing fairly substantially, is still a relatively small component in our economic system. Household mortgage debt is huge compared to that debt.

There's no doubt that there's been a fairly dramatic endeavor on the part of banks, finance companies, and other institutions actually to cater to this market, because it's growing at a good clip.

Despite the fact that there are substantial losses, by the very nature of the type of instrument, the interest rates which are charged more than capture the losses and create a reasonably good rate of return. It has turned out to be good for both consumers and for financial institutions.

It is certainly the case that credit card delinquencies are much higher than mortgage delinquencies by a huge order of magnitude. But the delinquency rate has come down in the last 6 months.

As I'm sure you are aware, the bankruptcy rate for other than businesses has pretty much flattened out in the last number of months, so we're not getting evidence that we see the situation deteriorating, and there is an interrelationship between credit cards and this process.

It's something which I think should be addressed. The fact that we have had this huge increase in bankruptcies in a period of quite remarkable economic expansion and of falling unemployment rates tells you that something needs some form of adjustment.

What that is, I don't feel sufficiently expert at, but I will tell you it sticks out like a sore thumb from the other economic statistics.

Senator DODD. You speak of this unprecedented growth in our economy taking place across the country, and you raised this in response to some of Senator Kerry's questions, but I think in many of our inner cities and rural areas this has yet to take place. Some rural areas have been untouched by it, as we see from some of the farm state issues that have been raised.

I'm concerned about this education gap. I have heard talk about this, and heard you address it briefly here today, but I have this great concern, even though many people are going back to school and continuing their education, I worry that, in certain sectors of our economy, that's not happening at all. I see this gap getting wider and wider each year.

When Nesbit wrote his book on megatrends a number of years ago, he picked four States to look at; California and Florida, for obvious reasons a number of years ago, the demographic changes that were taking place; Colorado and Connecticut.

In Connecticut, you are looking at a relatively small piece of geography the size of San Diego County, where you have tremendous affluence, the highest per capita earnings in the country. Yet, the inner cities of Connecticut, Hartford, New Haven, and Bridgeport, for instance, rank in the top 30 of the poorest cities in America. In an area of 110 miles by 50 miles, you have incredible affluence and you have some real poverty, and we don't have much of a rural area in our State.

It seems to me, while we do have a strong middle-class and the economy has improved tremendously over the last number of years, when I compare the schools in suburban communities of Connecticut to those in urban areas, I see tremendous disparities in terms of the opportunities. Disparities not on the level of intelligence, desires, and so forth, but there's a huge gap educationally that's occurring. I'm not going to get involved in an education discussion per se, but I am concerned about this.

I don't know if you have any thoughts on this particular concern beyond the question of technology, moving people into an ongoing educational experience, which I think will help, but I'm concerned about something more endemic here, something at another level.

Chairman GREENSPAN. I just wanted to reinforce your concerns. The evidence of this gap, this relationship between the degree of education and income, has increasingly been reinforced in the last decade or two. In other words, as the premium of having a college education over a high school diploma has continued to increase, and the premium of a high school diploma over a dropout has continued to increase, you can see it in the labor market, you can see it in the whole process of the skill differentials becoming ever more pronounced.

Since our economy is at the cutting edge of technology, where ideas matter, the proportion of the gross domestic product which is comprised of conceptual, as distinct from physical, is consistently increasing, which is going to make this problem even worse unless we can find a means to bring up those in the lower echelons of the society to educational levels that bring them into the mainstream.

We have found, in today's environment, that a number of people who thought of themselves as not having the capacity to do the types of jobs which really pay well, have been proved wrong. When they have been pressed into action, when they have been given on-the-job training, when they have been, in a sense, prodded in some cases, to reach out for things that they didn't think they could do, they have, for the most part, found they could do them.

It's really an issue here of how does one create incentives to encourage people to reach out, because that's going to be the way in which we are going to solve a lot of these problems. If we can find means to encourage them, to improve the environment in a manner in which they feel encouraged to do it, I think we will find that that's where the solution lies. It is not in trying to get new types of schools with heavy equipment in them, because that, in itself, isn't going to do it.

Senator DODD. Thank you.

Mr. Chairman, I'm very grateful to you. Thank you.

Senator GRAMS. Thank you, Senator.

Mr. Greenspan, I appreciate your time. I don't want to keep you very long, but when one feels the power of the gavel, you don't let it go very quickly.

[Laughter.]

I just have a couple of quick questions.

We talked a little bit about Social Security unfunded liabilities. As you are aware, there's going to be a great debate going on—it's already started—over the next couple of months at least, on how to reform our Social Security system, where do we go from here to make it solvent.

One approach would be to let the Government invest part of the Social Security trust fund surplus into the financial market.

Do you believe this would be the right direction to go?

Chairman GREENSPAN. No. I think it would be very dangerous. The presumption that you can somehow have, and I assume this is what you are suggesting, the Social Security Administration invest in equities—I don't know of any way you can essentially insulate Government decisionmakers from having access to what will amount to very large investments in American private industry.

There are, without doubt, many Presidents, many Members of Congress, who would look at the thought of employing that type of leverage which the Government would then have, as an anathema. There are others who would not. I'm fearful we are taking on a position here, at least in conjecture, that has very far-reaching potential dangers for the free American economy and the free American society.

It is a wholly different phenomenon of having private investment of pension funds in the market where individuals own the stock, vote the claims on management, and having Government do that. I know there are those who have views, beliefs that it can be insulated from the political process, and they go a long way to try to do that. I have been around long enough to realize that that's just not credible, not possible.

Somewhere along the line, that breach will be broken, and I think it will be much to the detriment of the American society.

Senator GRAMS. Just to be clear, you are not opposed to personal retirement accounts being established and allowing individuals to invest in the market alongside of having Government control those accounts?

Chairman GREENSPAN. Even if you are an indexed fund, it is a slippery slope away from there. But I'm very strongly supportive of going to private funding where individuals control claims on the corporations.

I just feel there's a slippery slope of extraordinary magnitude to move that power into a Government agency.

Senator GRAMS. Finally, Chairman Greenspan, what if Congress, instead of trying to move to more of a personalized retirement account, would decide to look at the old system and tinker around the edges and maybe raise payroll taxes to fix the Social Security problem instead of pursuing reform?

Would these taxes absolve the problems of Social Security in the long run?

How would that tax again affect national savings and investment interest rates, et cetera?

Chairman GREENSPAN. Senator, you have to look at it in two ways. You have to look at it in terms of whether or not you're creating a pay-as-you-go Social Security system, or whether you are fully funding it.

One of the reasons, I might add, as I have indicated many times before in Congress, why I'm inclined toward private accounts is I think it far more readily will move toward funding which I think is essential, as I indicated earlier, to create the savings which will create investment and production of the real goods that are required for retirees.

What is involved here is essentially to recognize that you can, if you want to, create a pay-as-you-go system, and it will work for the 75-year horizon which forecasters always create by jiggling with the tax side and the benefit side. That will keep the system going the way it's been going.

The question, however, is that, with the significant demographic changes about to be created in the United States where the population is aging and proportionate retirement is increasing year by year, can we afford not to have far more funding, it may not even have to be full funding, but clearly, the more funding you have, the greater capacity you have to employ current savings for investment into assets—productive equipment—which produce the real goods that are required to finance retirees.

A pay-as-you-go system does not do that. It's just a mere intergenerational transfer or a transfer from workers to retirees, and in and of itself, that does not provide the increased productivity which a full funding system would engender.

Senator GRAMS. I think to keep the current system afloat, if I'm not mistaken, in the last several decades, Congress has now had to tinker 51 times with either raising Social Security tax, adjusting the income on which it's levied, or tinker with the benefits.

That is what has put us in the situation we are in today.

Would you say there would have to be even higher taxes, less benefits, and greater income levied against the system in order to maintain even the present pay-as-you-go?

Chairman GREENSPAN. The current projections of the Social Security Administration indicate there's a gap which would have to be closed, either on the revenue side or on the benefit side.

Senator GRAMS. Chairman Greenspan, I would like to thank you for your time and your patience. I appreciate you coming before this Committee.

Thank you very much.

The hearing is concluded.

Thank you.

[Whereupon, at 12:10 p.m., Tuesday, July 21, 1998, the hearing was adjourned.]

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

PREPARED STATEMENT OF SENATOR ALFONSE M. D'AMATO

The Committee is pleased to welcome Chairman Greenspan this morning to give the Federal Reserve's semiannual report to Congress on our Nation's economy.

As many have noted on countless occasions, the Fed has done a remarkable job under your tenure. Our economic expansion is in its eighth year, making it the third longest in the post-World War II period. More than 15 million new jobs have been created. Continued low interest rates have allowed thousands of businesses to expand and millions of families to buy homes.

Chairman Greenspan, one thing is now clear to this Senator and perhaps to my colleagues as well. You and your colleagues at the Federal Reserve have something in common with Mark McGwire, a very talented baseball player. Continuing to hit home runs at a blistering pace, Mark McGwire is almost certain to break Roger Maris' home run record. Chairman Greenspan, you, too, are now in the pursuit of a home run record. If you succeed in keeping the expansion going for just another 19 months, 107 months in total, you will set a new record for the longest economic postwar expansion. Should that happen—and we all hope it will—my colleagues and I will be pleased to designate you "The Great Inflation Slugger" and induct you into the Economics Hall of Fame which, coincidentally, would be located in a lovely city in New York State.

In much the same way as Mark McGwire must face challenges nearly every night in hitting against very talented pitchers, the Federal Reserve will face challenges in the year ahead. Inflation remains under control, yet low prices on oil and other commodities are hurting the economies of countries who can't afford it. Unemployment also remains low, yet there is still significant concern among workers about their long-term job security. In addition, you and other financial regulators have expressed concern about the underwriting standards of commercial banks. Finally, I think we all have questions about the depth and extent of financial problems in several countries around the world.

Chairman Greenspan, I know that you will touch on the significant factors which may affect our Nation's economy over the next year, in particular the risks posed by international events, as we attempt to remain on our prosperous economic path. I would note that we in Congress remain optimistic that this path can be sustained and we look forward to working with you to ensure that continued economic growth under stable prices remains our common goal.

PREPARED STATEMENT OF SENATOR CONNIE MACK

Thank you, Chairman Greenspan, for appearing before this Committee. As always, I look forward to hearing your thoughtful insights on monetary policy and the economy.

With continued turmoil in many foreign economies, it is comforting to know that the U.S. economy remains fundamentally sound and growing. It almost seems like the U.S. economy is the saving grace—helping to bolster many troubled economies around the world. It is clear that our Nation is experiencing a remarkable period of good economic times. Our currency is strong, and we are enjoying low inflation, favorable growth, and good employment opportunities.

A great deal of our economic stability is the result of sound monetary policy that has kept inflation in check. Under your guidance, the Federal Reserve has done an excellent job of focusing on stable prices, which is the key to good, strong economic growth. There is no doubt that your solid leadership has produced confidence and certainty in the U.S. economy.

The focus on sound fiscal policy has also been a positive factor in our economy. Under a Republican Congress, the deficit outlook has changed dramatically, from predicted deficits of more than $200 billion, all the way down to sizable surpluses. This, I believe, has helped to foster lower interest rates that act as a major tax cut—benefiting millions of American families and helping our economy remain strong.

However, our current growth and positive fiscal statistics should not lure us into complacency—particularly with major economies around the world teetering on financial meltdown. It was not long ago that some questioned whether the United States could remain the world's leading economic power, and they were in awe of the "Asian economic miracle."

Perhaps the overriding lesson to be learned from the current economic turmoil in many countries is the tremendous importance of a stable monetary policy. The Federal Reserve must remain committed to price stability—and Congress should remain focused on preserving budget balance, reducing wasteful spending, and easing the tax burden. I will continue to work to reform the Humphrey-Hawkins Act and replace it with legislation that focuses on price stability as the Fed's primary goal.

Most importantly, pursuing sound monetary policy is not just for abstract economic reasons. The failure of many governments to keep their currencies stable means that the people in these countries end up suffering greatly. In Indonesia, for example, the value of the rupiah has dropped more than 80 percent, half the population has fallen into poverty, and 1,200 have died in related violence.

We have to come up with better ways to identify and to prevent such economic crises—both in the near-term and in the future. I would be interested in hearing from Chairman Greenspan just how the Federal Reserve and other international institutions might be improving their efforts to identify and to prevent crises before they become severe. Congress' role should be to ensure that both the United States and the IMF promote pro-growth policies, including low tax rates, free markets, sound banking systems, and stable currencies.

A strong America must continue to be a guiding light to countries around the world. Our country has an important role to play in promoting economic growth, not just at home but also abroad. Why? Because our Nation strongly believes in freedom, justice, democracy, human rights, and capitalism—and we're the only nation committed to exporting these ideas and principles around the globe.

I welcome Chairman Greenspan and look forward to hearing his analysis.

PREPARED STATEMENT OF ALAN GREENSPAN

CHAIRMAN, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

JULY 21, 1998

Introduction

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

Overall, the performance of the U.S. economy continues to be impressive. Over the first part of the year, we experienced further gains in output and employment, subdued prices, and moderate long-term interest rates. Important crosscurrents, however, have been impacting the economy. With labor markets very tight and domestic final demand retaining considerable momentum, the risks of a pickup in inflation remain significant. But inventory investment, which was quite rapid late last year and early this year, appears to have slowed, perhaps appreciably. Moreover, the economic and financial troubles in Asian economies are now demonstrably restraining demands for U.S. goods and services—and those troubles could intensify and spread further. Weighing these forces, the Federal Open Market Committee chose to keep the stance of policy unchanged over the first half of 1998. However, should pressures on labor resources begin to show through more impressively in cost increases, policy action may need to counter any associated tendency for prices to accelerate before it undermines this extraordinary expansion.

Recent Developments

When I appeared before your Committee in February, I noted that a key question for monetary policy was whether the consequences of the turmoil in Asia would be sufficient to check inflationary tendencies that might otherwise result from the strength of domestic spending and tightening labor markets. After the economy's surge in 1996 and, especially, last year, resource utilization, particularly that of the labor force, had risen to a very high level. Although there were some signs pointing to stepped-up increases in productivity, the speed at which the demand for goods and services had been growing clearly exceeded the rate of expansion of the economy's long-run potential to produce. Maintenance of such a pace would put even greater pressures on the economy's resources, threatening the balance and longevity of the expansion.

However, it appeared very likely that the difficulties being encountered by Asian economies, by cutting into U.S. exports, would be a potentially important factor slowing the growth of aggregate demand in the United States. But uncertainties about the timing and dimensions of that development were considerable given the difficulties in assessing the extent of the problems in East Asia.

In the event, the contraction of output and incomes in a number of Asian economies has turned out to be more substantial than most had anticipated. Moreover, financial markets in Asia and in emerging market economies generally have remained unsettled, portending further difficult adjustments. The contraction in Asian economies, along with the rise in the foreign exchange value of the dollar over 1997, prompted a sharp deterioration in the U.S. balance of trade in the first quarter. Nonetheless, the American economy proved to be unexpectedly robust in that period. The growth of real GDP not only failed to slow, it climbed even further, to about a 5½ percent annual rate in the first quarter, according to the current national income accounts. Domestic private demand for goods and services—including personal consumption expenditures, business investment, and residential expenditures—was exceptionally strong.

Evidently, optimism about jobs, incomes, and profits, high and rising wealth-to-income ratios, low financing costs, and falling prices for high-tech goods fed the appetites of households and businesses for consumer durables and capital equipment. In addition, inventory investment contributed significantly to growth in the first quarter; indeed, the growth of stocks of materials and goods outpaced that of overall output by a wide margin during the first quarter, adding 1¾ percentage points to the annualized growth rate of GDP. Although accumulation of some products likely was unintended, surveys indicate that much of the stock building probably reflected firms' confidence in the prospects for continued growth.

As evidence piled up that the economy continued to run hot during the winter, the Federal Reserve's concerns about inflationary pressures mounted. Domestic demand clearly had more underlying momentum than we had anticipated, supported in part by financial conditions that were quite accommodative. Credit remained easy for most borrowers to obtain; intermediate- and long-term interest rates were at relatively low levels; equity prices soared higher, despite some disappointing earnings reports; and growth in the monetary aggregates was rapid. Indeed, the crises in Asia, by lowering longer-term U.S. interest rates—through stronger preferences for dollar investments and expectations of slower growth ahead—and by reducing commodity prices, probably added to the positive forces boosting domestic spending in the first half, especially in the interest-sensitive housing sector. The robust expansion of demand tightened labor markets further, giving additional impetus to the upward trend in labor costs. Inflation was low—though, given the lags with which monetary policy affects the economy and prices, we had to be mainly concerned not with conditions at the moment, but with those likely to prevail many months ahead. In these circumstances, the Federal Open Market Committee elected in March to move to a state of heightened alert against inflation, but left the stance of policy unchanged.

Although national income and product data for the second quarter have not yet been published, growth of U.S. output appears to have slowed sharply. The auto strike has brought General Motor's production essentially to a halt, probably reducing real GDP in the second quarter by about ½ percentage point at an annual rate. The limited amount of available information on inventory investment suggests that stock building dropped markedly from its unsustainable pace of the first quarter. In addition to the slower pace of inventory building, Asian economies have continued to deteriorate, further retarding our exports in recent months.

Indeed, readings on the elements that make up the real GDP have led many analysts to anticipate a decline in that measure in the second quarter, after the first-quarter surge. Given the upcoming revisions to the national income accounts, such assessments would have to be regarded as conjectural. It is worth noting in any case that other indicators of output, including worker hours and manufacturing production, show a somewhat steadier, though slowing, path over the first half of the year. And underlying trends in domestic final demand have remained strong, imparting impetus to the continuing economic expansion.

During the first half of the year, measures of resource utilization diverged. Pressures on manufacturing facilities appeared to be easing. Plant capacity was growing rapidly as a result of vigorous investment. And growth of industrial output was dropping off from its brisk pace of 1997, importantly reflecting the deceleration in the world demand for manufactured goods that resulted from the Asian economic difficulties.

But labor markets, in contrast, became increasingly taut during the first half. Total payroll jobs rose about 1½ million over the first 6 months of the year. The civilian unemployment rate dropped to a bit below 4½ percent in the second quarter, its lowest level in three decades. Firms resorted to a variety of tactics to attract and retain workers, such as paying various types of monetary bonuses and raising basic wage rates. But, at least through the first quarter, the effects of a rising wage bill on production costs were moderated by strong gains in productivity.

Indeed, inflation stayed remarkably damped during the first quarter. The Consumer Price Index, as well as broader measures of prices, indicate that inflation moved down further, even as the economy strengthened. Although the declining oil prices contributed to this development, pricing leverage in the goods-producing sector more generally was held in check by reduced demand from Asia that, among other things, has led to a softening of commodity prices, a strong dollar that has contributed to bargain prices on many imports, and rising industrial capacity. Service price inflation, less influenced by international events, has remained steady at about a 3 percent rate since before the beginning of the crisis.

Some elements in the goods price mix clearly were transitory. Indeed, the more recent price data suggest that overall consumer price inflation moved up in the second quarter. But, even so, the increase remained moderate.

In any event, it would be a mistake for monetary policymakers to focus on any single index in gauging inflation pressures in the economy. Although much public attention is directed to the CPI, the Federal Reserve monitors a wide variety of aggregate price measures. Each is designed for a particular purpose and has its own strengths and weaknesses. Price pressures appear especially absent in some of the measures in the national income accounts, which are available through the first quarter. The chain-weight price index for personal consumption expenditures excluding food and energy, for example, rose 1.5 percent over the year ending in the first quarter, considerably less than the 2.3 percent rise in the core CPI over the same period. An even broader price measure, that for overall GDP, rose 1.4 percent. These indexes, while certainly subject to many of the measurement difficulties the Bureau of Labor Statistics has been grappling with in the CPI, have the advantages that their chain-weighting avoids some aspects of so-called substitution bias and that already published data can be revised to incorporate any and all new information and measurement techniques. Taken together, while the various price indexes show some differences, the basic message is that inflation to date has remained low.

Economic Fundamentals: The Virtuous Cycle

So far this year, our economy has continued to enjoy a virtuous cycle. Evidence of accelerated productivity has been bolstering expectations of future corporate earnings, thereby fueling still further increases in equity values, and the improvements in productivity have been helping to reduce inflation. In the context of subdued price increases and generally supportive credit conditions, rising equity values have provided impetus to spending and, in turn, the expansion of output, employment, and productivity-enhancing capital investment.

The essential precondition for the emergence, and persistence, of this virtuous cycle is arguably the decline in the rate of inflation to near price stability. In recent years, continued low product price inflation and expectations that it will persist have promoted stability in financial markets and fostered perceptions that the degree of risk in the financial outlook has been moving ever lower. These perceptions, in turn, have reduced the extra compensation that investors require for making loans to, or taking ownership positions in, private firms. With risks in the domestic economy judged to be low, credit and equity capital have been readily available for many businesses, fostering strong investment. And low mortgage interest rates have allowed many households to purchase homes and to refinance outstanding debt. The reduction in debt servicing costs has contributed to an apparent stabilization of the financial strains on the household sector that seemed to emerge a couple of years ago and has buoyed consumer demand.

To a considerable extent, investors seem to be expecting that low inflation and stronger productivity growth will allow the extraordinary growth of profits to be extended into the distant future. Indeed, expectations of earnings growth over the longer term have been undergoing continual upward revision by security analysts since early 1995. These rising expectations have, in turn, driven stock prices sharply higher and credit spreads lower, perhaps in both cases to levels that will be difficult to sustain unless the virtuous cycle continues. In any event, primarily because of the rise in stock prices, about $12½ trillion has been added to the value of household assets since the end of 1994. Probably only a few percent of these largely unrealized capital gains have been transformed into the purchase of goods and services in consumer markets. But that increment to spending, combined with the sharp increase in equipment investment, which has stemmed from the low cost of both equity and debt relative to expected profits on capital, has been instrumental in propelling the economy forward.

The consequences for the American worker have been dramatic and, for the most part, highly favorable. A great many chronically underemployed people have been given the opportunity to work, and many others have been able to upgrade their skills as a result of work experience, extensive increases in on-the-job training, or increased enrollment in technical programs in community colleges and elsewhere. In addition, former welfare recipients appear to have been absorbed into the workforce in significant numbers.

Government finances have been enhanced as well. Widespread improvement has been evident in the financial positions of State and local governments. In the Federal sector, the taxes paid on huge realized capital gains and other incomes related to stock market advances, coupled with taxes on markedly higher corporate profits, have joined with restraint on spending to produce a unified budget surplus for the first time in nearly three decades. The important steps taken by Congress and the Administration to put Federal finances on a sounder footing have added to national saving, relieving pressures on credit markets. The paydown of debt associated with the Federal surplus has helped to hold down longer-term interest rates, which in turn has encouraged capital formation and reduced debt burdens. Maintaining this disciplined budget stance would be most helpful in supporting a continuation of our current robust economic performance in the years ahead.

The fact that economic performance has strengthened as inflation subsided should not have been surprising, given that risk premiums and economic disincentives to invest in productive capital diminish as the economy approaches price stability. But the extent to which strong growth and high labor force utilization have been joined with low inflation over an extended period is, nevertheless, exceptional. So far, at least, the adverse wage-price interactions that played so central a role in pressuring inflation higher in many past business expansions—eventually bringing those expansions to an end—have not played a significant role in the current expansion.

For one thing, increases in hourly compensation have been slower to pick up than in most other recent expansions, although, to be sure, wages have started to accelerate in the past couple of years as the labor market has become progressively tighter. In the first few years of the expansion, the subdued rate of rise in hourly compensation seemed to be, in part, a reflection of greater concerns among workers about job security. We now seem to have moved beyond that phase of especially acute concern, though the flux of technology may still be leaving many workers with fears of job skill obsolescence and a willingness to trade wage gains for job security. In the past couple of years, of course, workers have not had to press especially hard for nominal pay gains to realize sizable increases in their real wages. In contrast to the pattern that developed in several previous business expansions, when workers required substantial increases in pay just to cover increases in the cost of living, consumer prices have been generally well-behaved in the current expansion.

A couple of years ago—almost at the same time that increases in total hourly compensation began trending up in nominal terms—some evidence of a long-awaited pickup in the growth of labor productivity began to show through more strongly in the data; and this accelerated increase in output per hour has enabled firms to raise workers' real wages while holding the line on price increases. Gains in productivity usually vary with the strength of the economy, and the favorable results that we have observed during the past 2 years or so, when the economy has been growing more rapidly, almost certainly overstate the degree of structural improvement. But evidence continues to mount that the trend of productivity has accelerated, even if the extent of that pickup is as yet unclear. Signs of major technological improvements are all around us, and the benefits are evident not only in the high-tech industries but also in production processes that have long been part of our industrial economy.

Those technological innovations, as well as the rapidly declining cost of capital equipment which embodies them, in turn seem to be a major factor behind the recent enlarged gains in productivity. Evidently, plant managers who were involved in planning capital investments anticipated that a significant increase in the real rates of return on facilities could be achieved by exploiting emerging technologies. If that had been a mistake on their part, one would have expected capital investment to run up briefly and then start down again when the lower-than-anticipated rates of return developed. But we have instead seen sustained gains in investment, indicating that hoped-for rates of return apparently have been realized.

Notwithstanding a reasonably optimistic interpretation of the recent productivity numbers, it would not be prudent to assume that even strongly rising productivity, by itself, can ensure a noninflationary future. Certainly wage increases, per se, are not inflationary, unless they exceed productivity growth, thereby creating pressure for inflationary price increases that can eventually undermine economic growth and employment. Because the level of productivity is tied to an important degree to the stock of capital, which turns over only gradually, increases in the trend growth of productivity probably also occur rather gradually. By contrast, the potential for abrupt acceleration of nominal hourly compensation is surely greater.

As I have noted in previous appearances before Congress, economic growth at rates experienced on average over the past several years would eventually run into constraints as the reservoir of unemployed people available to work is drawn down. The annual increase in the working-age population (from 16 to 64 years of age), including immigrants, has been approximately 1 percent a year in recent years. Yet employment, measured by the count of persons who are working rather than by the count of jobs, has been rising 2 percent a year since 1995, despite the acceleration in the growth of output per hour. The gap between employment growth and population growth, amounting to about 1.1 million persons a year on average since the end of 1995, has been made up, in part, by a decline in the number of individuals who are counted as unemployed—those persons who are actively seeking work—of approximately 650,000 a year, on average, over the past 2½ years. The remainder of the gap has reflected a rise in labor force participation that can be traced largely to a decline of almost 300,000 a year in the number of individuals (aged 16 to 64) wanting a job but not actively seeking one. Presumably, many of the persons who once were in this group have more recently become active and successful job-seekers as the economy has strengthened, thereby preventing a still sharper drop in the official unemployment rate. In June, the number of persons aged 16 to 64 who wanted to work but who did not have jobs was 10.6 million on a seasonally adjusted basis, roughly 6 percent of the working-age population. Despite an uptick in joblessness in June, this percentage is only fractionally above the record low reached in May for these data, which can be calculated back to 1970.

Nonetheless, a strong signal of inflation pressures building because of compensation increases markedly in excess of productivity gains has not yet clearly emerged in this expansion. Among nonfinancial corporations (our most recent source of data on consolidated income statements), trends in costs seem to have accelerated from their lows, but the rates of increase in both unit labor costs and total unit costs are still quite low.

Still, the gap between the growth in employment and that of the working-age population will inevitably close. What is crucial to sustaining this unprecedented period of prosperity is that it close reasonably promptly, given already stretched labor resources, and that labor markets find a balance consistent with sustained growth marked by compensation gains in line with productivity advances. Whether these adjustments will occur without monetary policy action remains an open question.

Foreign Developments

While the United States has been benefiting from a virtuous economic cycle, a number of other economies unfortunately have been spiraling in quite the opposite direction. The United States, Canada, and Western Europe have been enjoying solid economic growth, with relatively low inflation and declining unemployment, but the economic performance in many developing and transition nations and Japan has been deteriorating. How quickly the latter erosion is arrested and reversed will be a key factor in shaping U.S. economic and financial trends in the period ahead. With all that is at stake, it would be very difficult to overstate how crucial it is that the authorities in the relevant economies promptly implement effective policies to correct the structural problems underlying recent weaknesses and to promote sustainable economic growth before patterns of reinforcing contraction become difficult to contain.

Conditions in Asia are of particular concern. Aggregate output of the Asian developing economies has plunged, with particularly steep declines in Korea, Malaysia, Thailand, and Indonesia. Even the economies of the stalwart tigers—Hong Kong, Singapore, and Taiwan—have softened. Economic growth in China has also slowed, owing largely to the currency depreciations among its neighbors and the sharp declines in their demand for imports.

Russia has also experienced some spillover from the Asian difficulties, but Russia's problems are mostly home-grown. Large fiscal deficits stem from high effective marginal tax rates that encourage avoidance and do not raise adequate revenue. This and the recent declines in prices of oil and other commodities have rendered Russian financial markets and the ruble vulnerable, particularly in an environment of heightened concern about all emerging markets. The Russian government has recently promulgated a set of new policy measures in connection with an expanded IMF support package in an effort to address these problems.

In Latin America, conditions vary: Economies that are heavily dependent on exports of oil and other commodities have suffered as prices of those items have fallen, and several countries in that region have received more intensive scrutiny in international capital markets, but, on the whole, Latin American economies continue to perform reasonably well.

Disappointingly, economic activity in Japan—a crucial engine of Asian economic growth—has now turned down after a long period of subpar growth. Gross domestic product fell at a 5¼ percent annual rate in the first quarter. More recently, confidence of households and businesses has continued to erode, the sharp contraction elsewhere in Asia has fed back onto Japan, and the dwindling domestic demand for goods and services in that country has been even further constrained by a mounting credit crunch. Nonperforming loans have risen sharply as real estate values fell following the bursting of the asset bubble in 1991. Problems in the banking sector, exacerbated by the broader Asian financial crisis, have led to market concerns about the adequacy of the capital of many Japanese banks and have engendered a premium in the market for Japanese banks' borrowing. This resulting squeeze to profit margins has led to a reluctance to lend in dollars or yen. In response to the weakening economy and deteriorating banking situation, the Japanese yen has tended to weaken significantly, in often volatile markets, against the dollar and major European currencies.

As you know, we have sought to be helpful in the Japanese government's efforts to stabilize their economy and financial system, reflecting our awareness of the important role that Japanese financial and economic performance plays in the world economy, including that of the United States. We have consulted with the relevant Japanese authorities on methods for resolving difficulties in their banking system and have urged them to take effective measures to stimulate their economy. I believe that the Japanese authorities recognize the urgency of the situation.

That a number of foreign economies are currently experiencing difficulties is not surprising. Although many had previously realized a substantial measure of success in developing their economies, a number had leaned heavily on command-type systems rather than relying primarily on market mechanisms. This characteristic has been evident not only in their industrial sectors but also in banking where government intervention is typically heavy, where long-standing personal and corporate relationships are the predominant factor in their financing arrangements, and where market-based credit assessments are the exception rather than the rule. Many recent events confirm that these sorts of structures are ill-suited to today's dynamic global economy, in which national economies must be capable of adapting flexibly and rapidly to changing conditions.

Responses in countries currently experiencing difficulties have varied considerably. Some have reacted quickly and, in general terms, appropriately. But in others, a variety of political considerations appear to have militated against prompt and effective action.

As a consequence, the risks of further adverse developments in these economies remain substantial. And given the pervasive interconnections of virtually all economies and financial systems in the world today, the associated uncertainties for the United States and other developed economies remain substantial as well.

In the current circumstances, we need to be very much aware that monetary policy tightening actions in the United States could have outsized effects on very sensitive financial markets in Asia, a development that could have substantial adverse repercussions on U.S. financial markets and, over time, on our own economy. But while we must take account of such foreign interactions, we must also be careful that our responses ultimately are consistent with a monetary policy aimed at optimal performance of the U.S. economy. Our objectives relate to domestic economic performance, and price stability and maximum sustainable economic growth here at home would best serve the long-run interests of troubled financial markets and economies abroad.

The Economic Outlook

The Federal Open Market Committee believes that the conditions for continued growth with low inflation are in place here in the United States. As I noted previously, an important issue for policy is how the imbalance of recent years between the demand for labor and the growth of the working-age population is resolved. In that regard, we see a slowing of the growth in aggregate demand as a necessary element in the mix.

At this time, some of the key factors that have supported strong final demand by domestic purchasers remain favorable. Although real short-term interest rates have risen as the Federal funds rate has been held unchanged while inflation expectations have declined, the financial conditions that have fostered the strength in demand are still in place. With their incomes and wealth having been on a strong upward track, American consumers remain quite upbeat. For businesses, decreasing costs of and high rates of return on investment, as well as the scarcity of labor, could keep capital spending elevated. These factors suggest some risk that the labor market could get even tighter. And even if it does not, under prevailing tight labor markets increasingly confident workers might place gradually escalating pressures on wages and costs, which would eventually feed through to prices.

But a number of factors likely will serve to damp growth in aggregate demand, helping to foster a reasonably smooth transition to a much more sustainable rate of growth and reasonable balance in labor markets. We have yet to see the full effects of the crisis in East Asia on U.S. employment and income. Residential and business fixed investment already have reached such high levels that further gains approaching those experienced recently would imply rapid growth of the stocks of housing and plant and equipment relative to income trends. Moreover, business investment will be damped if recent indications of a narrowing in domestic operating profit margins prompt a reassessment of the expected rates of return on investment in plant and equipment. Reduced prospects for the return to capital would not only affect investment directly but could also affect consumption if stock prices adjust to a less optimistic view of earnings prospects.

Of course, the demand for labor that is consistent with a particular rate of output growth also could be lowered if productivity growth were to increase more. And, on the supply side of the labor market, faster growth of the labor force could emerge as the result of increased immigration or delayed retirements. Nonetheless, it appears most probable that the necessary slower absorption of labor into employment will reflect, in part, a deceleration of output growth, as a consequence of evolving market forces. Failing that, firming actions on the part of the Federal Reserve may be necessary to ensure a track of expansion that is capable of being sustained.

Thus, members of the Board of Governors and presidents of the Federal Reserve Banks anticipate a slowing in the rate of economic growth. The central tendency of their forecasts is that real GDP will rise 3 to 3¼ percent over 1998 as a whole and 2 to 2½ percent in 1999. With the rise in the demand for workers coming into line with that of the labor force, the unemployment rate is expected to change little from its current level, finishing next year in the neighborhood of 4½ to 4¾ percent.

Inflation performance will be affected by developments abroad as well as those here at home. The extent and pace of recovery of Asian economies currently experiencing a severe downturn will have important implications for prices of energy and other commodities, the strength of the dollar, and competitive conditions on world product markets. Should the situation abroad remain unsettled, these factors would probably continue to contribute to good price performance in the United States in the period ahead. But it is important to recognize that the damping influence of these factors on inflation is mostly temporary. At some point, the dollar will stop rising, foreign demand will begin to recover, and oil and other commodity prices will stop falling and could even back up some. Indeed, a brisk snap-back in foreign economic activity, should that occur, would add, at least temporarily, to price pressures in the United States.

On a more fundamental level, it is the balance of supply and demand in labor and product markets in the United States that will have the greatest effect on inflation rates here. As I noted previously, wage and benefit costs have been remarkably subdued in the current expansion. Nonetheless, an accelerating trend in wages has been apparent for some time.

In addition, a gradual upward tilt in benefit costs has become evident of late. A variety of factors—including the strength of the economy and rising equity values, which have reduced the need for payments into unemployment trust funds and pension plans, and the restructuring of the health care sector—have been working to keep benefit costs in check in this expansion. But, in the medical area at least, the most recent developments suggest that the favorable trend may have run its course. The slowing of price increases for medical services seems to have come to a halt, at least for a time, and, with the cost-saving shift to managed care having been largely completed, the potential for businesses to achieve any further savings in that regard appears to be rather limited at this point. There have been a few striking instances this past year of employers boosting outlays for health benefits by substantial amounts.

Given that compensation costs are likely to accelerate at least a little further, productivity trends and profit margins will be key to determining price performance in the period ahead. Whether the recent strong performance of productivity can be extended remains to be seen. It does seem likely that productivity calculated for the entire economy using GDP data weakened in the second quarter. This development clearly owed, at least in some degree, to the deceleration of output in that period. In manufacturing, where our data are better measured, productivity appears still to have registered a solid increase. We will be closely monitoring a variety of indicators to assess how productivity is performing in the months ahead.

Monetary policymakers see the most likely outcome as modestly higher inflation rates in the next 1½ years. The central tendency of monetary policymakers' CPI inflation forecasts is for an increase of 1¾ to 2 percent during 1998 and 2 to 2½ percent next year. As noted, the ebbing of the special factors reducing inflation over the past year or so, such as the decline in oil prices, will account for some of this uptick. But the Federal Open Market Committee will need to remain particularly alert to the possibility that more fundamental imbalances are increasing inflationary pressures. The Committee would need to resist vigorously any tendency for an upward trend, which could become embedded in the inflationary process.

The Committee recognizes that significant risks attend the outlook: One is that the impending constraint from domestic labor markets could bind more abruptly than it has to date, intensifying inflation pressures. The other is the potential for further adverse developments abroad, which could reduce the demand for U.S. goods and services more sharply than anticipated and which would thereby ease pressures on labor markets. While we expect that the situation will develop rather smoothly, the Committee believes that, given the current tightness in labor markets, the potential for accelerating inflation is probably greater than the risk of protracted, excessive weakness in the economy. In any case, it will need to continue to monitor evolving circumstances closely, and adjust the stance of monetary policy as appropriate, in order to help establish conditions consistent with progress toward the Federal Reserve's goals of price stability and maximum sustainable economic growth.

Ranges for Money and Credit Growth

Indeed, recognition of the benefits of low inflation and our commitment to the Federal Reserve's statutory objective of price stability were once again dominant in the Committee's semiannual review of the ranges for the monetary and debt aggregates. The FOMC noted that the behavior of the monetary aggregates had been somewhat more predictable over the past few years than it had been earlier in the 1990's. The rapid growth of M2 and M3 over the first half of the year, which lifted those measures above the upper ends of the target ranges established in February, was consistent with the unexpectedly strong advance in aggregate demand. However, movements in velocity remain difficult to predict.

The FOMC will continue to interpret the monetary ranges as benchmarks for the achievement of price stability under conditions of historically normal velocity behavior. Consistent with that interpretation, the Committee decided to retain the current ranges for the monetary aggregates for 1998, as well as the range for debt, and to carry them over on a provisional basis to next year. Although near-term prospects for velocity behavior are uncertain, the Committee recognizes that monetary growth does appear to provide some information about trends in the economy and inflation. Therefore, we will be carefully evaluating the aggregates, relative both to forecasts and to their ranges, in the context of other readings on other variables in our efforts to promote optimum macroeconomic conditions.

Concluding Comments

As I have stated in previous testimony, the recent economic performance, with its combination of strong growth and low inflation, is as impressive as any I have witnessed in my near half-century of daily observation of the American economy. Although the reasons for this development are complex, our success can be attributed in part to sound economic policy. Congress and the Administration have successfully balanced the budget and, indeed, achieved a near-term surplus, a development that tends to boost national saving and investment. The Federal Reserve has pursued monetary conditions consistent with maximum sustainable long-run growth by seeking price stability. These policies have helped bring about a healthy macroeconomic environment for productivity-boosting investment and innovation, factors that have lifted living standards for most Americans. The task before us is to maintain disciplined economic policies and thereby contribute to maintaining and to extending these gains in the years ahead.

RESPONSE TO WRITTEN QUESTIONS OF SENATOR SHELBY FROM ALAN GREENSPAN

Q.1. Can you explain how and why the monetary aggregates like M2 and M3 have been growing so rapidly? Does the recent increase in the growth of M2 and M3 cause inflationary concerns? Why or why not?

A.1. The monetary aggregates have been growing very rapidly so far this year. M2 has expanded at an 8¼ percent annual rate through September and M3 at a 10¼ percent annual rate. The factors behind this development are not completely clear. Expansion of nominal income, which has been relatively low this year, does not explain the rapid growth. Nor do movements in short-term interest rates, which until recently have been relatively stable.

Instead, it appears that factors relating to developments in the stock market have been playing a role. First, in light of the rapid rise in equity valuations which occurred through mid-July 1998, households may have been re-balancing their asset portfolios by steering more of their savings toward cash-type instruments, many of which are included in M2, such as money market mutual fund shares. More recently, the pronounced volatility in equity prices probably has led some households to reduce their equity positions in favor of the safety of money funds and, perhaps, other M2 instruments. The rapid growth of M3 owes importantly to money market mutual funds, both the retail funds within M2 as well as the institution-only funds in the non-M2 component of M3. In addition, M3 has been supported by strong advances in bank credit, which is funded partly with instruments included in M3.

Interpreting these aggregates is not straightforward because of uncertainties about their relationships to spending. The velocity of M2—the ratio of income to money—varies considerably, and recent changes have been within the normal range of fluctuation. The robust growth in M2 earlier in the year, to the extent that it did owe in part to the elevated level of equity prices, may have been providing a signal consistent with other indicators that suggested that demand in the U.S. economy remained quite strong and inflation pressures were in danger of building. But the more recent strength in the monetary aggregates is reflective of the current volatility in financial markets; it seems to reflect a flight to liquidity rather than financial stimulus, and thus does not appear to be signaling oncoming inflationary pressures.

Q.2. In the past, you have stated that productivity is tough to measure with regard to the service sector. In fact, most economists would agree that durable manufacturing productivity is a much more reliable indicator of productivity. It is my understanding that durable manufacturing productivity has increased at an annual rate of 5.6 percent over the last 7 years—the fastest of any recovery in the history of the data. Is that true? If so, is it possible we are experiencing record growth rates in the productivity of the service sector as well, but our measurements just do not record it as such?

A.2. I agree that a number of difficult issues surround the measurement of productivity, but I disagree that "durable manufacturing" productivity is a more reliable indicator of productivity in the economy as a whole. It is, in fact, true that for some firms in the durable goods sector we have very good physical product measures of output—for example, for motor vehicles and steel. However, for other firms, such as computer companies, the measurement of output can be quite difficult.[1] In addition, durable manufacturing is a relatively small part of the total private sector.

Rather than focus on durable manufacturing, I prefer to look at a broader measure of productivity. In particular research by the staff of the Federal Reserve, "Decomposition of Productivity and Unit Costs," November 1996 (included in Additional Material Supplied for the Record), it is suggested that the best measured broad sector of the economy is the nonfarm nonfinancial corporate sector.

Typically, macro-economists look at productivity in the nonfarm business sector (line 1 of the table). However, the Board's research suggests that two important components of that aggregate are not well measured—the financial sector and, even more important, the nonfarm noncorporate sector (lines 3 and 7).[2] As shown on line 7, output per hour in the nonfarm noncorporate sector, as derived from the published statistics, fell for more than two decades, beginning in the early 1970's. However, it seems unlikely that, in reality, the firms in this sector became less and less efficient, year in and year out. This suggests that this sector is not well measured and may distort productivity analyses that include this sector.

Sectoral Labor Productivity

(Percent change at annual rate over period indicated)

	1959 to 1973	1973 to 1989	1989 to 1998:Q2
1. Nonfarm business sector	2.9	1.1	1.2
2. Nonfarm corporate	2.4	1.5	1.8
3. Financial	2.4	1.2	1.6
4. Nonfinancial	2.3	1.5	1.9
5. Manufacturing	3.3	2.7	3.0
6. Nonmanufacturing	1.4	.8	1.5
7. Nonfarm noncorporate	3.5	−.6	−.2

Source: Based on updated version of the data set described in "Decomposition of Productivity and Unit Costs."

As can be seen on line 4 of the table, productivity of nonfarm nonfinancial corporations has been increasing at nearly a 2 percent annual rate since the peak of the last cyclical expansion in 1989—nearly half a percentage point faster than the average pace between the cyclical peaks in 1973 and 1989. As shown on lines 5 and 6, productivity growth in the total manufacturing sector (durable plus nondurable goods-producing industries) continues to outpace

[1] The issue is how to evaluate the output represented by this year's PC versus last year's PC. If, for example, the same number of "boxes" left a factory this year as last, we would not think that the output of the factory was unchanged since this year's PC is more powerful than last year's. Government statisticians do their best to estimate how much more output is represented by the extra power of this year's PC, but these are only educated guesses.

[2] The shares of the financial and nonfarm noncorporate sectors in total nonfarm business sector productivity are roughly 5 percent and 25 percent, respectively.

the growth of productivity in nonmanufacturing corporations. The greatest amount of measured *improvement* in productivity performance during the 1990's, however, has occurred at nonmanufacturing corporations.

Q.3. The Producer Price Index and the price of commodities were dropping even before the East Asian currency crisis and the General Motors strike. Why do you believe those indicators were decreasing before these two events? Doesn't this suggest something else may be at work helping to hold inflation down?

A.3. Following the 2.8 percent rise in 1996, the Producer Price Index (PPI) fell 1.2 percent in 1997 and another 0.9 percent in the first 8 months of 1998. As suggested in your question, these movements do reflect a complex set of influences, and Asian economic developments certainly have played a role. However, the supply-demand balance in individual markets has been important as well, and to better understand the underlying trends, it is useful to examine the behavior of several key subindexes of the PPI.

Buoyed by favorable harvests, food prices fell 0.8 percent in 1997 and have edged lower this year. These developments reflect the favorable growing conditions in most parts of the country over the past 2 years as well as reduced demand for U.S. agricultural exports as a result of the economic crises in Asia and Russia.

Falling energy prices also have contributed to the declines in the PPI over the past 18 months. Energy prices fell 6.4 percent in 1997 and another 10.1 percent in the first 8 months of this year. This pattern largely reflects the sizable declines in crude oil prices over this period. Oil producers were slow to cut back their production in the face of an unusually mild winter in the Northern Hemisphere earlier this year and slumping demand from the economically troubled Asian economies. Crude oil prices fell as a result, and these cost decreases quickly were passed through to the prices of refined petroleum products. Falling electricity charges associated with the deregulation of electricity markets in several States also have contributed to the decline in energy prices this year.

Other than food and energy, producer prices were flat in 1997 and have edged up about ¾ percent in the first 8 months of 1998. This favorable performance reflects a number of factors. First, increases in unit labor costs have remained quite low despite an uptick in compensation costs because firms have been able to achieve rapid gains in labor productivity. Second, firms now find that they have very little leverage to raise prices. Today's marketplace is extremely competitive, and the appreciation of the U.S. dollar on foreign exchange markets—related in part to the Asian crisis—has heightened that competition. Third, unusually rapid declines in the prices of high-tech equipment (such as computers) also has been a restraining influence on PPI inflation this year.

Q.4. The yield curve is inverted from the Federal funds rate out to the 10-year Treasury bond. Historically, that has suggested monetary policy is too tight. Is that the case today? If not, why?

A.4. Although rates on most Treasury securities are less than or equal to the Federal funds rate, the yield curve is currently upward sloping from 3-month Treasury bills through 30-year bonds. Thus, it may be a misnomer to say that the yield curve is inverted. The current configuration likely reflects several factors. Recent developments, including slower growth in foreign economies, widening yield spreads on corporate debt, and tighter terms and standards on business lending, have substantially altered the outlook for the U.S. economy, lowering investors' expectations of economic growth and further reducing inflationary pressures. Thus, the lower rates on shorter-term Treasury securities relative to the Federal funds rate in part reflects the view in the market that the Federal Reserve will ease monetary policy further in coming months to help counter these developments.

In addition, Treasury securities, especially Treasury bills, have benefited strongly from safe-haven flows as investors continue to reduce risk exposure in light of turbulence in worldwide financial markets. Because of the high value they currently place on safety and liquidity, these investors are willing to hold Treasury securities at yields well below levels that might be observed in more orderly markets. Also, reductions in the supply of Treasury securities may also be keeping yields low. On net, there has been a paydown of nominal Treasury securities over the past year as the Federal budget has moved into surplus.

The accuracy of the yield curve as a signal of the stance of monetary policy is unclear. It is true that each recession over the past several decades has been preceded by an inverted yield curve. However, in these cases, the yield curve typically has become inverted as a result of sharp increases in short-term rates when monetary policy tightened to counter high and rising inflation. The inversion occurred as both short- and long-term rates rose, with the former increasing more than the latter. In contrast to this, the more recent inversion of the yield curve has been driven by a decline in long-term interest rates of more than 1½ percentage points over the past 12 months, importantly reflecting declining inflation expectations, and, more recently, by the strong flight-to-quality demands for Treasury securities described previously. With few historical precedents for this pattern, the implications for future economic trends are difficult to discern.

STATEMENT OF DAVID A. SMITH

DIRECTOR OF PUBLIC POLICY, AFL–CIO

JULY 21, 1998

The AFL–CIO appreciates the opportunity to submit this statement for the record of today's Humphrey-Hawkins hearing. All working Americans and their families have a high stake in the achievement of the Humphrey-Hawkins Act's full employment targets. It is good news for America's workers that the Nation's unemployment rate is edging closer to our historic full employment targets than at any other time since this landmark legislation was adopted in 1978.

While the reduction in the unemployment rate over the last few years has been gratifying, it is by no means guaranteed that this favorable trend will continue, or that the Humphrey-Hawkins target of a national unemployment rate no higher than 4 percent will actually be achieved. Much will depend on economic policy decisions, of which none will be more important than the monetary policy decisions of the Federal Reserve's Open Market Committee.

We urge Chairman Greenspan and his FOMC colleagues to use the tools of monetary policy in order to guide the economy toward its full employment potential. With inflation low and declining while unemployment has been decreasing, 4 percent unemployment should no longer be dismissed as an unrealistic goal.

The most serious threat to reaching that goal is the shock waves set off by the severe financial and economic crisis which has enveloped much of East Asia, and which apparently is spreading to other parts of the world, including Russia.

No serious observer would deny that the movement of a tidal wave of capital from East Asia and elsewhere to the relative safety, security, and high returns of U.S. financial markets has been a hallmark of the current financial crisis. In an effort to stem the outflow, defend their currencies, and satisfy the austerity conditions imposed by the IMF, the countries hit hardest by the crisis have been forced to boost their domestic interest rates to astronomical and punishing levels.

Meanwhile, the largest economy in Asia and the second largest in the world, Japan, is caught in a deepening economic crisis. In an effort to jump-start its stalled economy, Japan's central bank has cut interest rates to record lows. Low interest rates, however, have done little to stimulate Japan's economy; in part because a banking crisis has curtailed lending but also in part because capital has left the country in pursuit of higher returns on investment in the United States. The exit of capital has battered the yen, making Japanese exports hyper-competitive and stimulating the outflow of even more capital.

The human costs of East Asia's financial crisis are staggering. In Indonesia, Thailand, South Korea, and elsewhere bankruptcies and unemployment are mounting, and the worst is yet to come. Rudimentary or nonexistent social safety nets in these countries mean that the unemployed are left largely to their own devices. Beyond the human tragedy, the inadequate safety net worsens these economies' downward spiral, as the unemployed are forced to curtail their purchases when they lose their jobs. Deficit spending to mitigate the crisis is out of the question, partly as a result of IMF austerity conditions and partly because of the need to prevent further exodus of capital.

One obvious step which the United States could and should take to ease Japan's and the East Asian economic crisis is to lower our interest rates in order to slow down the torrent of capital pouring into our financial markets. Lower U.S. interest rates in and of themselves will not resolve the crisis, but they would clearly ease it. Compared with the cost of IMF bailouts both to U.S. taxpayers and to the people of East Asia who are bearing the burden of economic austerity, lower U.S. interest rates are a dirt-cheap policy alternative.

The crisis taking place in Japan and the rest of East Asia has already begun to have a negative impact on the U.S. economy. In May, the Nation's trade deficit in goods and services increased to $15.7 billion, an all-time monthly high. For the first 5 months of 1998, the U.S. trade deficit in goods with the Pacific Rim countries totaled $59 billion, a 43 percent jump from the first 5 months of 1997.

Much of the recent deterioration in the Nation's trade position is attributable to declining U.S. exports, brought about by the collapse of currencies and bank lending in Asian countries which, as a result, can no longer afford or finance the purchase of U.S.-made products. The declining exports and accelerating imports have begun to hit U.S. manufacturing employment, which has been weak for most of this year. In May and June, this weakness yielded to outright employment declines totaling 51,000 jobs.

Evidence is mounting, moreover, that the worsening of the Nation's trade position and the declines in manufacturing employment may already have triggered a very marked slowdown or even contraction in the U.S. economy.

In view of the time lag between changes in monetary policy and their impact on the economy, it would be far better to lower U.S. interest rates now than to wait for the East Asian economic crisis and the weakness in the U.S. economy to worsen. There is little downside to lowering U.S. interest rates. Inflation remains tame, as the June figures for both the CPI and PPI attest. Now is the time to lower interest rates, to ease the East Asian economic crisis and keep the U.S. economy on course to, at long last, reaching the Humphrey-Hawkins Act's full employment goal.

STATEMENT OF ANDREW L. STERN

INTERNATIONAL PRESIDENT, SERVICE EMPLOYEES INTERNATIONAL UNION, AFL–CIO

JULY 21, 1998

The 1.3 million members of the Service Employees International Union have a vital stake in the monetary policies of the Federal Reserve. SEIU's membership includes workers in the public sector, health care, and the building service industry. The economic security of their families depends on a strong and growing economy.

Our Future is At Stake

Strong economic growth has eliminated the Federal budget deficit and boosted the budgets of State and local government. After years of cutbacks, these conditions make possible a debate about restoring the ability of our public sector to strengthen our economic future through increased investment in education, families, health care, and infrastructure.

Decades of neglect have left unattended many social problems that threaten our economic well-being. Over 41 million Americans have no health insurance, a figure projected to increase to 50.4 million by 2004. According to the General Accounting Office, at least one-third of our schools—serving 14 million students—have one or more buildings in need of extensive repair. Only strong growth can generate the resources we need to become more competitive in the future.

It's a Question of Fairness

Low-wage workers have suffered significant wage losses over the past two decades, partly as a result of the historically high real interest rates during that time which kept unemployment higher than the postwar norm. Low-wage workers are especially vulnerable to labor market conditions. Since 1996, thanks to low unemployment, and an increase in the minimum wage, low-wage workers have enjoyed real wage gains. These gains are important and must be sustained by keeping growth strong. Even with these gains, low-wage workers have not restored their wages to the level they enjoyed in 1989, the peak of the previous recovery.

Low-wage workers are especially fortunate that job growth has been strong over the past 2 years. The 1996 welfare reform law introduced stiff work requirements that have pushed millions of former welfare recipients into the workforce. Nationwide, welfare rolls are down by over one-third. Rising unemployment would put the recent wage gains and the success of welfare reform into jeopardy. While workers are benefiting from the strong economy, they still have a long way to go to regain their fair share of the economic pie.

Working Families Are Still Digging Out of the Hole

According to Bureau of Labor Statistics data analyzed by the Economic Policy Institute, the median worker's 1997 wage of $10.82 was 3.2 percent below what it was in 1989, the peak year of the previous economic expansion, after adjusting for inflation. Not that 1989 was such a great year—the 1997 median wage is 6.8 percent below what it was in 1973.

Stagnant wages undermine the ability of workers to save for the future. In a January poll conducted by Peter Hart Research for the AFL–CIO, only 41 percent of respondents said their family income was sufficient to put money aside in savings.

Economic Danger Signals

We should not be complacent about the dangers posed by the Asian crisis. Indonesia's economy has shrunk by 80 percent in the past 2 years, Thailand's by 50 percent, and South Korea by 25 percent. Japan, the world's second largest economy and the only hope for pulling the region out of the doldrums, is now in its second recession in 5 years.

Manufacturing employment has declined in the United States in June and May—prior to any impact of the General Motors strike. The strong dollar is adding to the woes of the manufacturing sector by making U.S. exports more expensive and imports cheaper. Lowering interest rates would slow the inflow of short-term capital which is driving up the dollar.

The Federal Reserve Must Act Now

Although the Federal Reserve has maintained a steady interest rate policy over the past year, this does not mean that the cost of borrowing is unchanged. Inflation has been declining steadily. As a result, in 1997, the benchmark Federal funds rate was at its highest level since 1989—on the eve of the last recession (in annualized, inflation-adjusted terms). The Federal Reserve should reverse its policy of allowing *real* interest rates to drift upward.

Over the past two decades of determined inflation-fighting by the Fed, we have heard often about the need for preemptive action to forestall inflation. Today, we have clear signs of an impending economic slowdown. Now is the time for preemptive action by the Federal Reserve to prevent an increase in unemployment resulting from slower growth.

DECOMPOSITION OF PRODUCTIVITY AND UNIT COSTS

L. Slifman and C. Corrado*

Board of Governors of the
Federal Reserve System

November 18, 1996

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DECOMPOSITION OF PRODUCTIVITY AND UNIT COSTS

L. Slifman and C. Corrado

Labor productivity (output per hour) in the private business sector is reported to have been rising at an annual rate of about 1-1/4 percent since 1973. At the same time, output per hour in the nonfinancial corporate sector is estimated to have been increasing at a 1-3/4 percent annual rate. Given that the nonfinancial corporate sector is about two-thirds of the aggregate, these statistics imply that output per hour elsewhere in private business has not increased, on average, for more than two decades.

For the past fifteen years, productivity growth in manufacturing has been relatively robust. A BLS study concluded that all of the growth in private business multifactor productivity in the 1980s could be attributed to manufacturing.[1] Moreover, the published figures for private business and manufacturing labor productivity suggest that since the beginning of the 1990s output per hour in the nonmanufacturing sector of the economy has been disappointing.

Because it seems unlikely that major sectors of the economy have, in reality, failed to become more efficient year in and year out, it would be useful to try to identify at a more disaggregated level those segments of the economy with persistently dismal measured productivity performance. Moreover, for purposes of current analysis, one would like to have the data at a quarterly frequency. This paper presents such a disaggregation. The decompositions are by legal form of organization, with gross industry breaks within the corporate sector, and by detailed industry. For expository convenience, we refer to the former as the "sectoral" decomposition and the latter as the "industry" decomposition. An accompanying dataset contains the complete set of sectoral and industry estimates of labor productivity as well as a decomposition of sectoral data on unit costs and profits.

Decomposition of Productivity and Unit Costs by Sector

The sectoral decomposition develops product and income accounts for subsectors of the domestic business sector in the national income and product accounts (NIPAs). The basic idea underlying the decomposition is that the Commerce Department's Bureau of Economic Analysis (BEA) publishes quarterly income and product for the domestic business sector and for most of the corporate business sector. The BEA also publishes annual income and product for farms and owner-occupied housing. After making a few interpolations (and extrapolations) of these annual data, as well as constructing an implicit deflator for the output of financial corporations, one can calculate a complete quarterly income and product account for the nonfarm business

[1]William Gullickson, "Multifactor Productivity in Manufacturing Industries," *Monthly Labor Review* (October 1992); see especially page 29 and chart 2.

sector (as defined by BLS for official productivity estimates).[2] An income and product account for the noncorporate sector can then be calculated as a residual. The nonfarm, nonfinancial corporate sector is further disaggregated into manufacturing and nonmanufacturing; this disaggregation relies, in part, on BEA's annual series on gross product originating by industry (see below). A complete description of all the series that are part of the sectoral decomposition appears in Appendix 1.

What Does the Decomposition Comprise?

The sectoral decomposition breaks the nonfarm business sector (less housing) into the following sectors: nonfarm corporate business, financial corporations, nonfarm nonfinancial corporations, manufacturing corporations, nonmanufacturing corporations (excluding farm and financial corporations), and nonfarm noncorporations. The nonfarm noncorporate sector consists primarily of sole proprietorships and partnerships, with nearly half of the sector's income generated by businesses in the services industry.[3] In addition, nominal and real product for the total nonfarm business sector and for the nonfarm noncorporate business sector are recalculated on an "income basis" by subtracting the NIPA statistical discrepancy. Because the statistical discrepancy has swung from +$58 billion in 1993 to -$51 billion in 1996:Q2, the income-based measures of activity (and, hence, productivity) have been growing more rapidly than the output-based numbers in recent quarters.

Each sector is decomposed into the following product and income components: nominal gross product; real gross product; consumption of fixed capital (with capital consumption adjustment); indirect business taxes, business transfers, and net subsidies; compensation; profits (with inventory valuation adjustment and capital consumption adjustment); net interest; proprietors' income; and rental income.

When real sector product is divided by hours worked, the result is labor productivity, or output per hour.[4] When nominal sector product and its income components are divided by real sector product, the result is a complete unit cost (and profit) accounting that adds up to the implicit deflator for the sector. The unit cost decomposition for each sector is presented in the accompanying dataset.

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[2]The interpolations, extrapolations, and data constructions are based primarily on published quarterly NIPA series and are described in Appendix 1.

[3]The services industry share reflects calculations based on unpublished BEA data on domestic income by industry and legal form of business. See table 4, line 15, column 3.

[4]Note that the manufacturing sectoral real product estimates presented here are value-added measures and thus differ from sectoral output as calculated by BLS. See William Gullickson, "Measurement of Productivity Growth in U.S. Manufacturing," *Monthly Labor Review* (July 1995), pp. 13-28.

Highlights of the Sectoral Decomposition

Tables 1 and 2 summarize the results of the exercise. The upper portion of table 1 shows the annualized growth rate of real sector output over selected time periods and the next portion shows the corresponding growth rates of hours worked.[5] The third and fourth sections show labor productivity (output per hour) and unit labor costs by sector. As can be seen in line 16, the official measure of labor productivity in the nonfarm business sector slowed from an annual growth rate of 2.8 percent in the 1960s and early 1970s to a 0.9 percent rate during the 1990s. Even when measured on an income basis (line 17), the recent performance (1.2 percent per year) has been disappointing compared with that in the 1960s.

By sector, the decomposition suggests that the 1970s slowdown in measured productivity growth was concentrated in the corporate manufacturing and nonfarm noncorporate sectors (lines 21 and 23). Subsequently, output per hour in manufacturing recovered. But the level of output in the noncorporate sector, as implied by this decomposition, has continued to fall. Table 2 provides perspective on the relative size of each sector's domestic income, real output, and hours. As may be seen, the nonfarm noncorporate sector has accounted for just under one-fourth of nonfarm business activity in recent years.

Accompanying the lackluster behavior of productivity in the nonfarm noncorporate sector has been rapid growth in unit labor costs compared with those in the corporate sector (table 1, line 31 vs. line 26). At the same time, as shown in chart 1, the return to the owners of nonfarm noncorporate businesses (that is, proprietors' income plus rental income) as a share of either nominal gross sector product or domestic income has been well maintained in recent years.[6] Consequently, as illustrated by chart 2, since 1976 the implicit deflator for the nonfarm noncorporate sector has been rising much faster than the deflator for the nonfarm corporate sector -- 6.7 percent (annual rate) vs. 4 percent (annual rate).

A Caveat

A critical component of this decomposition is BEA's estimate of real nonfinancial corporate output. To calculate real nonfinancial corporate output, BEA deflates current-dollar nonfinancial corporate product using the implicit deflator for goods and structures, which may not accurately represent corporate product prices. For example, corporate product includes almost all of the output for services, such as purchased

[5]For the most part, the figures on hours worked are those used in the BLS measures of output per hour for nonfarm business, nonfinancial corporations, and manufacturing. See Appendix 1 for a complete description.

[6]The domestic income of a sector is equal to the sector's gross product originating minus the consumption of fixed capital, indirect business taxes, and business transfers, plus net subsidies. See table A-1, line 6.

intercity transportation, household utilities, and motion pictures, as well as a portion of legal services. However, the quantity weights for the prices of these and other obviously excluded categories are relatively small for the nonfinancial corporate sector as a whole (see table 4, column 2).

In fact, as shown on chart 3, a nonfinancial corporate output price index constructed to reflect the two-digit industry composition of nonfinancial corporate product does not show a long-term trend that is significantly different from BEA's published deflator. The broad trends implied by the productivity and unit cost decompositions, which are based on the published estimates of real nonfinancial corporate product, would be little changed if current-dollar nonfinancial corporate product were deflated with the constructed price index. However, the chart does show the two deflators beginning to diverge in the 1990s, suggesting that in recent years the use of official statistics for the decomposition has caused a misallocation of a small portion of real product from the noncorporate sector to the nonmanufacturing corporate sector.

Decomposition of Productivity by Industry

The industry decomposition relies on one- and two-digit SIC industry output, employment, and hours data that are available as part of BEA's gross product by industry dataset.[7] An important caveat associated with using these data for longer-run historical comparisons is that the SIC system was changed in 1987. BEA's recommendations have been followed in combining certain two-digit industries to create reasonably continuous time series.[8] In any event, with these data, output per hour measures were calculated for detailed industries and aggregated to a measure for the nonfarm business sector less housing.[9]

Highlights of the Industry Decomposition

Table 3 summarizes the results of this exercise. As can be seen by comparing lines 1 and 2, growth rates of the constructed aggregate and the official series are quite close,

[7]This decomposition is similar to analyses of output per hour by major industry presented in the 1988 *Economic Report of the President*, page 73, and in Zvi Griliches' introduction to the conference volume *Output Measurement in the Service Sectors*, University of Chicago Press, 1992, page 5. In addition to updating these earlier studies, this report presents productivity estimates at a more disaggregated level.

[8]See the August 1996 edition of the *Survey of Current Business* for a complete description of gross product by industry and BEA's recommendations for linking the data across the 1987 SIC change.

[9]Unlike the official BLS productivity series, the constructed aggregate includes output and hours from nonprofit institutions and paid private household workers. In addition, the constructed series excludes the entire government, and agriculture, forestry, and fishing industries rather than just excluding farm output and hours.

even though 25 percent of services industry domestic income is not in the business sector (table 5, column 3, line 15). Within the industry decomposition, the results are similar to those in the sectoral decomposition--that is, the level of measured output per hour in the services industry (line 16) has been falling continuously for the past two decades. Lines 17 to 28 provide additional detail and suggest that the disappointing reported productivity performance has been widespread across nearly all two-digit services industries.

Questions Raised by the Decomposition

As indicated above, the dataset shows that the profitability of noncorporate businesses, (proxied by proprietors' income plus rental income as a share of sector output) has been well maintained in the face of declining productivity over the past two decades. One question raised by the decomposition, then, is, Does such a confluence of events make economic sense? It seems unlikely that firms with declining long-term productivity would be able to avoid bankruptcy let alone maintain the rate of return to the owners. In theory, some firms could have low or declining measured output per hour and still be profitable, but it is hard to imagine this occurring on a widespread basis. To be sure, the noncorporate sector is not stagnant; it reflects many start-up businesses, the most successful of which eventually incorporate. But the confluence of events as described by this dataset requires the sector to have persistently harbored the economy's least efficient businesses since the mid-1970s, which seems inconsistent with the sector's continued profitability.

In an accounting sense, these apparently incompatible productivity and profitability trends can be reconciled by relatively rapid increases in the prices of the noncorporate sector's output. Is there an economic explanation for the rapid rise over two decades in the relative price of output from the noncorporate sector? Factors such as widespread price inelastic demand, barriers to entry, including nontransferable intellectual property rights, and so forth could possibly explain such trends. But it is hard to imagine the presence of these factors on a wide enough scale to account for a significant portion of the productivity slowdown in the noncorporate sector.

Alternatively, the sector's measured trends in productivity, profitability, and prices may not reflect actual economic developments. Thus, another question raised by the decomposition is, Do these inconsistent trends signify problems with our economic statistics?

One possible measurement problem is that nominal output could be understated. In particular, the invoices for some output may not be captured by the Commerce Department's statistical nets. But is the problem, if it exists, getting worse? The $100 billion swing in the statistical discrepancy since 1993 does raise the possibility that nominal output growth has been understated in recent years. Nevertheless, the income-based measures of output per hour presented on lines 17 and 23 of table 1 suggests that mismeasurement of nominal output is unlikely to account for much of the dreary performance of productivity as indicated by published statistics over the past two decades.

A more likely statistical explanation for the implausible productivity, profitability, and price trends in the noncorporate sector is that they reflect problems in measuring prices. Indeed, the decomposition of national accounts data presented here can be viewed as providing a macroeconomic perspective on the problems of price measurement that many other researchers have noted from a microstatistical perspective.[10] It suggests that actual inflation in the economy is less than that shown by the published data, and, accordingly, actual growth of output and productivity is faster.

What is the possible magnitude of the overstatement of inflation that emerges from this dataset? As a benchmark thought experiment for making a judgment on this issue, one could assume that instead of falling for the past two decades, productivity in all declining two-digit service-producing industries has been flat. Such a calculation suggests that over the past two decades aggregate productivity growth would have been nearly half a percentage point faster per year than indicated by the published data and, that for a given nominal output, inflation would have been lower by the same amount.[11] This benchmark figure, which is derived independently, is within the range of estimates of CPI biases arising from the slow introduction of new products and deficiencies of quality adjustment that have been noted by many researchers (see footnote 10). Of course, one could argue that even the assumption of no productivity growth for these industries is unrealistic. Obviously, if one were to assume that productivity in these industries has actually been improving, aggregate output per hour would rise even faster and price inflation would be still lower.

A Concluding Thought

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[10]See, for example, the following studies: David E. Lebow, John M. Roberts, and David J. Stockton, "Monetary Policy and the Price Level," Federal Reserve Board, August 1994. J. Peterson, "Is the Growth of the CPI a Biased Measure of Changes in the Cost of Living?", Congressional Budget Office, 1994. Advisory Commission to Study the Consumer Price Index, "Toward a More Accurate Measure of the Cost of Living: Interim Report to the Senate Finance Committee," September 15, 1995. Mathew Shapiro and David W. Wilcox, "Mismeasurement in the Consumer Price Index: An Evaluation," NBER Working Paper 5590, May 1996.

[11]Seventeen industries were adjusted. Four of these industries were in the transportation sector: local and interurban passenger transit; trucking and warehousing; water transportation; and transportation services. Two of the adjusted industries were in finance, insurance, and real estate: insurance carriers; and insurance agents, brokers, and services. The remaining eleven adjusted were in the services industry: hotels and other lodging places; personal business services; business services; auto repair services and parking; miscellaneous repair services; motion pictures; amusement and recreation services; health services; legal services; education services; and social services.

Many observers have questioned how the influence of relentless technological progress appears so prominently in statistics on manufacturing, but not in those for services. Some have long questioned the accuracy of the statistics themselves.[12] Others suggest that the gains from new technologies take a long time to diffuse and that the productivity boost from information technology has yet to come.[13] Yet others look more closely at structural developments such as "downsizing" and "outsourcing" and suggest that these need not stimulate aggregate growth or efficiency; instead, such developments could just reflect a reallocation of resources within the economy. Clearly, the basic trend toward automation in manufacturing and distribution will result in a productivity gain in the aggregate economy only if the laid-off workers find new jobs in which they are as productive as they were in their old jobs. If human capital is lost when production workers move from one industry to another following firm downsizing, aggregate labor productivity will not necessarily increase.

However, many of the changes in manufacturing over the 1980s occurred as part of corporate restructuring that outsourced ancillary, labor-intensive, service activities of the basic enterprises. A related development is the increased tendency in the 1990s for manufacturers to purchase the services of temporary workers as labor on production lines. When a manufacturing or related enterprise decides to use temporary workers or to close down an ancillary activity (for example, a warehousing unit, a legal services department, or a research and development laboratory) and purchase the service on the market instead, value added in manufacturing is reduced and value added elsewhere in industry is increased. These changes reflect an alteration in the organization of production to meet a given pattern of final demand and do not necessarily result in an immediate increase in aggregate productive efficiency. Over time, however, contracting out ancillary activities means replacing own-account production by specialist production, which should eventually lead to an increase in productive efficiency for the economy as a whole. A final question, then, is How long does it take for these efficiency gains to occur, and when they do take place, will our economic statistics capture them?

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[12]See, for example, Zvi Griliches, "Productivity, R&D and the Data Constraint," *American Economic Review* (March 1994), pp. 1-23 and the references therein.

[13]Paul David, "The Dynamo and the Computer: An Historical Perspective on the Modern Productivity Paradox," *American Economic Review: Papers and Proceedings* (May 1990), and Nathan Rosenberg, "Uncertainty and Technological Change," unpublished paper prepared for a conference sponsored by the Federal Reserve Bank of Boston, June 5-7, 1996.

Table 1

Sectoral Labor Productivity and Costs
(Percent change at an annual rate over period indicated)

	60:Q2 to 96:Q2	60:Q2 to 73:Q4	73:Q4 to 80:Q1	80:Q1 to 90:Q2	90:Q2 to 96:Q2
REAL OUTPUT					
1. Nonfarm business sector	3.3	4.5	3.0	2.9	2.1
2. Income-based	3.3	4.4	2.6	3.0	2.3
3. Nonfarm corporate	3.9	4.7	3.8	3.5	2.9
4. Financial	3.5	3.2	7.4	1.7	3.2
5. Nonfinancial	3.9	4.8	3.6	3.7	2.8
6. Manufacturing	2.9	4.2	1.9	2.5	1.8
7. Nonmanufacturing	4.6	5.4	4.8	4.3	3.3
8. Nonfarm noncorporate	1.4	3.6	-1.5	1.0	0.4
HOURS WORKED					
9. Nonfarm business sector	1.6	1.6	1.8	1.7	1.1
10. Nonfarm corporate	2.2	2.9	2.2	1.8	1.2
11. Financial	2.5	3.2	3.2	2.2	0.4
12. Nonfinancial	2.2	2.9	2.1	1.8	1.3
13. Manufacturing	0.3	1.4	-0.1	-0.5	-0.4
14. Nonmanufacturing	3.6	4.5	3.8	3.1	2.0
15. Nonfarm noncorporate	0.2	-1.1	0.5	1.5	0.9
LABOR PRODUCTIVITY					
16. Nonfarm business sector	1.7	2.8	1.2	1.1	0.9
17. Income-based	1.7	2.8	0.9	1.2	1.2
18. Nonfarm corporate	1.7	1.8	1.6	1.7	1.6
19. Financial	1.0	-0.0	4.1	-0.5	2.8
20. Nonfinancial	1.7	1.9	1.5	1.8	1.5
21. Manufacturing	2.6	2.8	2.0	3.1	2.3
22. Nonmanufacturing	1.0	0.9	1.0	1.2	1.2
23. Nonfarm noncorporate	1.2	4.8	-1.9	-0.5	-0.5
UNIT LABOR COSTS					
24. Nonfarm business sector	4.2	3.1	8.0	4.2	2.7
25. Income-based	4.2	3.1	8.3	4.0	2.5
26. Nonfarm corporate	3.8	3.3	7.3	3.5	1.9
27. Financial	5.7	5.6	4.5	8.0	3.3
28. Nonfinancial	3.7	3.2	7.5	3.2	1.8
29. Manufacturing	3.1	2.4	7.8	2.2	1.6
30. Nonmanufacturing	4.2	4.1	7.4	3.8	1.9
31. Nonfarm noncorporate	4.8	1.0	11.0	6.2	5.0

Table 2

Sectoral Income, Real Output and Hours
(Average percentage of total nonfarm business over period indicated)

	1960 to 1995	1960 to 1973	1974 to 1979	1979 to 1990	1990 to 1995
DOMESTIC INCOME					
1. Nonfarm business sector	100.0	100.0	100.0	100.0	100.0
2. Nonfarm corporate	76.7	74.8	77.8	78.2	77.4
3. Financial	5.5	4.3	4.9	6.0	7.9
4. Nonfinancial	71.2	70.5	73.0	72.2	69.5
5. Manufacturing	29.9	34.6	31.4	26.6	23.0
6. Nonmanufacturing	41.4	35.9	41.6	45.6	46.5
7. Nonfarm noncorporate	23.3	25.2	22.2	21.8	22.6
REAL OUTPUT[1]					
8. Nonfarm business sector	100.0	100.0	100.0	100.0	100.0
9. Nonfarm corporate	73.2	69.0	71.6	76.2	78.4
10. Financial	7.5	6.8	7.6	8.2	7.6
11. Nonfinancial	65.6	62.0	64.1	68.1	70.8
12. Manufacturing	24.4	26.1	24.4	23.6	22.4
13. Nonmanufacturing	41.1	35.6	39.7	44.6	48.4
14. Nonfarm noncorporate	28.4	34.3	30.3	24.1	21.6
HOURS					
15. Nonfarm business sector	100.0	100.0	100.0	100.0	100.0
16. Nonfarm corporate	72.7	67.9	74.5	76.2	76.3
17. Financial	4.4	3.8	4.5	5.0	4.9
18. Nonfinancial	68.3	64.1	70.0	71.2	71.4
19. Manufacturing	28.2	32.7	29.5	25.1	21.7
20. Nonmanufacturing	40.1	31.4	40.5	46.1	49.8
21. Nonfarm noncorporate	27.3	32.1	25.5	23.8	23.7

1. Figures for real output shares begin in 1961 and are relative to the income-based measure of total nonfarm business output.

Table 3

Real Gross Product Originating per Hour, 1977-94
(Percent change at an annual rate over period indicated)

	Industry	1977 to 1994	1980 to 1990	1990 to 1994
1	Nonfarm business sector, excluding housing (BLS)	0.95	1.14	1.12
2	Nonagricultural private industries (exc. housing)	0.89	1.17	1.03
3	Mining	2.62	5.00	4.58
4	Construction	-1.02	-0.68	0.77
5	Manufacturing	2.45	3.22	2.15
6	Durables	2.80	3.56	3.07
7	Nondurables	1.99	2.73	0.96
8	Transportation and utilities	1.51	1.29	2.58
9	Transportation	0.58	-0.05	2.34
10	Communications	4.53	4.02	5.20
11	Public utilities	0.65	1.21	2.80
12	Trade	2.06	2.49	2.37
13	Wholesale trade	3.30	3.34	5.42
14	Retail trade	1.29	2.04	0.60
15	Finance, ins., real estate (exc. housing)	0.16	0.10	0.88
16	Services	-0.56	-0.50	-1.11
17	Hotels and lodging	-1.53	-1.46	0.40
18	Personal services	-0.87	-0.53	-0.71
19	Business and other services	-0.42	-0.21	-1.12
20	Auto repair	-1.26	-1.04	-1.87
21	Miscellaneous services	-0.20	-1.22	-3.47
22	Motion pictures	1.65	1.68	-1.05
23	Amusement services	0.98	2.64	-4.75
24	Health services	-1.84	-1.82	-2.50
25	Legal services	-2.77	-2.58	-3.61
26	Education services	0.01	-0.53	0.23
27	Membership orgs. and social services	-0.18	-0.14	0.45
28	Private households	2.16	3.70	2.07

Notes: Hours of all persons in these calculations differ from hours of all persons as defined by the BLS because the calculations presented here include nonprofit institutions and private households. These calculations assume that self-employed workers in each industry work the same number of hours annually as full-time wage and salary employees.

Table 4

Distribution of Domestic Income across Private Nonagricultural Industries, by Legal Form of Organization, 1994[1]

		TOTAL	Corporations	Sole Proprietorships and Partnerships	Households and Nonprofit Institutions
1.	**Total**	100.00	100.00	100.00	100.00
2.	Mining	1.01	1.13	0.98	0.00
3.	Construction	5.98	5.69	10.68	0.00
4.	Manufacturing	23.78	30.43	5.26	0.23
5.	Durables	13.76	17.73	2.49	0.02
6.	Nondurables	10.02	12.69	2.77	0.20
7.	Transportation and utilities	10.37	11.83	7.06	3.83
8.	Transportation	4.59	5.04	3.24	3.22
9.	Communications	2.97	3.45	2.21	0.28
10.	Public utilities	2.80	3.35	1.60	0.32
11.	Trade	18.44	21.48	14.09	0.17
12.	Wholesale trade	7.59	9.36	3.36	0.08
13.	Retail trade	10.84	12.12	10.73	0.09
14.	Finance, insurance, and real estate	11.06	10.00	15.69	11.80
15.	Services	29.36	19.44	46.25	83.97
16.	Hotels and lodging	1.03	0.94	1.98	0.08
17.	Personal services	0.98	0.65	3.07	0.00
18.	Motion pictures	0.54	10.42	1.41	0.00
19.	Amusement	1.02	0.78	1.72	1.81
20.	Business and other	9.37	9.15	14.12	2.58
21.	Auto repair	0.92	0.73	2.35	0.00
22.	Miscellaneous repair	0.39	0.34	0.87	0.00
23.	Health services	9.39	4.69	11.17	46.51
24.	Legal services	2.20	1.09	8.66	0.10
25.	Education services	1.20	0.12	0.20	12.34
26.	Social services	2.06	0.53	0.71	17.59
27.	Private households	0.26	0.00	0.00	2.95

1 These data are derived from unpublished BEA estimates.

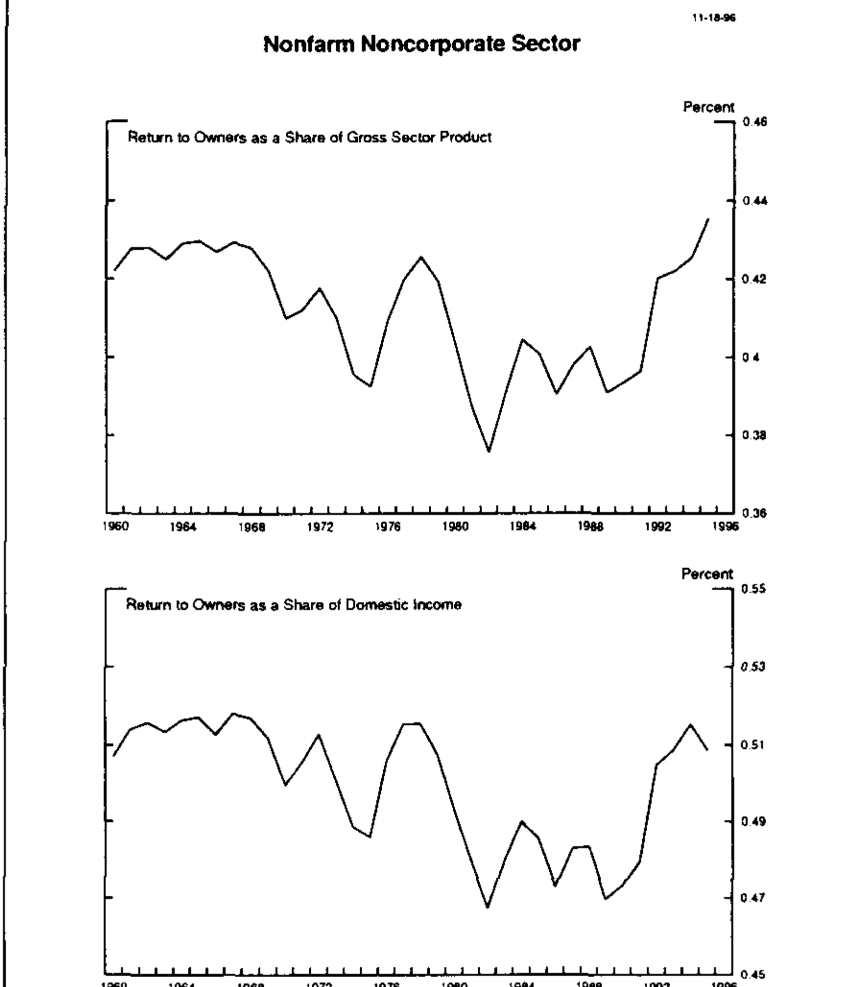
Table 5

Distribution of Domestic Income within Private Nonagricultural Industries, by Legal Form of Organization, 1994[1]

		Corporations	Sole Proprietorships and Partnerships	Households and Nonprofit Institutions
1.	**TOTAL**	75.57	15.10	9.33
2.	Mining	84.50	15.50	0.00
3.	Construction	71.65	28.35	0.00
4.	Manufacturing	96.40	3.52	0.08
5.	Durables	97.10	2.88	0.02
6.	Nondurables	95.43	4.39	0.18
7.	Transportation and utilities	85.95	10.82	3.24
8.	Transportation	82.62	11.22	6.16
9.	Communications	87.34	11.82	0.84
10.	Public utilities	89.93	9.08	0.99
11.	Trade	87.78	12.14	0.08
12.	Wholesale trade	92.88	7.03	0.10
13.	Retail trade	84.21	15.72	0.07
14.	Finance, insurance, and real estate[2]	41.91	13.86	5.76
15.	Services	49.88	25.03	25.10
16.	Hotels and lodging	68.72	30.62	0.66
17.	Personal services	50.24	49.76	0.00
18.	Motion picturest	58.72	41.28	0.00
19.	Amusement	57.81	26.66	15.53
20.	Business and other	73.63	23.95	2.42
21.	Auto repair	59.49	40.51	0.00
22.	Miscellaneous repair	64.67	35.33	0.00
23.	Health services	37.63	18.90	43.47
24.	Legal services	37.12	62.48	0.40
25.	Education services	7.21	2.63	90.16
26.	Social services	19.49	5.45	75.06
27.	Private households	0.00	0.00	100.00

1. These data are derived from unpublished BEA estimates.
2. Finance, insurance, and real estate add to less than 100 because of the omission of owner-occupied housing.

Chart 1



Note: Return to owners equals proprietors' income plus rental income.

Chart 2

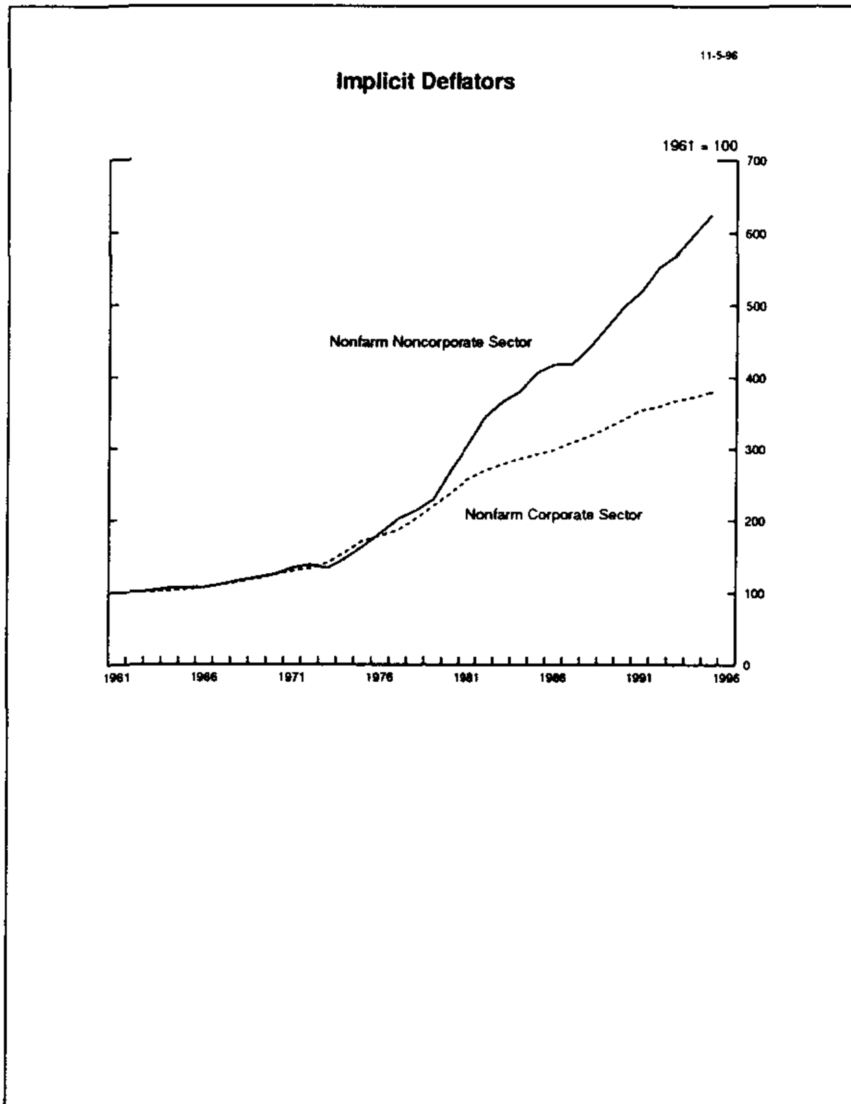
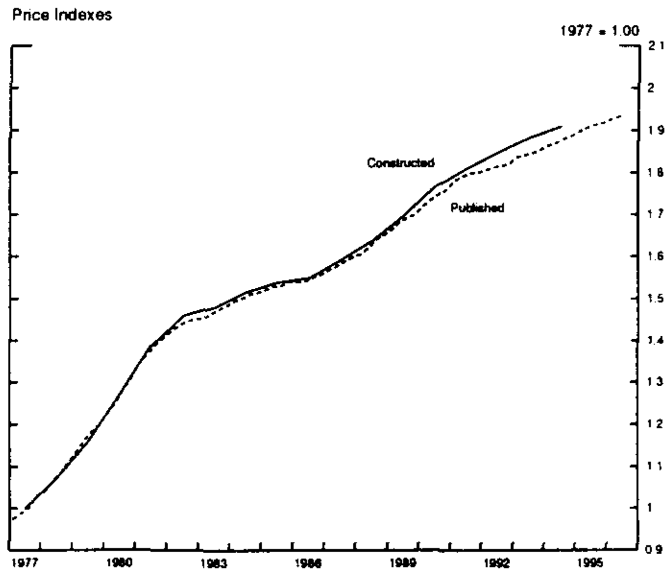

11-5-96
Implicit Deflators
1961 = 100
700
600
500
400
300
200
100
0
Nonfarm Noncorporate Sector
Nonfarm Corporate Sector
1961
1966
1971
1976
1981
1986
1991
1996

Chart 3

11-13-96

Nonfinancial Corporations



Note: BEA's published deflator for nonfinancial corporations is based on the implicit deflator for goods and structures. The constructed price measure is a Fisher index that weights two-digit GPO industry deflators by the corporate GPO for each industry.

Appendix 1

Detailed Description of the Sectoral Decomposition

Table A-1 presents the 1996:Q2 levels of the data used in the sectoral decomposition. Columns A through I contain the series of primary interest; columns J through Q contain the sectors needed to construct the series in the first nine columns. A description of the source data, accounting identity, or interpolation/exrapolation procedure used to construct each cell is given below.

Column A	*Nonfarm Business Less Housing, Product-based*
Lines 1-11:	Column J-Column O-Column P-Column Q. That is, the domestic business sector less the farm sector, owner-occupied housing, and the rental value of buildings and equipment owned by nonprofit institutions. The domestic business sector excludes output originating in private households, nonprofit institutions, and general government from total GDP.
Line 12:	BLS. Hours of all persons in the nonfarm business sector.
Column B	*Nonfarm Business Less Housing, Income-based*
Line 1:	A1 - NIPA statistical discrepancy for gross domestic product (NIPA 1.9, line 15).
Line 2:	B1/(A1/A2)
Line 3:	A3
Line 4:	A4-(NIPA 1.9, line 15)
Line 5:	A5-(NIPA 1.9, line 15)
Lines 6-12:	A6 through A12
Column C	*Nonfarm Corporate Business*
Lines 1-12:	Column E+Column D
Column D	*Financial Corporations*
Lines 1-12:	Column K-Column L
Column E	*Nonfarm Nonfinancial Corporations*
Lines 1-12:	Column L-Column N
Column F	*Manufacturing Corporations*
Line 1:	F4+F3
Line 2:	F1/(manufacturing deflator). The manufacturing deflator is the implicit gross product originating (GPO) deflator interpolated and extrapolated to the quarterly frequency using a deflator for nonfarm goods (calculated using NIPAs 1.3 and 1.4, lines 4 and 5, and NIPAs 1.7 and 1.8, line 6).

Line 3:	NIPA 6.22C, line 11, interpolated and extrapolated by the capital consumption allowance for nonfinancial corporations.
Line 4:	F5+F6
Line 5:	M5*(F6/M6). This assumes that indirect business taxes, etc., for manufacturing corporations are proportional to their income relative to the income of all manufacturing business (column M).
Line 6:	F7+F8+F9
Line 7:	M7*0.98
Line 8:	M8
Line 9:	M9*0.97 (This ratio is based on unpublished BEA data by legal *form of business.)*
Lines 10-11:	Not applicable
Line 12:	BLS. Hours of all employees in manufacturing*0.98 The 0.98 estimate for the corporate share of manufacturing hours is based on data provided by BEA for the distribution of labor compensation by legal form of organization and industry.

<u>Column G</u> *Nonfarm Nonmanufacturing Corporations*

Lines 1-12:	Column E-column F. Note, line 2 is adjusted to take account of the residual that emerges from chain weight aggregation.

<u>Column H</u> *Nonfarm Noncorporate Business*

Lines 1-12:	Column A-column D-column E. Note, line 2 is adjusted to take account of the residual that emerges from chain weight aggregation.

<u>Column I</u> *Nonfarm Noncorporate Business, Income-based*

Lines 1-12:	Column B-column D-column E. Note, line 2 is adjusted to take account of the residual that emerges from chain weight aggregation.

<u>Column J</u> *Domestic Business*

Line 1:	NIPA 1.7, line 2.
Line 2:	NIPA 1.8, line 2.
Line 3:	NIPA 1.9, line 6+line 11.
Line 4:	J1-J3.
Line 5:	NIPA 3.1, line 4+NIPA 1.9, line 14+NIPA 1.9, line 15-NIPA 3.2, line 25
Line 6:	J4-J5.
Line 7:	NIPA 1.14, line 2 - NIPA 3.7B, line 38 - NIPA 1.7, line 7 - NIPA 1.15, line 49. (The last item, rest of world compensation, is linearly interpolated to the quarterly frequency.)
Line 8:	NIPA 1.16, line 9.
Line 9:	J6-J7-J8-J10-J11
Line 10:	NIPA 1.14, line 9.
Line 11:	NIPA 1.14, line 17.
Line 12:	BLS. Hours of all persons in the business sector.

Column K	*Corporations*
Line 1:	NIPA 1.16, line 1
Line 2:	NIPA 1.16, line 36+(NIPA 1.16, line 18/financial deflator). The financial deflator is the implicit GPO deflator for banking, credit agencies other than banks, insurance carriers, and security and commodity brokers interpolated and extrapolated by the quarterly deflator for personal consumption expenditures on brokerage and bank service charges, services furnished without payment by financial intermediaries, and the expense of handling life insurance (NIPA 2.4, lines 61-64).
Lines 3-9:	NIPA 1.16, lines 2, 3, 4, 5, 6, 9, and 17.
Lines 10-11:	Not applicable.
Line 12:	L12 + (financial hours). The financial hours are calculated from BLS data on hours paid in the finance, insurance and real estate industry, excluding hours in SIC 64, 65, and 67, reduced by 6 percent to adjust for hours worked vs. hours paid. (This series is similar to BEA's annual series on employee hours for SICs 60, 61, and 63.)
Column L	*Nonfinancial Corporations*
Lines 1-9:	NIPA 1.16, lines 19, 36, 20-24, 27, and 35.
Lines 10-11	Not applicable.
Line 12:	BLS. Hours of all employees in the nonfinancial corporate sector.
Column M	*Manufacturing*
Line 1:	M3+M4
Line 2:	M1/(manufacturing deflator) (see F2).
Line 3:	NIPA 6.13C, line 7 + NIPA 6.22C, line 11, interpolated and extrapolated by the capital consumption allowance for nonfinancial corporations.
Line 4:	M5+M6
Line 5:	GPO data. Indirect business taxes are interpolated and extrapolated by manufacturing shipments; business transfers and subsidies are interpolated to the quarterly frequency using a cubic spline.
Line 6:	M7+M8+M9+M10
Line 7:	NIPA 2.1, line 5 + (NIPA 6.2C, line 13 - NIPA 6.3C, line 13), interpolated and extrapolated by NIPA 1.16, line 26 (supplements for all nonfinancial corporations).
Line 8:	NIPA 6.16C, line 14 (adjusted to be consistent with latest GPO figures).
Line 9:	NIPA 6.15C, line 6, interpolated and extrapolated by NIPA 1.16, line 35.
Line 10:	NIPA 6.12C, line 5, interpolated and extrapolated by manufacturing shipments.
Line 11:	Not applicable.
Line 12:	BLS. Hours of all persons in manufacturing.

Column N	*Farm Corporations*
Line 1:	N3+N4
Line 2:	N1/(O1/O2)
Line 3:	Flow of funds table F.104, line 4.
Line 4:	N5+N6.
Line 5:	O5*(N6/O6) This assumes that indirect business taxes and subsidies for farm corporations are proportional to their income relative to the income of all farm business(column O).
Line 6:	N7+N8+N9
Line 7:	O7* (the corporate share of farm sector compensation obtained from unpublished BEA annual data interpolated to the quarterly frequency).
Line 8:	O8
Line 9:	O9* (the corporate share of farm sector net interest obtained from unpublished BEA annual data interpolated to the quarterly frequency).
Lines 10-11:	Not applicable.
Line 12:	O12* (the corporate share of farm sector compensation (see N7)).

Column O	*Farm Business*
Line 1:	NIPA 1.7, line 6.
Line 2:	NIPA 1.8, line 6
Line 3:	Flow of funds table F.104, line 3.
Line 4:	O1-O3.
Line 5:	NIPA 8.8, line 17-NIPA 8.8, line 18. Note: both series are interpolated to a quarterly frequency using a cubic spline.
Line 6:	O4-O5.
Line 7:	NIPA 8.8, line 20, interpolated to a quarterly pattern using the sector's total domestic income less net interest and proprietors' income (O6-O9-O10).
Line 8:	O6-O7-O9-O10.
Line 9:	NIPA 8.8, line 26, interpolated to a quarterly frequency using a cubic spline.
Line 10:	NIPA 1.14, line 10.
Line 11:	Not applicable.
Line 12:	J12-A12. (BLS hours of all persons for the business less nonfarm business sectors)

Column P	*Owner-occupied Housing*
Line 1:	NIPA 8.19, line 89, interpolated to a quarterly frequency using PCE space rent for owner-occupied nonfarm dwellings (NIPA 2.4, line 24). [Data beginning in 1995Q4 are the unpublished BEA estimates supplied to BLS.]

Line 2:	P1 deflated by the implicit deflator for nonfarm housing product (NIPA 1.7, line 5/NIPA 1.8, line 5). [Data beginning in 1995Q4 are the unpublished BEA estimates supplied to BLS.]
Line 3:	NIPA 8.19, line 90, interpolated to a quarterly frequency using the consumption of fixed capital for the noncorporate sector (NIPA 1.9, line 6-NIPA 1.14, line 33).
Line 4:	P1-P3.
Line 5:	P4-P6.
Line 6:	P9+P11
Lines 7-8:	Not applicable.
Line 9:	NIPA 8.19, line 93, interpolated to a quarterly frequency using net interest for the noncorporate sector (NIPA 1.9, line 19-NIPA 1.16, line 17).
Line 10:	Not applicable.
Line 11:	NIPA 8.19, line 94, interpolated to a quarterly frequency using rental income of persons (NIPA 1.14, line 17).
Line 12:	Not applicable.

<u>Column Q</u> *Building and Equipment Serving Nonprofit Institutions*

Line 1:	NIPA 8.19, line 102, interpolated to a quarterly frequency using nonfarm business output less housing (NIPA 1.7, line 4). Note: this is the convention used by BLS.
Line 2:	Q1 deflated by the implicit deflator for nonfarm business output less housing (NIPA 1.7, line 4/NIPA 1.8, line 4).
Line 3:	NIPA 8.19, 103, interpolated to a quarterly frequency using the consumption of fixed capital for the noncorporate sector (NIPA 1.9, line 6-NIPA 1.14, line 33).
Line 4:	Q1-Q3.
Line 5:	Q6-Q4.
Line 6:	Q9
Lines 7-8:	Not applicable.
Line 9:	NIPA 8.19, line 105, interpolated to a quarterly frequency using net interest for the noncorporate sector (NIPA 1.9, line 19-NIPA 1.16, line 17).
Lines 10-12:	Not applicable.

Table A-1

Sectoral Decomposition of Gross Product and Income -- 1996:Q2

		Nonfarm Bus. less housing, product based	Nonfarm Bus. less housing, income based	Nonfarm corporate business	Financial Corps.	Nonfarm Non-financial corps.	Mfg. corps.	Nonfarm Non-manufac-turing corps.	Nonfarm Non-corporate, product based	Nonfarm Non-corporate, income based
		A	B	C	D	E	F	G	H	I
1	Gross product: nominal	5714.4	5771.9	4552.5	484.0	4068.5	1242.2	2826.3	1161.9	1219.4
2	Gross product: $92	5256.9	5309.8	4247.7	427.4	3819.9	1187.8	2631.9	1016.9	1065.4
3	Cons. of fixed cap	601.8	601.8	468.8	31.1	437.7	152.6	285.1	132.9	132.9
4	Net dom. product	5112.6	5170.1	4083.7	452.9	3630.8	1089.6	2541.2	1029.0	1086.5
5	IBT+Bus. trans.-subs.	429.0	486.5	450.3	47.3	403.0	62.8	340.3	-21.3	36.2
6	Domestic income	4683.6	4683.6	3633.3	405.5	3227.8	1026.8	2201.0	1050.2	1050.2
7	Compensation	3320.9	3320.9	2938.2	241.9	2696.3	830.6	1865.7	382.8	382.8
8	Profits w/IVA&CCA	574.7	574.7	574.7	143.5	431.2	161.5	269.7		
9	Net interest	253.6	253.6	120.4	20.1	100.3	34.8	65.5	133.2	133.2
10	Prop. income	469.4	469.4						469.4	469.4
11	Rental income	65.0	65.0						65.0	65.0
12	Hours of persons	173.8	173.8	133.5	8.1	125.3	35.4	89.9	40.4	40.4

		Domestic business	Corp-orate (Total)	Non-financial corps. (Total)	Mfg. (Total)	Farm corps.	Farm (Total)	Owner-occupied housing	Rental value of buildings and equip. of non-profits
		J	K	L	M	N	O	P	Q
1	Gross product: nominal	6334.6	4565.6	4081.6	1298.3	13.1	97.6	476.5	46.2
2	Gross product: $92	5807.3	4258.4	3831.0	1241.4	11.1	82.8	425.1	42.5
3	Cons. of fixed cap	726.4	471.0	439.9	159.7	2.2	23.5	78.0	23.2
4	Net dom. product	5608.2	4094.6	3641.7	1138.6	10.9	74.1	398.5	23.0
5	IBT+Bus. trans.-subs.	552.8	450.3	403.0	65.6	-0.0	-0.1	114.4	9.4
6	Domestic income	5055.4	3644.3	3238.8	1073.0	11.0	74.2	284.1	13.5
7	Compensation	3336.9	2945.3	2703.4	847.5	7.1	16.0		
8	Profits w/IVA&CCA	577.3	577.3	433.8	161.5	2.6	2.6		
9	Net interest	501.5	121.6	101.5	35.9	1.2	9.9	224.5	13.5
10	Prop. income	515.2			28.2		45.8		
11	Rental income	124.5						59.5	
12	Hours of persons	178.6	135.6	127.4	37.1	2.1	4.7		

For use at 10:00 a.m., E.D.T.
Tuesday
July 21, 1998

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 21, 1998

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM
Washington, D.C., July 21, 1998

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

Table of Contents

Section 1: Monetary Policy and the Economic Outlook

The U.S. economy posted significant further gains in the first half of 1998. The unemployment rate dropped to its lowest level in nearly thirty years, and inflation remained subdued. Real output rose appreciably, on balance, although much of the advance apparently occurred early in the year. Household spending and business fixed investment, supported by the ongoing rise in equity prices and the continued low level of long-term interest rates, appear to have maintained considerable momentum this year. The sizable advance in capital spending and the resulting additions to the capital stock should help bolster labor productivity—the key to rising living standards.

Yet the news this year has not been uniformly good. The turmoil that erupted in some Asian countries last year has generated major concerns about the outlook for those economies and the repercussions for other nations, including the United States. Several Asian countries have had sharp contractions in economic activity, and others have experienced distinctly sub-par growth. Heightened uneasiness among international investors has induced portfolio shifts away from Asia and, to some extent, from other emerging market economies.

These difficulties have created considerable uncertainty and risk for the U.S. economy, but they have also helped to contain potential inflationary pressures in the near term by reducing import prices and restraining aggregate demand. In particular, the substantial rise in the foreign exchange value of the dollar has boosted our real imports and—together with the slower growth in Asia—depressed our real exports. At the same time, the runup in the dollar and slack economic conditions in Asia have helped produce a sharp drop in the dollar prices of oil and other commodities and have pushed down other import prices. Shifts in preferences toward dollar-denominated assets in combination with downward revisions to forecasts of inflation and demand have helped to reduce our interest rates; the lower interest rates have boosted household and business spending, offsetting a portion of the damping of demand from the foreign sector.

The Asian crisis is likely to continue to restrain U.S. economic activity in coming quarters. The size of the effect will depend in large part on how quickly the authorities in the Asian nations can put their troubled financial systems on a sounder footing and carry out other essential economic reforms. Deteriorating conditions in many countries during the past few months created added pressures for reform, and they underscored the depth and scope of the problems that must be addressed.

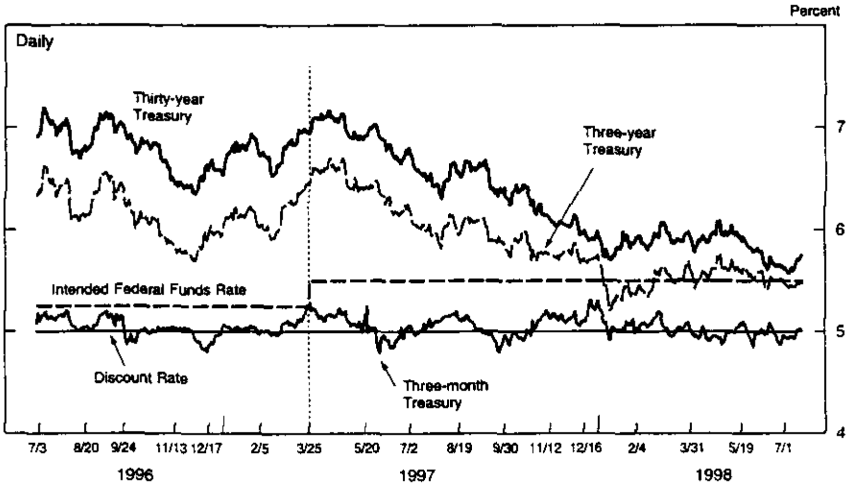
Despite the pronounced weakening of our trade balance, the already tight U.S. labor market has come under further strain this year owing to robust growth of domestic demand. As a result, the outlook for inflation has taken on a greater degree of risk. Consumer prices actually rose a bit less rapidly in the first half of 1998 than they did in 1997, but transitory factors—the drop in oil prices, the runup in the dollar, and weak economic activity in Asia—exerted considerable downward pressure on domestic prices. These factors will not persist indefinitely. Meanwhile, the pool of individuals interested in working but who are not already employed has continued to shrink. The extraordinary tightness in labor markets has generated a rising trend of increases in wages and related costs, although faster productivity growth has damped the effect on business costs so far.

In conducting monetary policy in the first half of 1998, the Federal Open Market Committee (FOMC) closely scrutinized incoming information for signs that the strength of the economy and the taut labor market were likely to boost inflation and threaten the durability of the expansion. However, despite slightly larger increases in the CPI in some months, inflation remained moderate on the whole. Moreover, the Committee expected that aggregate demand would slow appreciably because of a rising trade deficit and a considerable slackening in domestic spending. Although the Committee was acutely aware of the uncertainties in the economic outlook, it believed that the deceleration in demand—and the associated modest easing of pressures on resources—could well be sufficient to limit any deterioration in underlying price performance. On balance, the FOMC chose to keep the intended federal funds rate at 5½ percent.

Monetary Policy, Financial Markets, and the Economy over the First Half of 1998

Output grew rapidly in the first quarter, with real gross domestic product estimated to have risen 5½ percent at an annual rate. Business fixed investment soared after a weak fourth quarter, and consumption and housing expenditures expanded at a strong clip. In addition, contrary to the expectations of many forecasters, inventory investment rose substantially from its already hefty fourth-quarter

Selected Interest Rates



Note. Dotted vertical line indicates the day on which the Federal Open Market Committee (FOMC) announced a monetary policy action. The dates on the horizontal axis are those on which the FOMC held meetings. Last observations are for July 17, 1998.

pace, with the rise contributing more than 1½ percentage points to overall GDP growth. At the same time, the cumulative effect of the appreciation of the dollar and faster growth of demand here than abroad resulted in a sharp drop in real net exports, with both rapid import growth and the first quarterly drop in exports in four years. Employment continued to advance briskly, and the unemployment rate held steady at 4¾ percent. Hourly compensation accelerated somewhat when measured on a year-over-year basis, but impressive productivity growth once again helped to restrain the increase in unit labor costs. The consumer price index rose only ¼ percent at an annual rate over the first three months of the year, as a sharp drop in energy prices offset price increases elsewhere.

Falling long-term interest rates and rising equity prices over the previous year provided substantial impetus to household and business spending in the first quarter. Interest rates dropped sharply further in early January, and although they moved up a little over the remainder of the quarter, nominal yields on long-term Treasury securities were among the lowest in decades. Interest rates continued to benefit from the improvement in the federal budget and the prospect of reduced federal borrowing in the future; rates were also restrained to a significant extent by the effects of the Asian crisis. Equity prices increased sharply in the first quarter, extending their remarkable gains of the previous three years in spite of disappointing news on corporate profits. Households and firms borrowed at a vigorous pace in the first quarter, and growth in the debt of domestic nonfinancial sectors picked up from the fourth quarter of 1997, as did the growth of the monetary aggregates.

At their March meeting, the members of the FOMC confronted unusual cross-currents in the economic outlook. On the price side, the FOMC noted that, although the incoming data were quite favorable, transitory factors were possibly masking underlying tendencies toward higher inflation. Moreover, the available data on household and business spending confirmed the impressive strength of domestic demand and highlighted the possibility that developments in the external sector might not provide sufficient offset in coming quarters to avoid a build-up of inflation pressures. At the same time, the FOMC noted the substantial uncertainty surrounding the prospects for the Asian economies. Balancing these considerations, the FOMC kept its policy stance unchanged but noted that recent information had altered the inflation risks enough to make tightening more likely than easing in the period ahead.

The second quarter brought both a marked further deterioration in the outlook for Asia and some indications that the U.S. economy might be cooling. In Asia, evidence of steep output declines in several countries was combined with mounting concern that economic and financial problems in Japan were not likely to be resolved as quickly as many observers had hoped or expected. One result was a further rise in the exchange value of the dollar and a decline in long-term U.S. interest rates. Increasing investor concern about emerging market economies raised risk spreads on external debts in Asia, Russia, and Latin America.

The higher value of the dollar and the depressed income in many Asian countries continued to take their toll on U.S. exports and to boost imports in the second quarter. In addition, a marked slackening in the pace of inventory accumulation, which was amplified by the effects of a strike in the motor vehicle industry, was reflected in a sharp slowing in domestic demand. Nonetheless, the utilization of labor resources remained very high: In the second quarter, the unemployment rate averaged a bit less than 4½ percent, its lowest quarterly reading in nearly thirty years. The twelve-month change in average hourly earnings indicated that wages were rising somewhat more rapidly than they had a year earlier. And the CPI rose faster in the second quarter than in the first, mainly reflecting a smaller drop in energy prices.

Financial conditions in the second quarter and into July remained supportive of domestic spending. Yields on private securities declined, although less than Treasury yields, as quality spreads widened a bit. Equity prices rose further in early April before falling back over the next two months in response to renewed earnings disappointments. Prices then rebounded substantially, with most major indexes hitting record highs in July. The growth of money and credit slowed a little on balance from the first-quarter pace but remained buoyant. Banks and other lenders continued to compete vigorously, extending credit on generally favorable terms as they responded in part to the sustained healthy financial condition of most businesses and households.

The FOMC left the intended federal funds rate unchanged at its May and June-July meetings. At the May meeting, the FOMC reiterated its earlier concern that the robust expansion of domestic final demand, supported by very positive financial conditions, had raised labor market pressures to a point that might precipitate an upturn in inflation over time. Yet the FOMC believed that the growth of economic activity would slow. It also judged that the risk of significant further deterioration in Asia, which could disrupt global financial markets and impair economic activity in the United States, was rising somewhat.

Economic Projections for 1998 and 1999

The members of the Board of Governors and the Federal Reserve Bank Presidents, all of whom participate in the deliberations of the FOMC, expect economic activity to expand moderately, on average, over the next year and a half. For 1998 as a whole, the central tendency of their forecasts for real GDP growth spans a range of 3 percent to 3¼ percent. For 1999, these forecasts center on a range of 2 percent to 2½ percent. The civilian unemployment rate, which averaged a bit less than 4½ percent in the second quarter of 1998, is expected to stay near this level through the end of this year and to edge higher in 1999. With labor markets remaining tight and some of the special factors that helped restrain inflation in the first half of 1998 unlikely to be repeated, inflation is anticipated to run somewhat higher in the second half of 1998 and in 1999.

The economy is entering the second half of 1998 with considerable strength in household spending and business fixed investment. Consumers are enjoying expanding job opportunities, rising real incomes, and high levels of wealth, all of which are providing them with the confidence and wherewithal to spend. These factors, in conjunction with low mortgage interest rates, are also bolstering housing demand. Business fixed investment appears robust as well: Financial conditions remain conducive to capital spending, and firms no doubt are continuing to seek out opportunities for productivity gains in an environment of rapid technological change, falling prices for high-tech equipment, and tight labor markets.

Nonetheless, a number of factors are expected to exert some restraint on the expansion of activity in the quarters ahead. The demand for U.S. exports will continue to be depressed for a while by weak activity abroad, on average, and by the strong dollar, which will also likely continue to boost imports. The effects of these external sector developments on employment and income growth have yet to materialize fully. In addition, although financial conditions are generally expected to be supportive, real outlays on housing and business equipment have reached such

Economic Projections for 1998 and 1999
Percent

Indicator	Federal Reserve governors and Reserve Bank presidents: Range	Federal Reserve governors and Reserve Bank presidents: Central tendency	Administration
1998			
Change, fourth quarter to fourth quarter[1]			
Nominal GDP	4¼ to 5	4½ to 5	4.2
Real GDP	2¾ to 3¼	3 to 3¼	2.4
Consumer price index[2]	1¼ to 2¼	1¾ to 2	1.6
Average level, fourth quarter			
Civilian unemployment rate	4¼ to 4½	4¼ to 4½	4.8
1999			
Change, fourth quarter to fourth quarter[1]			
Nominal GDP	4 to 5½	4¼ to 5	4.1
Real GDP	2 to 3	2 to 2½	2.0
Consumer price index[2]	1½ to 3	2 to 2½	2.1
Average level, fourth quarter			
Civilian unemployment rate	4¼ to 4¾	4½ to 4¾	5.0

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

2. All urban consumers.

high levels that gains from here are expected to be more moderate.

With the plunge in energy prices in early 1998 unlikely to be repeated, most FOMC participants expect the CPI for all urban consumers to rise more rapidly in the second half of 1998 than it did in the first half, resulting in an increase in the CPI of 1¾ percent to 2 percent for 1998 as a whole. The pickup in the second half should be limited, however, by further decreases in non-oil import prices, ample domestic manufacturing capacity, and low expected inflation. Looking ahead to next year, the central tendency is for an increase in the CPI of 2 percent to 2½ percent. Absent a further rise in the dollar, the fall in non-oil import prices should have run its course. Moreover, even with the expected edging higher of the unemployment rate next year, the labor market will remain tight, suggesting potential ongoing pressures on available resources that would tend to raise inflation a bit. The FOMC will remain alert to the possibility of underlying imbalances in the economy that could generate a persisting pickup in inflation, which would threaten the economic expansion.

As noted in past monetary policy reports, the Bureau of Labor Statistics is in the process of implementing a series of technical adjustments to make the CPI a more accurate measure of price change. These adjustments and the regular updating of the market basket are estimated to have trimmed CPI inflation somewhat over 1995–98, and a significant further adjustment is scheduled for 1999. All told, the published figures for CPI inflation in 1999 are expected to be more than ½ percentage

Ranges for Growth of Monetary and Debt Aggregates
Percent

Aggregate	1997	1998	Provisional for 1999
M2	1 to 5	1 to 5	1 to 5
M3	2 to 6	2 to 6	2 to 6
Debt	3 to 7	3 to 7	3 to 7

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

point lower than they would have been had the Bureau retained the methods and formulas in place in 1994. In any event, the FOMC will continue to monitor a variety of price measures besides the CPI as it attempts to gauge progress toward the long-run goal of price stability.

Federal Reserve officials project somewhat faster growth in real GDP and slightly higher inflation in 1998 than does the Administration. The Administration's projections for the growth in real GDP and inflation in 1999 are around the lower end of the FOMC participants' central tendencies.

Money and Debt Ranges for 1998 and 1999

At its most recent meeting, the FOMC reaffirmed the ranges for 1998 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 the debt of the domestic nonfinancial sectors. The FOMC set these same ranges for 1999 on a provisional basis.

Once again, the FOMC chose the growth ranges for the monetary aggregates as benchmarks for growth under conditions of price stability and historical velocity behavior. For several decades before 1990, the velocities of M2 and M3 (defined as the ratios of nominal GDP to the aggregates) behaved in a fairly consistent way over periods of a year or more. M2 velocity showed little trend but varied positively from year to year with changes in a traditional measure of M2 opportunity cost, defined as the interest forgone by holding M2 assets rather than short-term market instruments such as Treasury bills. M3 velocity moved down a bit over time, as depository credit and the associated elements in M3 tended to grow a shade faster than GDP. In the early 1990s, these patterns of M2 and M3 behavior were disrupted, and the velocities of both aggregates climbed well above the levels that were predicted by past relationships. However, since 1994 the velocities of M2 and M3 have again moved roughly in accord with their pre-1990 experience, although their levels remain elevated.

The recent return to historical patterns does not imply that velocity will be fully predictable or even that all movements in velocity can be completely explained in retrospect. Some shifts in velocity arise from household and business decisions to adjust their portfolios for reasons that are not captured by simple measures of opportunity cost. Some shifts in velocity arise from decisions of depository institutions to create more or less credit or to fund credit creation in different ways. All these decisions are shaped by the rapid pace of innovation in financial institutions and instruments. Between 1994 and early 1997, M2 velocity drifted somewhat higher, probably owing to some reallocation of household savings into bond and equity markets. But M2 velocity has declined over the past year despite little change in its traditionally defined opportunity cost. One explanation may be that the flatter yield curve has reduced the return on longer-term investments relative to the bank deposits and money market mutual funds in M2. Another part of the story may be the booming stock market, which has reduced the share of households' financial assets represented by monetary assets and may have encouraged households to rebalance their portfolios by increasing their M2 holdings. M3 velocity has dropped more sharply over the past year, with strong growth in large time deposits and in institutional money funds that are increasingly used by businesses for cash management.

If the velocities of M2 and M3 follow their average historical patterns over the remainder of 1998 and the growth of nominal GDP matches the expectations of Federal Reserve policymakers, these aggregates will finish this year above the upper ends of their respective ranges. Part of this relatively rapid money growth reflects nominal GDP growth in excess of that consistent with price stability and sustainable growth of real output; the rest represents a decline in velocity. Absent unusual changes in velocity in 1999, policymakers' expectations of nominal GDP growth imply that M2 and M3 will be in the upper ends of their price-stability growth ranges next year. The debt of the domestic nonfinancial sectors is expected to remain near the middle of its range this year and in 1999.

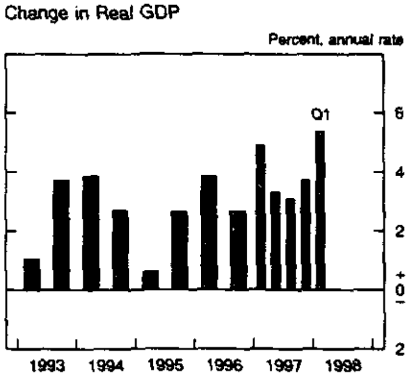
In light of the apparent return of velocity changes to their pre-1990 behavior, some FOMC members have been giving the aggregates greater weight in assessing overall financial conditions and the thrust of monetary policy. However, velocity remains somewhat unpredictable, and all Committee members monitor a wide variety of other financial and economic indicators to inform their policy deliberations. The FOMC decided that the money and debt ranges are best used to emphasize the Committee's commitment to achieving price stability, so it again set the ranges as benchmarks for growth under price stability and historical velocity behavior.

Section 2: Economic and Financial Developments in 1998

The U.S. economy continued to perform well in the first half of the year. The economic difficulties in Asia and the strong dollar reduced the demand for our exports and intensified the pressures on domestic producers from foreign competition. But these effects were outweighed by robust domestic final demand, owing in part to supportive financial conditions, including a higher stock market, ample availability of credit, and long-term interest rates that in nominal terms were among the lowest in many years. Sharp swings in inventory investment were mirrored in considerable unevenness in the growth of real GDP, which appears to have slowed markedly in the second quarter after having soared to nearly 5½ percent at an annual rate in the first quarter. Nonetheless, over the first half as a whole, the rise in real output was large enough to support sizable gains in employment and to push the unemployment rate down to the range of 4¼ to 4½ percent, the lowest in decades.

The further tightening of labor markets in recent quarters has been reflected in a more discernible uptilt to the trend in hourly compensation. But price inflation remained subdued in the first half of the year, held down in part by a sharp decline in energy prices and lower prices for non-oil imports. Intense competition in product markets, ample plant capacity, ongoing productivity gains, and damped inflation expectations also helped to restrain inflation pressures in the face of tight labor markets.

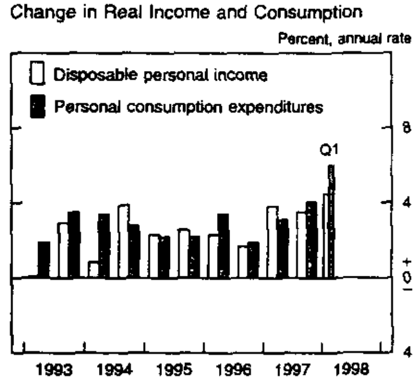
Change in Real GDP



The Household Sector

Consumer Spending. The factors that fueled the sizable increase in household expenditures in 1997 continued to spur spending in the first half of 1998: Growth in employment and real disposable income remained very strong, and households in the aggregate enjoyed significant further gains in net worth. Reflecting these developments, sentiment indexes suggest that consumers continued to feel extraordinarily upbeat about the current and prospective condition of the economy and their own financial situations.

Change in Real Income and Consumption



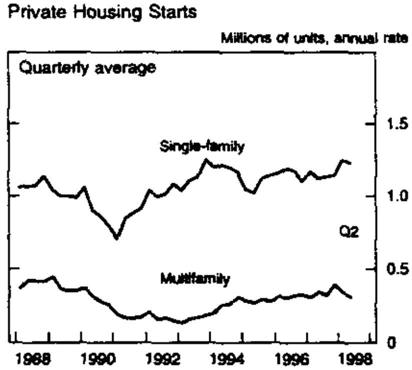
In total, real consumer outlays rose at an annual rate of 6 percent in the first quarter, and the available data point to another large increase in the second quarter. Increases in spending were broad-based, but outlays for durable goods were especially strong. Declining prices and ongoing product innovation continued to stimulate demand for personal computers and other home electronic equipment. In addition, purchases of motor vehicles were sustained by a combination of solid fundamentals and attractive pricing. Indeed, since 1994, sales of light vehicles have been running at a brisk pace of 15 million units (annual rate), and, in the second quarter, a round of very attractive manufacturers' incentives helped lift sales to a pace of 16 million units.

Spending on services also remained robust in the first half of the year, with short-run variations reflecting in part the effects of weather on household energy use; outlays on personal business services, including those related to financial transactions, and on recreation services continued to exhibit remarkable strength. In addition, real outlays for nondurable goods, which rose only moderately last year, grew about 6½ percent at an annual rate in the first quarter, and they appear to have posted another sizable increase in the second quarter.

Real disposable income—that is, after-tax income adjusted for inflation—remained on a strong uptrend in early 1998: It rose about 4 percent at an annual rate between the fourth quarter of 1997 and May 1998. This increase in part reflected a sharp rise in aggregate wages and salaries, which were boosted by sizable gains in both employment and real wage rates; dividends and nonfarm proprietors' incomes also rose appreciably. However, growth in after-tax income (as measured in the national income and product accounts) was restrained by large increases in personal income tax payments—likely owing in part to taxes paid on realized capital gains; capital gains—whether realized or not—are not included in measured income. Reflecting the movements in spending and measured income, the personal saving rate fell from an already low level of about 4 percent in 1997 to 3½ percent during the first five months of 1998.

Residential Investment. Housing activity continued to strengthen in the first half of 1998, especially in the single-family sector, where starts rose noticeably and sales of both new and existing homes soared. Indeed, the average level of single-family

Private Housing Starts



Note. Values for 1998:Q2 are the average of April and May.

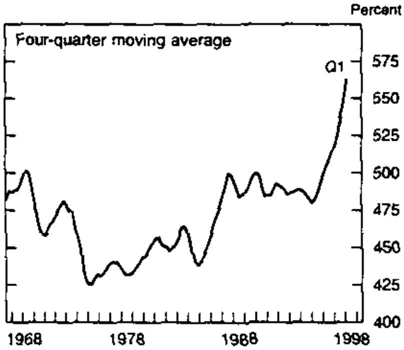
starts over the first five months of the year—1¼ million units at an annual rate—was 9 percent above the pace for 1997 as a whole. Moreover, surveys by the National Association of Homebuilders suggested that housing demand remained vigorous at midyear, and the Mortgage Bankers Association reported that loan applications for home purchases have been around all-time highs of late.

The strong demand for homes has contributed to some firming of house prices, which are now rising in the neighborhood of 3 to 5 percent per year, according to measures that control for shifts in the regional composition of sales and attempt to minimize the effects of changes in the mix of the structural features of houses sold. In nominal terms, these increases are well within the range of recent years; however, in real terms, they are among the largest since the mid-1980s—a development that should reinforce the investment motive for homeownership. Of course, rising house prices may make purchasing homes more difficult for some families. But, with income growth strong and mortgage rates around 7 percent (thirty-year conventional fixed-rate loans), homeownership is as affordable as it has been at any time in the past thirty years. Moreover, innovative programs that relax the standards for mortgage qualification are helping low-income families to finance home purchases. Also, stock market gains have probably boosted demand among higher-income groups, especially in the trade-up and second-home segments of the market.

After having surged in the fourth quarter of 1997, multifamily starts settled back to about 325,000 units (annual rate) over the first five months of 1998, a pace only slightly below that recorded over 1997 as a whole. Support for multifamily construction continued to come from the overall strength of the economy, which undoubtedly has stimulated more individuals to form households, as well as from low interest rates and an ample supply of financing. In addition, real rents picked up over the past year, and the apartment vacancy rate appears to be edging down.

Household Finance. Household net worth rose sharply in the first quarter, pushing the wealth-to-income ratio to another record high. Although the flow of new personal saving was quite small, the revaluation of existing assets added considerably to wealth, with much of these capital gains accumulated on equities held either directly or indirectly through mutual funds and retirement accounts. Of course, these gains have been distributed quite

Household Net Worth Relative to Disposable Personal Income



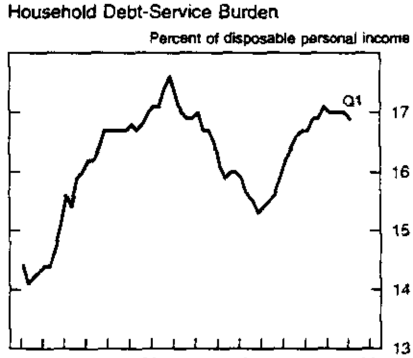
unevenly: The 1995 Survey of Consumer Finances reported that 41 percent of U.S. families own equities in some form, but that families with higher wealth own a much larger share of total equities.

In the first quarter of this year, the runup in wealth, together with low interest rates and high levels of confidence about future economic conditions, supported robust household spending and borrowing. The expansion of household debt, at an annual rate of 7¾ percent, was above last year's pace and once again outstripped growth in disposable income. The consumer credit component of household debt grew 4½ percent at an annual rate in the first quarter, a pace roughly double that for the fourth quarter of last year but near the 1997 average. Preliminary data for April and May point to a somewhat smaller advance in the second quarter.

Mortgage debt increased 8¼ percent at an annual rate in the first quarter, the same as its fourth-quarter advance and a little above its 1997 growth rate. Fixed-rate mortgage interest rates were 15 basis points lower in the first quarter than three months earlier and 75 basis points lower than a year earlier, which encouraged both new home purchases and a surge of refinancing of existing mortgages. Within total gross mortgage borrowing, the flattening of the yield curve made adjustable-rate mortgages less attractive relative to fixed-rate mortgages, and their share of originations reached the lowest point in recent years. Net borrowing can be boosted by refinancings if households "cash out" some housing equity, but the magnitude of this effect is unclear. In any event, continued expansion of bank real estate lending and a high level of mortgage applications for home purchases suggest a further solid gain in mortgage debt in the second quarter. Home equity credit at banks increased only 2 percent at an annual rate from the fourth quarter of 1997 through June 1998 after having posted a 15½ percent gain last year; this slowdown may reflect a diminished substitution of mortgage debt for consumer debt or simply the increase in mortgage refinancings, which allowed households to pay down more expensive home equity debt or to convert housing equity into cash in a more advantageous manner.

Despite the further buildup of household indebtedness, financial stress among households appears to have stabilized after several years of deterioration. In the aggregate, estimated required payments of loan principal and interest have held about steady relative to disposable personal income—albeit at a high level—since 1996. Over this period, the effect on debt burdens of faster growth of debt than income has been roughly offset by declining interest rates and the associated refinancing of higher interest-rate debt, as well as by a shift toward mortgage debt (which has a longer repayment period). Various measures of delinquency rates on consumer loans leveled off or declined in 1997, and delinquency rates on mortgages have been at very low levels for several years. Personal bankruptcy filings reached a new record high in the first quarter of 1998, but this represented only 6 percent more filings than four quarters earlier, which is the smallest such change in three years.

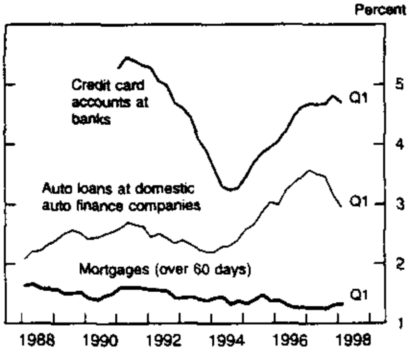
Household Debt-Service Burden



Note. Debt service is the sum of estimated required interest and principal payments on consumer and household-sector mortgage debt.

These developments have apparently suggested to banks that they have sufficiently tightened terms

Delinquency Rates on Household Loans



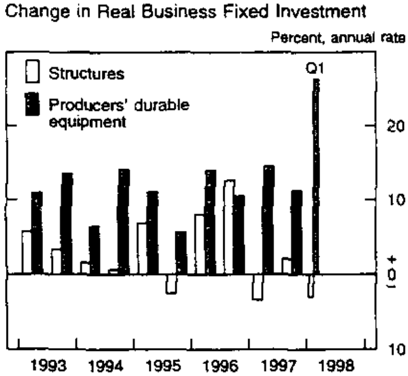
Note. Data on credit-card delinquencies are from the Call Report; data on mortgage delinquencies are from the Mortgage Bankers Association.

and standards on consumer loans. In the Federal Reserve's May Senior Loan Officer Opinion Survey on Bank Lending Practices, relatively few banks, on net, reported tightening standards on credit card or other consumer loans. Little change was reported in the terms of consumer loans.

The Business Sector

Fixed Investment. Real business fixed investment appears to have posted another hefty gain over the first half of 1998 as spending continued to be boosted by positive sales expectations in many industries; favorable financial conditions; and a perceived opportunity, if not a necessity, for firms to install new technology in order to remain competitive. The exceptional growth of investment since the early 1990s has been facilitated in part by the increase in national saving associated with the elimination of the federal budget deficit. It has resulted in considerable modernization and expansion of the nation's capital stock, which have been important in the improved performance of labor productivity over the past few years and which should continue to lift productivity in the future. Moreover, rapid investment in the manufacturing sector in recent years has resulted in large additions to productive capacity, which have helped keep factory operating rates from rising much above average historical levels in the face of appreciable increases in output.

Change in Real Business Fixed Investment



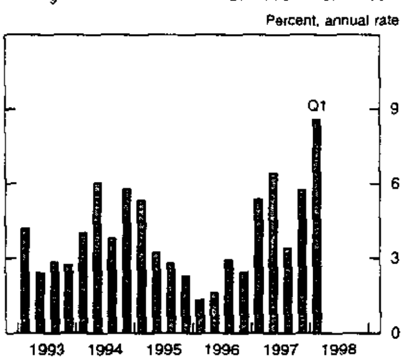
Real outlays for producers' durable equipment, which have been rising more than 10 percent per year, on average, since the early 1990s, moved sharply higher in the first half of 1998. All major categories of equipment spending recorded sizable gains in the first quarter; but as has been true throughout the expansion, outlays for computers rose especially rapidly. Real computer outlays received particular impetus in early 1998 from extensive price-cutting. Purchases of communications equipment have also soared in recent quarters; the rise reflects intense pressures to add capacity to accommodate the growth of networking; the rapid pace of technological advance, especially in wireless communications; and regulatory changes. As for the second quarter, data on shipments, coupled with another steep decline in computer prices, point to a further substantial increase in real computer outlays. Spending on motor vehicles apparently continued to advance as well while demand for other types of capital equipment appears to have remained brisk.

In total, real outlays on nonresidential construction flattened out in 1997 after four years of gains, and they remained sluggish in early 1998. Construction of office buildings remained robust in the first half of this year, after having risen at double-digit rates in 1996 and 1997, and outlays for institutional buildings continued to trend up. However, expenditures for other types of structures were lackluster. Nonetheless, the economic fundamentals for the sector as a whole remain quite favorable: Vacancy rates for office and retail space have continued to fall; real estate prices, though still well below the levels of the mid-1980s in real terms, have risen appreciably in recent quarters; and funding for new projects remains abundant.

Inventory Investment. The pace of stockbuilding by nonfarm businesses picked up markedly in

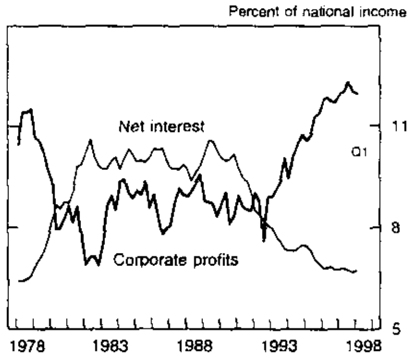
1997 and is estimated to have approached $100 billion (annual rate) in the first quarter of 1998—equal to an annual rate increase of 8½ percent in the level of inventories and accounting for more than 1½ percentage points of that quarter's growth in real GDP. The first-quarter accumulation was heavy almost across the board. Among other things, it included a large increase in stocks of petroleum as the unusually warm weather reduced demand for refined products and low prices provided an incentive for refiners and distributors to accumulate stocks. However, overall sales were also very strong, and with only a few exceptions—notably, semiconductors, chemicals, and textiles—stocks did not seem out of line with sales. In any event, fragmentary data for the second quarter point to a considerable slowing in inventory investment that is especially evident in the motor vehicle sector, where stocks were depleted by the combination of strong sales and GM production shortfalls. In addition, petroleum stocks appear to have grown less rapidly than they did in the first quarter, and stockbuilding elsewhere slowed sharply in April and May.

Change in Real Nonfarm Business Inventories



Corporate Profits and Business Finance. Businesses have financed a good part of their investment this year through continued strong cash flow, but they have also increased their reliance on financial markets. Economic profits (book profits after inventory valuation and capital consumption adjustments) have run at 12 percent of national income over the past year, well above the 1980s peak of roughly 9 percent. However, the strength in profits has resulted partly from the low level of net interest payments, leaving total capital income at roughly the same share of national income as at the 1980s peak.

Corporate Profits and Net Interest



NOTE. Corporate profits include inventory valuation and capital consumption adjustments.

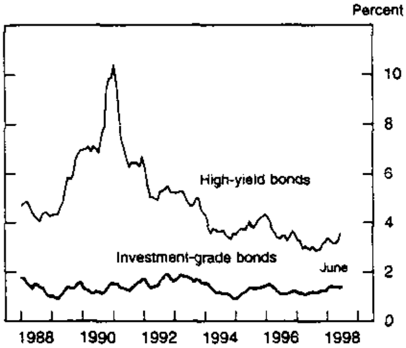
Overall, a major portion of the increase in profits between the 1980s and the 1990s represents a realignment of returns from debt-holders to equity-holders.

Although their level remains high, the growth of profits has slowed: Economic profits rose 4¾ percent at an annual rate in the first quarter compared with 9½ percent between the fourth quarter of 1996 and the fourth quarter of 1997. This slowdown may have resulted from various causes, including rising employee compensation and the Asian financial crisis. Quantifying the effect of the Asian turmoil is difficult: Although only a small share of the profits of U.S. companies is earned in the directly affected Asian countries, the crisis has reduced the prices of U.S. imports and thereby put downward pressure on domestic prices.

Nonfinancial businesses realized annualized economic profit growth of only 1¼ percent in the first quarter. Because capital expenditures (including inventory investment) grew much faster, the financing gap—the excess of capital expenditures over retained earnings—widened. As a result, these businesses used less of their cash flow to retire outstanding equity and continued to borrow at the rapid pace of the fourth quarter of 1997, with debt expanding at an annual rate of 9 percent in the first quarter of 1998. Outstanding amounts of both bonds and commercial paper rose especially sharply. The decline in long-term interest rates around year-end encouraged companies to lock in those yields, and gross bond issuance reached a record high in the first quarter of 1998. Borrowing by nonfinancial businesses increased at a slightly slower but still rapid clip in the second quarter, with little change in outstanding commercial paper but very strong net bond issuance and some rebound in bank loans.

Despite persistent high borrowing, external funding for businesses remained readily available on favorable terms. The spreads between yields on investment-grade bonds and yields on Treasury bonds widened a little from low levels, with investors favoring Treasury securities over corporate securities as a haven from Asian turmoil and, perhaps, with disappointing profits leading to some minor reassessment of the underlying risk of private obligations. The spreads on high-yield bonds also increased, in part because of heavy issuance of these bonds this spring, but they remain narrow by historical standards. In the Federal Reserve's May survey on bank lending practices, banks reported negligible change in business loan standards; moreover, yield spreads on bank loans remained low for both large and small firms. Surveys by the National Federation of Independent Business suggest that small firms have been facing little difficulty in obtaining credit.

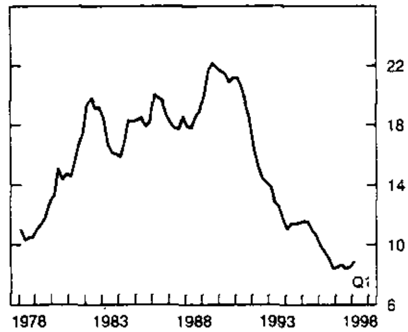
Spreads Between Yields on Private and Treasury Securities



Note. The spread on high-yield bonds compares the yield on the Merrill Lynch Master II Index with that on a seven-year Treasury note; the spread on investment-grade bonds compares the yield on Moody's index of A-rated bonds with that on a ten-year Treasury note.

The ready availability of credit has stemmed importantly from the healthy financial condition of many businesses, which have enjoyed an extended period of economic expansion and robust profits. The aggregate debt-service burden for nonfinancial corporations, measured as the ratio of net interest payments to cash flow, dropped substantially between 1990 and 1996 and remains modest, despite edging up in the first quarter of this year. In addition, most measures of financial distress have shown favorable readings. The delinquency rate on commercial and industrial bank loans has stayed very low since 1995, preserving the dramatic decline that occurred in the first half of the decade. After moving up a little in 1996 and 1997, business failures decreased in the first five months of 1998; the liabilities of failed businesses as a share of total liabilities was less than one-quarter the value reached in the early 1990s. At the same time, Moody's upgraded significantly more debt than it downgraded, and the rate of junk bond defaults stayed close to its low 1997 level.

Net Interest Payments of Nonfinancial Corporations Relative to Cash Flow



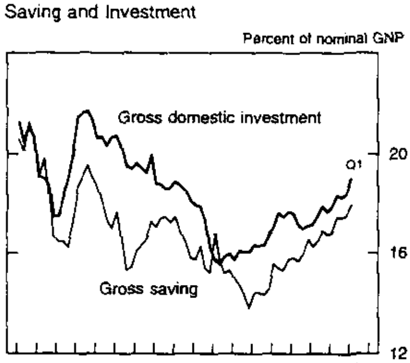
Net equity issuance was less negative in the first quarter of this year than in the fourth quarter of last year, but nonfinancial corporations still retired, on net, about $100 billion of equity at an annual rate. The wave of merger announcements this spring will likely generate strong share retirements over the remainder of the year. Gross equity issuance in the first half of 1998 was close to its pace of the past several years, although investors seemed somewhat cautious about initial public offerings.

The Government Sector

Federal Government. The incoming news on the federal budget continues to be very positive. Over the twelve months ending in May 1998, the unified budget registered a surplus of $60 billion, compared with a deficit of $65 billion during the twelve months ending in May 1997. Soaring receipts continued to be the main force driving the improvement in the budget, but subdued growth in outlays also played a key role. If the latest projections from OMB and CBO are realized, the unified budget for fiscal year 1998 as a whole will show a surplus of roughly $40 billion to $65 billion.

With the federal budget having shifted into surplus, the federal government is now augmenting, rather than drawing on, the pool of national saving. In fact, the improvement in the government's budget position over the past several years has been large enough to generate a considerable rise in gross domestic saving despite a decline in the private saving rate; all told, gross saving by households, businesses, and governments increased from about 14½ percent of gross national product in the early 1990s, when federal saving was at a cyclical low, to more than 17 percent of GNP in recent quarters. This increase in domestic saving, along with increased borrowing from abroad, has financed the surge in domestic investment in this expansion. Moreover, this year's budgetary surplus will continue to pay benefits in future years because it allows the government to reduce its outstanding debt, which implies smaller future interest payments and, all else equal, makes it easier to keep the budget in surplus. If, in fact, the budget outcome over the next several years is as favorable as OMB and CBO now anticipate under current policies, the reduction in the outstanding debt could be substantial.

Saving and Investment



Note. Gross saving consists of saving of households, businesses, and governments. Gross domestic investment is the sum of gross private domestic investment and government investment. The gap between gross saving and gross domestic investment is equal to the sum of net foreign investment and the statistical discrepancy from the national income and product accounts.

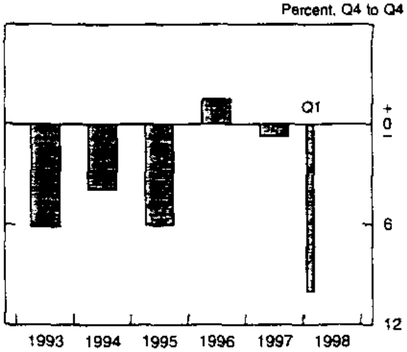
Federal receipts in the twelve months ending in May 1998 were 10 percent higher than in the same period a year earlier—roughly twice the percentage increase for nominal GDP over the past year. Individual income tax receipts, which have been rising at double-digit rates since the mid-1990s, continued to do so over the past year as the surge in capital gains realizations likely persisted and sizable gains in real income raised the average tax rates on many households (the individual income tax structure being indexed for inflation but not for growth in real incomes). In contrast to the ongoing strength in individual taxes, corporate tax payments increased only moderately over the past year, echoing the deceleration in corporate profits.

Federal expenditures in the twelve months ending in May 1998 were only 1½ percent higher in nominal terms than during the twelve months ending in May 1997, with restraint evident in most categories. Outlays for defense were about unchanged, as were those for income security programs. In the latter category, outlays for low-income support fell as economic activity remained robust, welfare reform capped outlays for family assistance, and enrollment rates in other programs dropped. In the health area, spending on Medicaid picked up somewhat after a period of extraordinarily small increases, whereas growth in spending for Medicare slowed, in part because of the programmatic changes that were legislated in 1997. And, with interest rates little changed and the stock of outstanding federal debt no longer rising, net interest payments stabilized.

Real federal outlays for consumption and gross investment, the part of federal spending that is counted in GDP, fell about 2 percent between the first quarters of 1997 and 1998. The decrease was concentrated in real defense spending, which fell about 2¾ percent, roughly the same as over the preceding four quarters; real nondefense spending was unchanged, on balance. In the first quarter, real federal outlays fell at a 10 percent annual rate; the drop reflected a plunge in defense spending, which appears to have been reversed in the second quarter.

With debt held by the public close to $4 trillion, the government will continue to undertake substantial gross borrowing in order to redeem maturing securities. The government will also continue to adjust its issuance of short-term debt to accommodate seasonal swings in receipts and spending. The surplus during the first half of calendar year 1998—boosted by the huge inflow of individual income tax receipts—enabled the Treasury to reduce its outstanding debt

Change in Real Federal Expenditures
on Consumption and Investment



Note. Value for 1998:Q1 is a quarterly percent change at an annual rate.

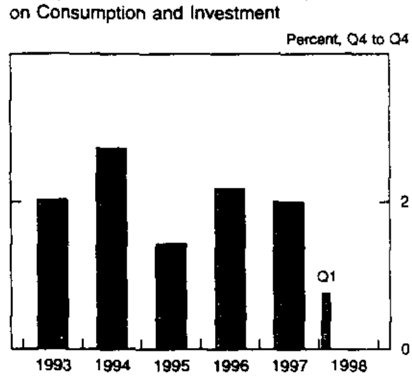
$57 billion while augmenting its cash balance $40 billion. The reduction in debt included net paydowns of coupon securities and bills.

Looking ahead to projected surpluses for coming years, the Treasury announced that it will no longer issue three-year notes and will auction five-year notes quarterly rather than monthly. Over the past several years, the Treasury has accommodated the surprising improvement in federal finances by substantially reducing both bill and coupon issuance. The Treasury hopes that concentrating future coupon offerings in larger, less-frequent auctions will maintain the liquidity of these securities while still allowing for sufficient issuance of bills to maintain their liquidity as well. These changes are also intended to prevent further upcreep in the average maturity of the outstanding debt held by private investors, now standing at sixty-five months. The Treasury continues to work on encouraging the market for inflation-indexed securities, issuing a thirty-year indexed bond in April to complement the existing five-year and ten-year indexed notes.

State and Local Governments. The fiscal position of state and local governments in the aggregate has also remained quite favorable. Strong growth of household income and consumer spending has continued to lift revenues, despite numerous small tax cuts, and governments have continued to hold the line on expenditures. As a result, the consolidated current account of the sector, as measured by the surplus (net of social insurance funds) of receipts over current expenditures in the national income and product accounts, held steady in the first quarter at around $35 billion (annual rate), roughly where it has been since 1995. State governments, which have reaped the main benefits of rising income taxes, have fared especially well: Indeed, all of the forty-seven states whose fiscal years ended by June 30 appear to have achieved balance or to have run surpluses in their general funds budgets in fiscal year 1998.

Real expenditures for consumption and gross investment by states and localities have been rising about 2 percent per year, on average, since the early 1990s, and the increase in spending for the first half of 1998 appears to have been a bit below that trend. These governments added jobs over the first half of the year at about the same rate as they did over 1997 as a whole. However, real construction outlays, which have been drifting down since early 1997, posted a sizable decline in the first quarter, and monthly data suggest that spending dropped further in the spring. The weakness in construction spending over the past year has cut across the major categories of construction and is puzzling in light of the sector's ongoing infrastructure needs and the good financial shape of most governments.

Change in Real State and Local Expenditures
on Consumption and Investment



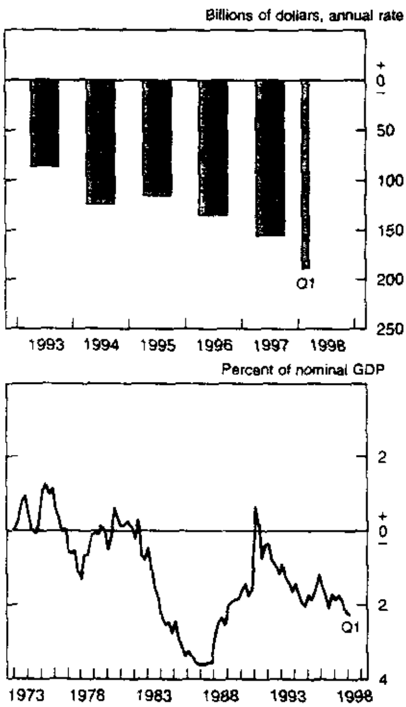
Note. Value for 1998:Q1 is a quarterly percent change at an annual rate.

State and local governments responded to the low interest rates during the first half of the year by borrowing at a rapid rate, both to refinance outstanding debt and to fund new capital projects. Because debt retirements eased in the first quarter relative to the fourth quarter of 1997, net issuance increased substantially. Meanwhile, credit quality of state and local debt continued to improve, with much more debt upgraded than downgraded in the first half of the year.

External Sector

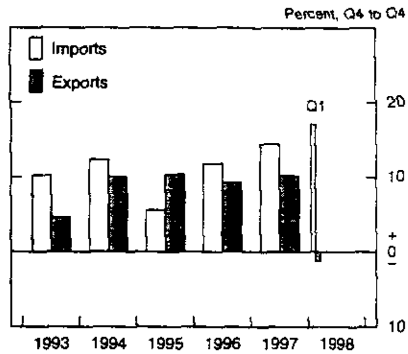
Trade and the Current Account. The nominal trade deficit on goods and services widened to $140 billion at an annual rate in the first quarter from $114 billion in the fourth quarter of last year. The current account deficit for the first quarter reached $189 billion (annual rate), 2¼ percent of GDP, compared with $155 billion for the year 1997. A larger deficit on net investment income as well as the widening of the deficit on trade in goods and services contributed to the deterioration in the first quarter of the current account balance. In April and May, the trade deficit increased further.

U.S. Current Account



The quantity of imports of goods and services again grew vigorously in the first quarter. The annual rate of expansion at 17 percent exceeded that for 1997 and reflected the continued strength of U.S. economic activity and the effects of past dollar appreciation. Imports of consumer goods, automotive products, and machinery were particularly robust. Preliminary data for April and May suggest that real import growth remained strong. Non-oil import prices fell sharply through the second quarter, reflecting the rise in the exchange value of the dollar over the past year.

Change in Real Imports and Exports of Goods and Services



Note. Value for 1998:Q1 is a quarterly percent change at an annual rate.

The quantity of exports of goods and services declined at an annual rate of 1 percent in the first quarter, the first such absolute drop since the first quarter of 1994. The weakness of economic activity in a number of our trading partners, with absolute declines in several economies in Asia, and the strength of the dollar, which also partly resulted from the Asian financial crises, largely account for the abrupt halt in the growth of real exports after a 10 percent rise last year. Declines were recorded for machinery, industrial supplies, and agricultural products. Exports to the emerging market economies in Asia, particularly Korea, as well as exports to Japan were down sharply while exports to western Europe and Canada rose moderately. Preliminary data for April and May suggest that real exports declined further.

The Capital Account. Foreign direct investment in the United States and U.S. direct investment abroad continued at near record levels in the first quarter of 1998, spurred by strong merger and acquisition activity across national borders.

In the first quarter, the booming U.S. stock market continued to attract large foreign interest. Net purchases by private foreigners were $29 billion, following record net purchases of $66 billion in the year 1997. Foreign net purchases of U.S. corporate bonds remained substantial, and net purchases of U.S. government agency bonds reached a record $21 billion. In contrast, net sales of U.S. Treasury securities by private foreigners, particularly large net sales booked at a Caribbean financial center, were recorded in the first quarter. U.S. net purchases of foreign stocks and bonds were modest.

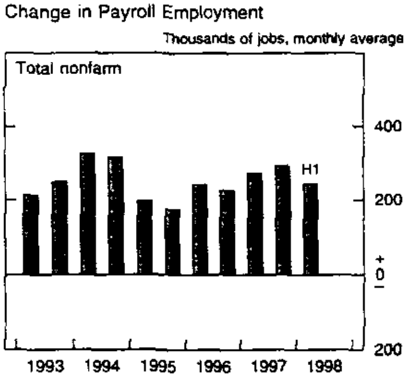
Foreign official assets in the United States increased $10 billion in the first quarter. However, the net increase in the second quarter was limited by large dollar sales by Japan.

The Labor Market

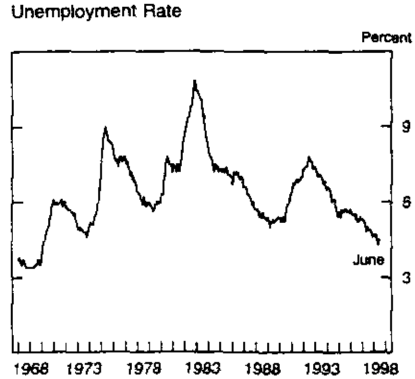
Employment and Labor Supply. Labor demand remained robust during the first half of 1998. Growth in payroll employment averaged 243,000 per month, only a little less than in 1997 and well above the rate consistent with the growth in the working-age population. The unemployment rate held steady in the first quarter at 4¾ percent but dropped to the range of 4¼ percent to 4½ percent in the second quarter.

The services industry, which accounts for about 30 percent of nonfarm employment, continued to be the mainstay of employment growth over the first half of 1998, posting increases of 115,000 per month, on average. Within services, hiring remained brisk at computer and data-processing firms and at firms providing engineering and managerial services, but payrolls at temporary help agencies rose much less rapidly than they had over the preceding few years—apparently in part reflecting difficulties in finding workers, especially for highly skilled and technical positions. Sizable increases were also posted at wholesale and retail trade establishments and in the finance, insurance, and real estate category. Construction payrolls were bounced around by unusual winter weather but, on average, rose a brisk 21,000 per month—about the same as in 1997.

Change in Payroll Employment



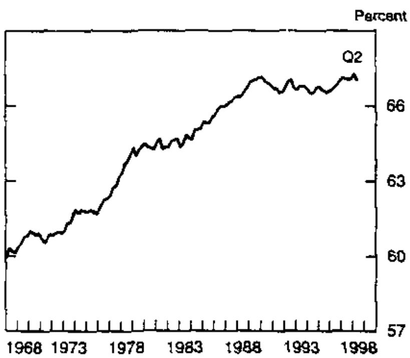
Unemployment Rate



In contrast to the robust gains elsewhere, manufacturing firms curbed their hiring in the first half of 1998 in the face of slower growth in factory output. After having risen a torrid 6¼ percent in 1997, factory output increased at an annual rate of about 2½ percent between the fourth quarter of last year and May 1998; the deceleration reflected the effects of the Asian crisis as well as a downshift in motor vehicle assemblies and the completion of the 1996–97 ramp-up in aircraft production. In June, factory output is estimated to have fallen ½ percent; the GM strike accounted for the decline.

The labor force participation rate—which measures the percentage of the working-age population that is either employed or looking for work—trended up mildly over the past couple of years and stood at 67.1 percent, on average, in the first half of 1998, slightly above the previous cyclical highs achieved in late 1989 and early 1990. Participation among adult women has picked up noticeably in recent years, after having risen only slowly in the first half of the 1990s, and participation among adult men, which had been on a gradual downtrend through mid-decade, appears to have leveled out. In contrast, participation rates for teenagers, for whom school enrollment rates have risen, have continued to sag after having dropped sharply in the early 1990s. Strong labor demand clearly contributed importantly to the rise in overall participation over the past several years, but the expansion of the earned income tax credit and changes in the welfare system probably provided added stimulus.

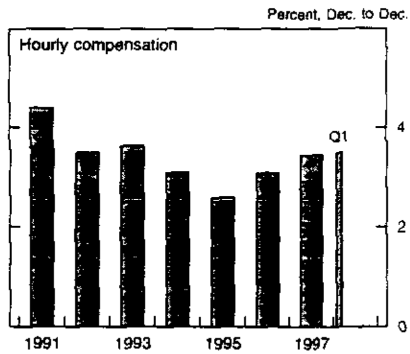
Labor Force Participation Rate



Note. Data before 1994 have been adjusted by the FRB staff for the redesign of the household survey.

Labor Costs and Productivity. Firms no doubt are continuing to rely heavily on targeted pay increases and incentives like stock options and bonuses to attract and retain workers. But the tightness of the labor market also appears to be exerting some upward pressure on traditional measures of hourly compensation, which have exhibited a somewhat more pronounced uptrend of late. Indeed, the twelve-month change in the employment cost index (ECI) for private industry workers picked up to 3½ percent in March, compared with 3 percent for the twelve months ending in March 1997 and 2¾ percent for the twelve months ending in March 1996. Hourly compensation accelerated especially rapidly for employees of finance, insurance, and real estate firms, some of whom received sizable bonuses and commissions. However, the acceleration was fairly widespread across industries and occupations and, given the relatively small rise in consumer prices

Change in Employment Cost Index



Note. Data are for private industry, excluding farm and household workers. The value for 1998:Q1 is measured from March 1997 to March 1998.

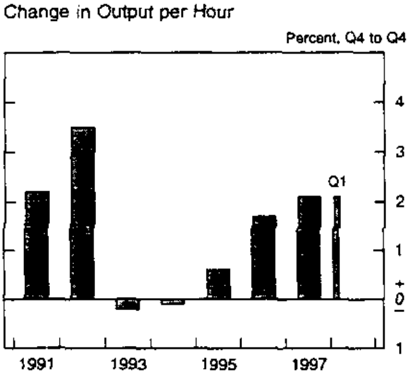
over the past year, implies a solid increase in real pay for many workers.

The acceleration in hourly compensation costs over the past year resulted mainly from faster growth of wages and salaries, which rose 4 percent over the twelve months ending in March; this increase was about ½ percentage point larger than the one recorded over the preceding twelve months. Separate data on average hourly earnings of production or nonsupervisory workers also show an ongoing acceleration of wages: The twelve-month change in this series was 4.1 percent in June, ½ percentage point above the reading for the preceding twelve months.

Benefits costs have generally remained subdued, with the increase over the year ending in March amounting to only about 2¼ percent. According to the ECI, employer payments for health insurance have picked up moderately in recent quarters after having been essentially flat over the previous couple of years, and indications are that further increases may be in the offing. Insurers whose profit margins had been squeezed in recent years by pricing strategies designed to gain market share reportedly are raising premiums, and many managed care plans are adding innovations that, while offering greater flexibility and protections to consumers, may boost costs. Additional upward pressure on premiums apparently has come from higher spending on prescription drugs. Among other major components of benefits, rising equity prices have reduced the need for firms to pay into defined benefit plans, and costs for state *unemployment insurance* and workers' compensation have fallen sharply.

Labor productivity in the nonfarm business sector posted another sizable advance in the first quarter of 1998, bringing the increase over the year ending in the first quarter to an impressive 2 percent.[1] Taking a slightly longer perspective, productivity has risen a bit more than 1½ percent per year, on average, over the past three years, after having risen less than 1 percent per year, on average, over the first half of the decade. At least in part, the recent strong productivity growth has likely been a cyclical response to the marked acceleration of output. But it is also possible that the high levels of business investment over the past several years—and the associated rise in the amount of capital per worker—are translating into a stronger underlying productivity trend. In addition, productivity apparently is being buoyed by the assimilation of new technologies into the workplace. In any event, the faster productivity growth of late is helping to offset the effects of higher hourly compensation on unit labor costs and prices, thereby allowing wages to rise in real terms.

Change in Output per Hour



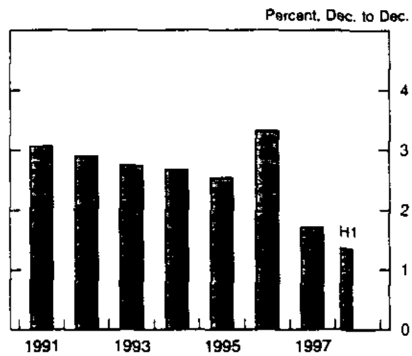
Note. Nonfarm business sector. Value for 1998:Q1 is the percent change from 1997:Q1 to 1998:Q1.

1. According to the published data, productivity rose 1.1 percent at an annual rate in the first quarter. However, these data are distorted by inconsistencies in the measurement of hours associated with varying lengths of pay periods across months. Although the Bureau of Labor Statistics has already revised the monthly hours and earnings data to account for these inconsistencies, it will not update the productivity statistics until August. All else being equal, adjusting the productivity data to reflect the Bureau's revisions to hours would substantially raise productivity growth in the first quarter, but it would have little effect on the change over the four quarters ending in the first quarter.

Prices

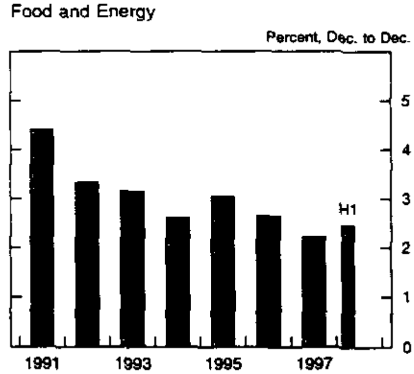
Price inflation remained quiescent in the first half of this year. After having increased 1¾ percent in 1997, the consumer price index (CPI) slowed to a crawl in early 1998 as energy prices plummeted, and it recorded a rise of only about 1½ percent at an annual rate over the first six months of the year. The increase in the CPI excluding food and energy—the so-called "core CPI"—picked up to 2½ percent (annual rate) over the first half of the year. However, this pickup follows some unusually small increases in the

Change in Consumer Prices



Note. Consumer price index for all urban consumers. Value for 1998:H1 is the percent change from December 1997 to June 1998 at an annual rate.

Change in Consumer Prices Excluding Food and Energy



Note. Consumer price index for all urban consumers. Value for 1998:H1 is the percent change from December 1997 to June 1998 at an annual rate.

Alternative Measures of Price Change

Percent

Price measure	1996:Q1 to 1997:Q1	1997:Q1 to 1998:Q1
Fixed weight		
Consumer price index	2.9	1.5
Excluding food and energy	2.5	2.3
Chain type		
Personal consumption expenditures	2.6	1.0
Excluding food and energy	2.3	1.4
Gross domestic product	2.2	1.4

Note. Changes are based on quarterly averages.

second half of 1997, and the twelve-month change has held fairly steady at about 2¼ percent since late last summer. The chain price index for personal consumption expenditures on items other than food and energy rose only 1½ percent over the year ending in the first quarter of 1998—the most recent information available; this measure typically rises less rapidly than does the core CPI, in part because it is less affected by so-called "substitution bias."

The relatively favorable price performance in the first half of 1998 reflected a number of factors that, taken together, continued to exert enough restraint to offset the upward pressures from strong aggregate demand and high levels of labor utilization. One was the drop in oil prices. In addition, non-oil import prices continued to fall, thus further lowering input costs for many domestic industries and limiting the ability of firms facing foreign competition to raise prices for fear of losing sales to producers abroad. Prices of manufactured goods were also held in check by the sizable increase in domestic industrial capacity in recent years and by devel-opments in Asia, which, among other things, led to a considerable softening of commodity prices. Moreover, the various surveys of consumers and forecasters suggest that inflation expectations stayed low—even declined in some measures. For example, according to the Michigan survey, median one-year inflation expectations dropped a bit further this year, after having held fairly steady over 1996 and 1997, and inflation expectations for the next five to ten years edged down from about 3 percent, on average, in 1996 and 1997 to 2¾ percent in the second quarter of 1998.

The CPI for goods other than food and energy rose at an annual rate of 1 percent over the first six months of 1998, only a bit above the meager ½ percent rise over 1997 as a whole. In the main, the step-up reflected a turnaround in prices of used cars and trucks, and prices of tobacco products and prescription drugs also rose considerably faster than they had in 1997. More generally, prices continued to be restrained by the effect of the strong dollar on prices of import-sensitive goods. For example, prices of new vehicles fell slightly over the first half of the year while prices of other import-sensitive goods—such as apparel and audio-video equipment—were flat or down. In the producer price index, prices of capital equipment were little changed, on balance, over the first half of 1998; they, too, were damped by the competitive effects of falling import prices.

The CPI for non-energy services increased 3 percent over the first six months of 1998, about the same as last year's pace. After having fallen somewhat last year, airfares picked up in the first half of the year, and owner's equivalent rent seems to be rising a bit faster than it did in 1997. In addition, increases in prices of medical services, which had slowed to about 3 percent per year in 1996–97, have been running somewhat higher so far this year. Price changes for most other major categories of services were similar to or smaller than those recorded in 1997.

Energy prices fell sharply in early 1998 as the price of crude oil came under severe downward pressure from weak demand in Asia, a decision by key OPEC producers to increase output, and a relatively warm winter in the Northern Hemisphere. After averaging about $20 per barrel in the fourth quarter of 1997, the spot price of West Texas intermediate dropped to a monthly average of $15 per barrel in March, where it more or less remained through the spring. Crude prices dropped sharply in June following reports of high levels of inventories and revised estimates of oil consumption in Asia but have since firmed in response to an agreement by major oil producers to restrict supply in the months ahead; they now stand at $14½ per barrel. Reflecting the decline in crude prices, retail energy prices fell at an annual rate of 12 percent over the first half of the year, led by a steep drop in gasoline prices.

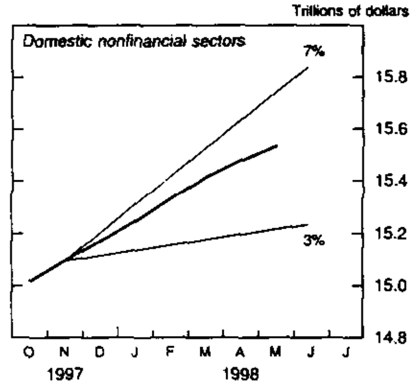
Developments in the agricultural sector also helped to restrain overall inflation in the first half of this year. Excluding the prices of fruits and vegetables—which tend to be bounced around by short-term swings in the weather—food prices have been rising a scant 0.1 percent per month, on average, since late 1997. Although farmers in some regions of the country are experiencing more prolonged weather problems, conditions in the major crop-producing areas of the Midwest still look relatively favorable, and it appears that aggregate farm production will be sufficient to maintain ample supplies over the coming year, especially in the context of sluggish export demand.

Credit and the Monetary Aggregates

Credit and Depository Intermediation. The total debt of U.S. households, governments, and nonfinancial businesses increased at an annual rate of 5¾ percent from the fourth quarter of 1997 through May of this year. Domestic nonfinancial debt now stands a little above the midpoint of the 3 percent to 7 percent range established by the FOMC for 1998. Debt growth has picked up since 1997, as an acceleration of private credit associated with strong domestic demand and readily available supply has more than offset reduced federal borrowing. Indeed, federal debt declined 1¼ percent at an annual rate between the fourth quarter of 1997 and May 1998, whereas nonfederal debt increased 8¼ percent annualized over the same period. The growth of nonfederal debt has slowed only slightly over the past several months.

Credit on the books of depository institutions rose at roughly the same pace as total credit in the first half of the year. Commercial bank credit advanced rapidly in the first quarter and at a more subdued rate in

Debt: Annual Range and Actual Level



the second. This slowdown was especially acute in securities holdings, which had surged in both the fourth quarter of 1997 and the first quarter of this year. Responses to the Federal Reserve's May survey on bank lending practices suggest that the earlier runup in securities reflected the efforts of banks to boost returns on equity by increasing leverage; much of the rise in securities holdings was concentrated at banks that were constrained by recent mergers from using their profits to repurchase shares. Loan growth also slowed in the second quarter, although the various loan categories behaved quite differently: Real estate lending expanded most slowly in May and June, whereas business lending rebounded in those months after stalling out in March and April. Outstanding loans at branches and agencies of foreign banks declined in the second quarter, and survey responses identified an actual or expected weakening in the capital position of the parent banks as the primary impetus for a tightening of loan terms and standards.

The Report of Condition and Income (the Call Report) showed that banks' return on equity was about unchanged in the first quarter, staying in the elevated range it has occupied since 1993. Call Report data also indicated that delinquency and charge-off rates on commercial and industrial loans and on real estate loans remain quite low, while delinquency and charge-off rates on consumer loans have leveled off after their previous rise. Indeed, bank profits have benefited importantly in recent years from a low level of provisioning for loan losses. Nevertheless, bank supervisors have been concerned that intense competition and favorable economic conditions might be leading banks to ease standards excessively. They reminded depositories that credit assessments should take account of the possibility of less positive economic circumstances in the future.

The trend toward consolidation in the banking industry continued in the first half of the year. Some of the announced mergers involve combinations of banks and nonbank financial institutions, such as thrifts and insurance companies. Many of the mergers were designed to capitalize on the economies of scale and diversification of risk in nationwide banking; other mergers were undertaken to expand the range of services offered to customers. Although some observers are concerned that consolidation might raise banks' market power, greater national concentration in banking over the past several years has not increased banking concentration in most local markets.

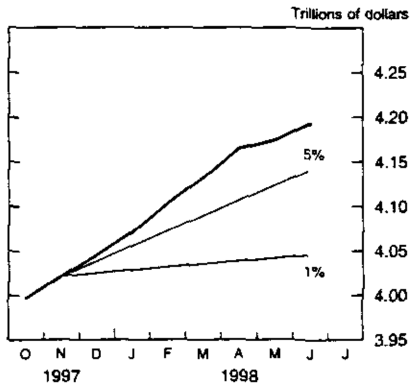
The Monetary Aggregates. The broad monetary aggregates grew more rapidly in the first half of 1998 than they did in 1997, although the pace of their expansion has slowed noticeably in recent months. M2 grew 7¼ percent at an annual rate between the fourth quarter of last year and June of this year, placing it well above the top of its 1 percent to 5 percent growth range. When the FOMC established this range in February, it noted that annual ranges represented benchmarks for money growth under conditions of stable prices and velocity behavior in accordance with its pre-1990 historical experience. In fact, nominal spending and income have grown more

Growth of Money and Debt
Percent

Period		M1	M2	M3	Domestic nonfinancial debt
Annual[1]					
1988		4.3	5.7	6.3	9.1
1989		0.5	5.2	4.0	7.5
1990		4.2	4.1	1.8	6.7
1991		7.9	3.1	1.2	4.5
1992		14.4	1.8	0.6	4.5
1993		10.6	1.3	1.1	4.9
1994		2.5	0.6	1.7	4.9
1995		-1.6	3.9	6.1	5.4
1996		-4.5	4.6	6.8	5.3
1997		-1.2	5.7	8.8	5.0
Quarterly (annual rate)[2]					
1998	Q1	3.0	8.0	11.0	6.2
	Q2	0.3	7.3	9.6	n.a.
Year-to-date[3]					
1998		0.9	7.3	9.8	5.8

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 1997 to average for June (May in the case of domestic nonfinancial debt).

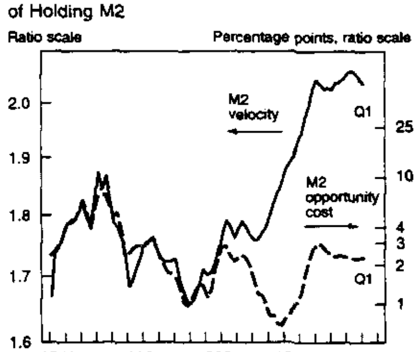
M2: Annual Range and Actual Level



rapidly than is consistent with price stability and sustainable real growth, and the velocity of M2 (defined as the ratio of nominal GDP to M2) has fallen relative to the behavior predicted by the pre-1990 experience.

For several decades before 1990, M2 velocity showed little overall trend but varied positively from year-to-year with changes in M2 opportunity cost, which is generally defined as the interest forgone by holding M2 assets rather than short-term market instruments such as Treasury bills. The relationship was disturbed in the early 1990s by a sharp increase in velocity; however, since mid-1994, M2 velocity and opportunity cost have again been moving roughly together, though not in lockstep. Indeed, velocity has declined recently despite almost no change in the standard measure of opportunity cost. The dip in velocity may be partly attributable to the flatter yield curve, which has reduced the return on longer-term investments relative to M2 assets—bank deposits and money market mutual funds. Money demand may also be bolstered by the efforts of households to rebalance their portfolios in the face of a booming stock market. By the end of 1997, households' monetary assets had ebbed to the smallest share of their total financial assets in many years, and households may want to reduce the concentration of their assets in relatively risky equities and increase their holdings of less volatile M2 assets. However, in spite of both the flatter yield curve and the rebalancing motive, flows into both bond mutual funds and stock mutual funds have been quite heavy this year.

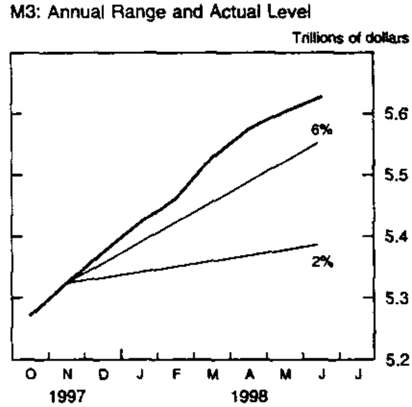
M2 Velocity and the Opportunity Cost of Holding M2



Note. M2 opportunity cost is a two-quarter moving average of the three-month Treasury bill rate less the weighted-average rate paid on M2 components.

M2 increased 7¼ percent at an annual rate in the second quarter, compared with 8 percent in the first quarter. A buildup in household liquid accounts in preparation for individual income tax payments substantially boosted money growth in April; the clearing of these payments depressed May growth by a roughly equal amount. At an annual rate, M2 increased about 6 percent on average over April and May and about 5 percent in June, suggesting a larger deceleration than is shown by the quarterly average figures.

M3: Annual Range and Actual Level



M3 grew 9¾ percent at an annual rate between the fourth quarter of last year and June, placing it far above the top of its 2 percent to 6 percent growth range. As with M2, the FOMC chose the growth range for M3 as a benchmark for growth under conditions of price stability and historical velocity behavior. The components of M3 not included in M2 increased 17½ percent at an annual rate over the first half of the year, following an even faster runup in 1997. Rapid expansion of large time deposits in the first quarter was driven importantly by strong credit growth at depository institutions. More recently, gains in this category have diminished as bank credit growth has slowed. Holdings of institutional money market mutual funds climbed more than 20 percent in each of the past three years, and that strength has mounted in 1998 as businesses' interest in outsourcing their cash management evidently has intensified. Because in-house management often involves short-term assets that are not included in M3, the shift to mutual funds boosts M3 growth.

M1 rose 1 percent at an annual rate between the fourth quarter of 1997 and June of this year. Currency expanded 6½ percent annualized over that period, a bit below its increase last year. Foreign demand for U.S. currency apparently weakened substantially in the first five months of the year, with an especially large decline in shipments to Russia. Deposits in M1 declined in the first half of the year owing to the continued introduction of "sweep" programs. M1 growth has been depressed for several years by the spread of these programs, which sweep balances out of transactions accounts, which are subject to reserve requirements, and into savings accounts, which are not. Depositors are unaffected by this arrangement because the funds are swept back when needed; banks benefit because they can reduce their holdings of reserves, which earn no interest. New sweeps of other checkable deposits have slowed sharply, but sweeps of demand deposits into savings deposits—an activity that has become popular more recently—continue to spread. Because many banks have already reduced their required reserves to minimal levels, the total flow of new sweep programs is tapering off, although it remains considerable.

The drop in transactions accounts in the first half of the year caused required reserves to fall 3¾ percent at an annual rate, a much slower decline than in 1997. The monetary base grew 5½ percent over the same period, as the runoff in required reserves was more than offset by the increased demand for currency.

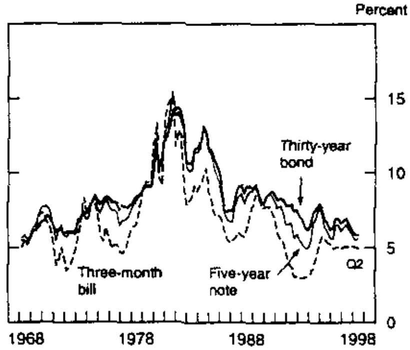
The substantial decline in required reserves over the past several years has raised concern that the federal funds rate might become more volatile. Required reserves are fairly predictable and must be maintained on only a two-week average basis. As a result, the Federal Reserve has generally been able to supply a quantity of reserves that is close to the quantity demanded at the federal funds rate intended by the FOMC, and banks have accommodated many unanticipated imbalances in reserve supply by varying the quantity demanded across days. Banks also hold reserve balances to avoid overdrafts after making payments to other banks. But this precautionary demand is more variable and difficult to predict than requirement-related demand, and it cannot be substituted across days. As required reserves drop, more banks will hold deposits at the Federal Reserve only to meet these day-to-day demands, reducing the potential for rate-smoothing behavior.

So far, however, the federal funds rate has not become noticeably more volatile on a maintenance-period average basis. This outcome has occurred partly because the Federal Reserve has responded to the changing nature of reserve demand by conducting open market operations on more days than had been customary and by arranging more operations with overnight maturity, thereby bringing the daily reserve supply more closely in line with demand. At the same time, banks have borrowed more reserves at the discount window and have improved the management of their accounts at Reserve Banks. Between 1995 and 1997, banks also significantly increased their required clearing balances, which they precommit to hold and which earn credits that can be applied to Federal Reserve priced services. Like required reserve balances, required clearing balances are predictable by the Federal Reserve and can be substituted across days within the two-week maintenance period. Going forward, the Federal Reserve's recent decision to use lagged reserve accounting rather than contemporaneous reserve accounting will increase somewhat the predictability of reserve demand by both banks and the Federal Reserve. Still, further declines in required reserves might increase funds-rate volatility. Moreover, one-third of the banks responding to the Federal Reserve's recent Senior Financial Officer Survey report that reserve management is more difficult today than in the past. One way to diminish these problems would be to pay interest on reserve balances, which would reduce banks' incentives to minimize those balances.

Financial Markets

Interest Rates. Yields on intermediate- and long-term Treasury securities moved in a fairly narrow

Selected Nominal Treasury Rates



Note. The twenty-year Treasury bond rate is shown until the first issuance of the thirty-year Treasury bond in February 1977.

band during the first half of 1998, centered a little below the levels that prevailed in the latter part of 1997. The thirty-year bond yield touched its lowest value since the bond was introduced to the regular auction calendar in 1977; it was also lower than any sustained yield on the twenty-year bond (the longest maturity Treasury security before the issuance of the thirty-year bond) since 1968. Meanwhile, the average yield on five-year notes in the first half of the year was the lowest since early 1994.

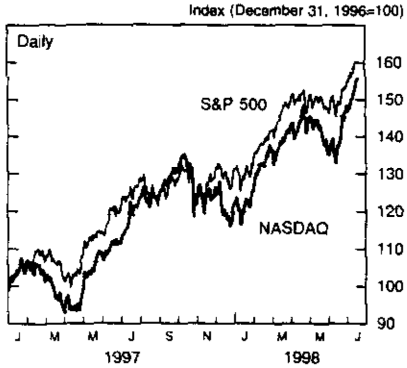
Several factors have contributed to the decline in intermediate- and long-term interest rates over the past year. For one, developments in the U.S. economy and overseas reduced expected inflation and, perhaps, uncertainty about future inflation. Between the second quarter of 1997 and the second quarter of 1998, the median long-term inflation expectation in the Michigan SRC survey of households dropped ¼ percentage point, and the average expectation in the Philadelphia Federal Reserve's Survey of Professional Forecasters fell almost ½ percentage point. Over the same period, the variance of long-term inflation expectations in the Michigan survey was halved. This greater consensus of expectations suggests that people may now place less weight on the possibility of a sharp acceleration in prices; a reduction in perceived inflation risk would tend to reduce term premiums and thereby cut long-term interest rates. A damping of expected growth in real demand here and abroad, triggered importantly by the Asian financial crisis, also has probably pulled rates lower, as has an apparent shift in desired portfolios away from Asia and, to some extent, from other emerging market economies. Lastly, diminished borrowing by the federal government has restrained interest rates by reducing the competition for private domestic saving and for borrowed funds from abroad.

Assessing the relative importance of some of these factors might be aided, in principle, by comparing yields on nominal and inflation-indexed Treasury notes. Between the second quarters of 1997 and 1998, the nominal ten-year yield fell more than 1 percentage point, whereas the inflation-indexed ten-year yield increased a bit. Unfortunately, the relatively recent introduction of inflation-indexed securities and the thinness of trading makes interpreting their yield levels and movements difficult. In particular, light trading may lead investors to view these new securities as providing less liquidity than traditional Treasury notes, and investors may value liquidity especially highly now in the face of uncertainty about developments in Asia.

The yield curve for Treasury securities has recently been flatter than at any point since the beginning of the decade. For example, the difference between the ten-year-note yield and the three-month-bill yield was smaller in the first half of 1998 than in any other half-year period since early 1990. In that earlier episode, the yield curve had been flattened by a sharp runup in short-term interest rates as the Federal Reserve tried to check an upcreep in inflation. In the current episode, short rates have held fairly steady, while long-term rates have declined significantly. Some of the current flatness of the term structure probably stems from the apparent reduction in term premiums noted above. But the flat yield curve may also reflect the expectation that short-term real interest rates, which have been boosted by the decline in inflation over the past year, will drop in the future. Supporting that notion, the yield curve for inflation-indexed debt has become inverted this year, as the return on the five-year indexed note has risen above the return on the ten-year indexed note, which exceeds the return on the new thirty-year indexed bond.

Equity Prices. Equity markets have remained ebullient this year. The S&P 500 composite index rose sharply in the first several months of 1998; it then fell back a little before moving up to a new record in July. The NASDAQ composite, NYSE composite, and Dow Jones Industrial Average followed roughly similar patterns, and these indexes now stand about 17 to 28 percent above their year-end marks. Small capitalization stocks have not fared so well this year, with the Russell 2000 index up about a third as much on net.

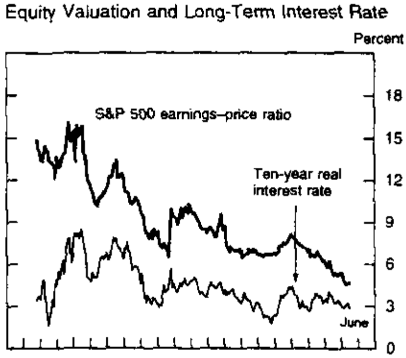
Major Stock Price Indexes



Note. Last observations are for July 17, 1998.

The increase in equity prices combined with the recent slowdown in earnings growth has kept many valuation measures well above their historical ranges. The ratio of prices in the S&P 500 to consensus estimates of earnings over the coming twelve months reached a new high in April and has retreated only slightly from that point. At the same time, the real long-term bond yield—measured either by the ten-year indexed yield or by the difference between the ten-year nominal Treasury yield and inflation expectations in the Philadelphia Federal Reserve's

Equity Valuation and Long-Term Interest Rate



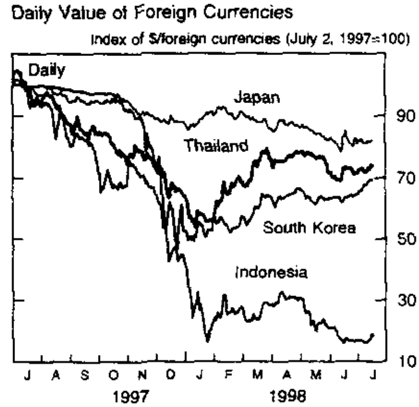
Note. The earnings-price ratio is based on the consensus estimate of earnings over the coming twelve months derived from the forecasts collected by I/B/E/S International, Inc. The real interest rate is the yield on the ten-year Treasury note less the ten-year inflation expectations from the Philadelphia Federal Reserve Survey of Professional Forecasters.

survey—is little changed since year-end. As a result, the forward-earnings yield on stocks exceeds the real yield on bonds by one of the smallest amounts in many years. Apparently, investors share analysts' expectations of robust long-term earnings growth, or they are content with a much smaller equity premium than the historical average.

International Developments

Events in Asia, including in Japan, have continued to dominate developments in global asset markets so far in 1998. During the first months of the year, many financial markets in Asia appeared to stabilize, and progress in implementing economic and financial reform programs was made in most of the countries seriously affected by the crises. In early April, the agreement between Korean banks and their external bank creditors to stretch out short-term obligations was implemented, ending an interval of rollovers by creditors that was endorsed by the authorities in countries that had pledged to support the Korean program. Indonesia reached a second revised agreement with the International Monetary Fund (IMF) in April on a reform program, which was subsequently derailed by political strife and the resignation of the president in late May; the change in political regime was followed by calm, and a new agreement was reached with the IMF management in late June and approved by the IMF Executive Board on July 15.

Daily Value of Foreign Currencies

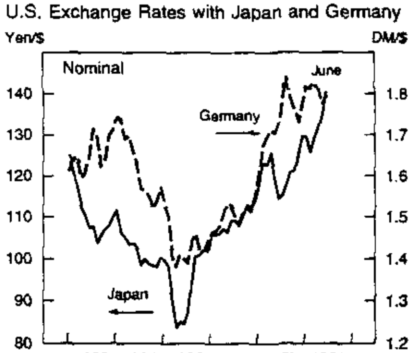


Note. Last observations are for July 17, 1998.

After rising sharply during the final months of 1997 through mid-January of 1998, the exchange value of the dollar in terms of the currencies of Korea, Indonesia, Thailand, and other ASEAN countries partly retraced those gains during February, March, and April. Since then, however, market pressures have again led to further sharp increases in the exchange value of the dollar in terms of the Indonesian rupiah while the dollar has changed little against most of the other Asian emerging-market currencies. Since the end of December, the dollar has declined, on balance, 24 percent against the Korean won and nearly 14 percent against the Thai baht and has risen moderately in terms of the Taiwan dollar and increased about 130 percent in terms of the Indonesian rupiah.

During the first weeks of the year, the dollar depreciated in terms of the Japanese yen as improved prospects elsewhere in Asia and market uncertainty regarding potential intervention by the Japanese monetary authorities lent support to the yen. Indications that significant measures for economic stimulus might be announced also put upward pressure on the yen. In February, the dollar resumed its appreciation with respect to the yen. The rise in the dollar was only temporarily interrupted by sizable intervention purchases of dollars by Japanese authorities in April. Upward pressure on the dollar relative to the yen intensified in late May and June. Renewed signs of cyclical weakness in the Japanese economy and lack of market confidence in the announced programs for addressing the chronic problems within the financial sector contributed to pessimism toward the yen. Persistent weakness in the Japanese economy and the yen, in turn, heightened concerns about prospects elsewhere in Asia; the lower yen adversely affected the competitiveness of goods produced in the Asian emerging-market economies and raised questions

U.S. Exchange Rates with Japan and Germany

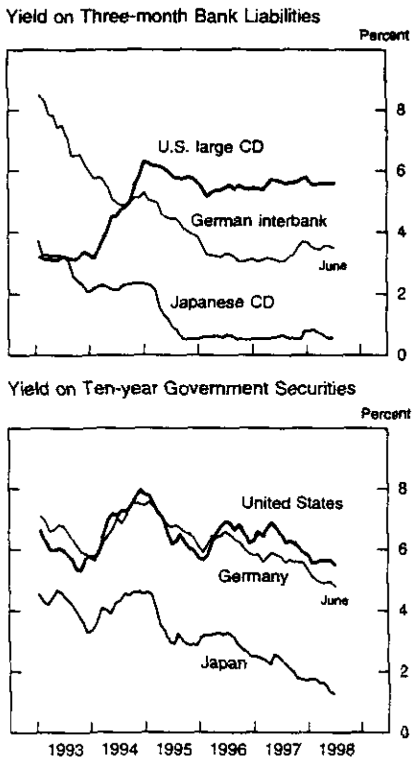


about the sustainability of current exchange rate policies in China and Hong Kong.

On June 17, the monetary authorities in the United States and Japan cooperated in foreign exchange intervention purchases of yen for dollars. This intervention operation was the first by U.S. authorities since August 1995. In announcing the market intervention, Treasury Secretary Rubin cited Japanese government plans to restore the health of their financial system and to strengthen Japanese domestic demand. He pointed to the stake of Asia and the international community as a whole in Japan's success. The yen rose somewhat following the exchange market intervention and has since partially given back that gain. In the wake of the recent election, which cost the LDP numerous seats in the upper house of the Diet and precipitated the resignation of Prime Minister Hashimoto, the yen changed little. On balance, the dollar has appreciated about 7 percent in terms of the yen since the end of December.

Equity prices in the Asian emerging-market economies have been volatile so far this year as well. These prices recovered somewhat in the first weeks of the year in response to the market perception that the crisis was easing; after fluctuating narrowly, they began moving back down in March and April, reaching new lows in June in Korea, Thailand, and Hong Kong. On balance, these equity prices have moved down about 25 percent (Singapore and Malaysia) to up about 20 percent (Indonesia) since the end of last year. Equity prices in Japan also rose early in the year on improved optimism but then gave back those gains over time with the release of indicators suggesting additional weakness in the Japanese economy. Since the middle of June, Japanese equity prices have rebounded on the perception that significant fiscal stimulus is now more likely. On balance, Japanese equity prices are up about 9 percent from their level at the end of last year. Japanese long-term interest rates continued through May on their downward trend that began in mid-1997, declining an additional 50 basis points during the first five months. Since then, long-term interest rates have retraced more than half of that decline, in part in response to the announcement of the plan for financial restructuring and in part in response to the outcome of the recent election, which heightened expectations of additional fiscal stimulus.

The Asian financial crises have resulted in a sharp drop in the pace of economic activity in the region. Output declined precipitously in the first quarter in those countries most affected, such as Korea, U.S. and Foreign Interest Rates



Indonesia, and Malaysia, and slowed in other Asian economies, such as China and Taiwan, that have suffered a loss of competitiveness and reduced external demand as a consequence of the crises. Data for recent months suggest that additional slowing has occurred and that the risk of further spread and deepening of cyclical weakness throughout the region cannot be ruled out. Depreciation of their respective currencies has led to acceleration of domestic prices in several of these economies, particularly in Indonesia and Thailand.

Real GDP in Japan also fell sharply in the first quarter, and output indicators suggest a further decline in the second quarter. Consumer price inflation remains very low. Japanese authorities have announced a series of fiscal measures that are expected to boost domestic demand during the second half of this year. In addition, officials have announced a package of steps directed at restoring the soundness of the financial sector, including (1) introduction of a bridge bank mechanism to facilitate the resolution of failed banks while permitting some of their borrowers to continue to receive credit, (2) measures to improve the disposal of bad bank loans, (3) enhanced transparency and disclosure by banks, and (4) strengthened bank supervision. These actions are intended to restore confidence in Japanese financial institutions and in the prospects for the economy more broadly.

In the other major industrial countries, economic developments so far this year have generally been favorable. The exchange value of the dollar in terms of the German mark has fluctuated narrowly and, on balance, is little changed since the end of December. Market perceptions that progress toward the start of the final stage of European Monetary Union (EMU) is going smoothly and signs of momentum in the U.S. and German economies resulted in little pressure in either direction on the exchange rate. The dollar also fluctuated narrowly against the U.K. pound with little net change so far this year. Moves to tighten monetary conditions in the United Kingdom lent support to the pound, countering some tendency for weak external demand to depress the currency. The Canadian dollar rebounded following a tightening of monetary conditions by the Bank of Canada on January 30. Since early March, however, it has tended to move down as market participants have come to believe that further upward shifts of official interest rates are unlikely and as weakness in global commodity markets, partly the result of reduced economic activity in Asia, have weighed on the currency. The exchange value of the U.S. dollar in terms of the Canadian dollar reached new highs in July and, on balance so far this year, has risen about 4 percent.

Long-term interest rates have declined and equity prices have generally risen strongly in European and Canadian markets this year. Despite signs of strengthening activity in Germany and other continental European countries and continued healthy expansion in the United Kingdom and Canada, long-term rates have moved down since December; long rates are about 60 basis points lower in Germany and less than half that amount lower in Canada. Shifts of international portfolios away from Asian assets and toward those perceived to be safer have probably contributed to rate declines in Continental Europe and in the United States. Stock prices have also continued to rise in Europe and Canada. Since December, the gains have ranged from about 40 percent in Germany and France to about 10 percent in Canada.

The pace of real economic activity improved somewhat in the first quarter in Germany and on average in the eleven countries slated to proceed with currency union on January 1, 1999.[2] Production and employment data for more recent months suggest continued expansion. Business confidence has firmed as progress toward EMU has continued. Domestic demand is becoming more buoyant in several of these countries, offsetting weakening of external demand arising from events in Asia. On average, inflation remains subdued within the euro area. In the United Kingdom and Canada, real output continues to expand at a relatively rapid rate. U.K. inflation threatens to exceed the government's target of 2½ percent, and the Bank of England raised its official lending rate 25 basis points in June in order to lessen price pressures. Consumer price inflation in Canada remains very low.

Events in Asia have spilled over to affect developments in Latin American countries. Declines in global oil prices have contributed to downward pressure on the exchange value of the Mexican peso. The peso declined sharply in terms of the dollar at the start of the year but then stabilized in February through May as Asian markets partially recovered. It depreciated further in May and June, resulting in a net decline of about 9 percent in terms of the dollar so far this year. The Brazilian exchange rate regime of a controlled crawl and the Argentine regime of pegging the peso to the dollar remain in place, and Brazilian short-term interest rates have been lowered from the very high levels to which they were raised when the Asian crisis intensified in late 1997. Equity prices in these three Latin American countries have been volatile, rising early in the year and giving back those gains since April. On balance this year, equity prices have declined about 10 percent in Mexico and Argentina and have risen about 8 percent in Brazil.

Real output growth remains strong in Mexico and Argentina, but the rate has slowed somewhat from last year's vigorous pace. In Brazil, economic activity has weakened more sharply, in part in response to the tightening of monetary conditions that followed the outbreak of the Asian crisis.

Lower global oil prices have combined with a poorly functioning domestic tax system to trigger a financial crisis in Russia. Russian officials have reached agreement with IMF management on a revised program that includes proposed increased funds from the IMF and other sources. To help finance this program, the General Arrangements to Borrow are being activated in light of the inadequacy of IMF resources to meet actual or expected requests for financing and a need to forestall impairment of the international monetary system. The General Arrangements to Borrow provide the IMF with supplementary lines of credit from the G-10 countries.

2. Those countries are Austria, Belgium, Finland, France, Ireland, Italy, Germany, Luxembourg, the Netherlands, Portugal, and Spain.