# CONDUCT OF MONETARY POLICY

**Report of the Federal Reserve Board pursuant to the Full Employment and Balanced Growth Act of 1978, P.L. 95-523 and The State of the Economy**

# HEARING

BEFORE THE

SUBCOMMITTEE ON

DOMESTIC AND INTERNATIONAL MONETARY POLICY

OF THE

COMMITTEE ON BANKING AND FINANCIAL SERVICES

HOUSE OF REPRESENTATIVES

ONE HUNDRED FOURTH CONGRESS

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# CONDUCT OF MONETARY POLICY

**TUESDAY, FEBRUARY 20, 1996**

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON DOMESTIC AND
INTERNATIONAL MONETARY POLICY,
COMMITTEE ON BANKING AND FINANCIAL SERVICES,
*Washington, DC.*

The subcommittee met, pursuant to call, at 2 p.m., in room 2128, Rayburn House Office Building, Hon. Michael N. Castle [chairman of the subcommittee] presiding.

Present: Chairman Castle, Representative LoBiondo.

Also present: Representatives Leach and Hinchey.

Chairman CASTLE. The subcommittee will come to order.

This subcommittee is meeting today to once again receive the semiannual report of the Board of Governors of the Federal Reserve System on the conduct of monetary policy and the state of the economy as mandated in the Full Employment and Balanced Growth Act of 1978, also known as the Humphrey-Hawkins Act.

Chairman Greenspan, it is always a pleasure to welcome you to the Subcommittee on Domestic and International Monetary Policy of the House Banking and Financial Services Committee, which may be the longest name of any in Congress. We have fewer Members than usual because the House is in recess. Nevertheless, those who are present look forward to our exchange. As usual, any prepared remarks submitted by Members will be accepted for the record.

Since our last hearing 6 months ago, we have seen the Fed continue on its new course of gradually lowering interest rates. Currently, the U.S. economy is in its 60th month of economic expansion, approximately 10 months beyond the average expansion. While we welcome continued expansion, concern tempers our enthusiasm. The economy is slowing to a growth rate of 1.4 percent for the first three quarters of 1995; this growth rate is below Fed targets. Pundits divide on whether the soft landing to slower growth has been achieved or the economy is being pushed back into recession. Some dispute whether the economy is softening too much or, alternatively, we are merely experiencing a current inventory draw-down cycle which will be succeeded by increased demand and additional noninflationary growth. Interpreting the indicators at these junctures is a chancy business, so we welcome your comments on what you see ahead with regard to inflationary pressures, the international value of the dollar and the future of interest rates, to name a couple of items.



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As you know, there is increasing debate over whether the economy can grow faster than 2.5 percent a year without reigniting inflation. Strong economic growth creates jobs and higher incomes for working Americans, but an overheated economy could lead to higher inflation. Inflation is bad for all Americans, but higher costs especially hurt those with low and moderate incomes. Anyone who remembers the double-digit inflation of the 1970's knows that we do not want to return to those days. My view is that we should not ignore the threat of inflation. However, while we are in a period of low inflation, there is very real anxiety among many Americans over corporate downsizing, wage stagnation, corporate expansion overseas, and what these mean for the creation of new jobs. Every government official must consider how to address these issues. Is there more that can be done through monetary policy to spur growth?

Since we are in an election year, the rhetoric over the issue of balancing the budget is certain to be heated on both sides, but we cannot overlook the fact that balancing the budget is a tremendously important goal that will impact the lives of every American. You have spoken out on this subject, and the subcommittee would like to hear your opinions on the impact of a balanced budget on interest rates, the financial markets, the economy in general and how these affect the lives of ordinary Americans.

The Humphrey-Hawkins Act of 1978 requires the Federal Reserve Board to report to Congress on its conduct of monetary policy and the state of the economy. That is the reason for this hearing. The Humphrey-Hawkins Act also sets goals for the Administration and the Federal Reserve System to pursue that may be outdated, inconsistent or conflicting. Most of the bill's mandates have been more honored in the breach, especially those that apply to the Executive. To the extent that these inconsistent goals actually hamper the Fed's ability to optimize its operations, Congress may want to revisit this legislative charter. We might then consider improvements or adjustments to your mandate that would make monetary operations more effective. Specifically, should Humphrey-Hawkins be reformed and narrowed to allow the Federal Reserve to concentrate on monetary policy and controlling inflation? Are the mandates in the act too broad? Congress will review these issues and your comments on the proper role of the Federal Reserve will assist Congress in this process.

Your chairmanship of the Federal Reserve continues to be marked by unprecedented openness both with Congress and the public. You have personally become a symbol of probity and stability that markets and the public look to for reassurance on the economy. We appreciate this and look forward to your timely reappointment although, let me hasten to add, it is beyond my jurisdiction to so reappoint you.

We are prepared today for a lively discussion.

Because we have a limited number of Members, I thought I would offer the others, if they wish to make opening statements, to do so. I will turn first to the ranking Democrat Member today, Mr. Hinchey.

Mr. HINCHEY. Thank you very much.

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Chairman Greenspan, welcome. It is always a great pleasure to see you and to have the opportunity to listen to your words of wisdom with regard to the Nation's economy, particularly the activities of the Fed as those activities are conducted under your stewardship in a way that is designed to promote economic growth and, of course, stable prices.

We have experienced, as the chairman has said, a period of almost unprecedented growth. I think there have been only a few times in the recent history of the Nation's economy when the economy has grown at a steady rate for such a prolonged period of time. We have almost become accustomed to new records in the stock market being made almost every other day. Certainly that was true within the last few weeks. This week it is going in the other direction somewhat, but it has moved steadily upward. That, of course, is something that we all welcome and are very happy about.

However, the growth of the economy is not being shared by all Americans equally. There are a great many people in this economy who are being left behind and who look at the increase in the stock market only with some form of wonder and amazement as to how this can be happening, why should the economy be doing so well, why do all the normal indicators indicate that the economy is doing well while they are not doing well in their own personal lives, their own economic circumstances.

Many people are being left behind. We are even hearing from major business leaders that the downsizing in the economy is something, obviously, that has affected large numbers of workers who had formerly regarded themselves as being in very stable positions, but that downsizing is likely to continue. We are told by some prominent business leaders, one in a recent speech in Washington, that perhaps fully one-third of those people employed in the economic circumstances today can regard their jobs to be in jeopardy in the future. This of course is very, very disconcerting.

The Humphrey-Hawkins Act, which is the subject of this hearing today particularly, stipulates that it is the responsibility of the Federal Reserve Board to promote stable prices, to hold down inflation, but also to promote full employment. The promotion of full employment is something that is increasingly on the minds of the American people, on the minds of Members of Congress, and, I note from the statements that are being made up in the State of New Hampshire, increasingly on the minds of those people who would be President of the United States.

So I would hope that in your remarks today, Mr. Chairman, that you would address yourself to that aspect of the Humphrey-Hawkins Act, that which is designed to encourage the Federal Reserve Board to promote full employment. It seems to me, and I think—this is quite obvious—that we have two tools at our disposal. That is the government and its agencies have two tools at their disposal to promote economic growth, fiscal policy and monetary policy. Fiscal policy is in the hands of the Congress, but the Congress has in recent years tied its hands, has reduced its ability to manipulate fiscal policy in ways to promote economic growth. So therefore increasingly the American people have looked toward the Federal Reserve Board as an agency to try to promote economic growth and developments.

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I know that this has been on your mind particularly recently, I presume, in that we have seen you recommend and the Federal Reserve Board follow a recommendation to reduce interest rates twice in recent months. That has been encouraging to people because we anticipate that that will improve economic conditions.

But we also believe that the economic growth that we are currently experiencing, which is below 2 percent, far below traditional growth that we have become accustomed to since the Second World War, that that growth of 2 percent is far too low and that we ought to be doing something to promote additional growth beyond that. Perhaps the interest rate increases that were occasioned by Federal Reserve Board decisions back in 1994 and 1995 have something to do with the fact that our economy is growing at such a low rate. I would hope that you might direct yourself in your remarks to those subjects as well.

Let me say again, welcome, and I am delighted to see you and always interested in what you have to say.

Thank you, Mr. Chairman.

Chairman CASTLE. Thank you Mr. Hinchey.

Next we will turn to the chairman of the full Committee on Banking and Financial Services. It is sort of like being a son and being a principal and your father is a teacher in this circumstance. Mr. Leach is my boss on the committee, and he would like to bring words of welcome. Mr. Chairman.

Mr. LEACH. I thank Chairman Castle, at whose feet we sit today.

Let me just say, Mr. Chairman, that the policies of the Federal Reserve Board should always be open to question. That is why we have hearings of this nature. But the integrity and the independence of the Federal Reserve Board should always be above reproach, and in my judgment that is the circumstance we are dealing with.

So we welcome you at a time when we can probe your judgments as well as reflect on the economy both in the past and, more importantly, in the immediate future. Thank you.

Chairman CASTLE. Thank you, Mr. Chairman.

Mr. LoBiondo, I know, has a written statement but perhaps he would like opening words.

Mr. LOBIONDO. Chairman Greenspan, I, too, would like to welcome you. I look forward to your remarks. We have a great deal of concern for jobs and the economy and where we are going. I look forward with anticipation to your comments today.

Chairman Castle, I would like to submit my remarks for the record.

Chairman CASTLE. Without objection, your statement and those of any Member of the subcommittee are more than welcome, and we appreciate that. Thank you for your comments.

[The prepared statement of Hon. Frank A. LoBiondo can be found on page 36 in the appendix.]

Chairman CASTLE. Mr. Chairman, we have reached that time which is on the mind of most people in this room, and that is for you to review with us where we are vis-a-vis the Federal Reserve pursuant to the Humphrey-Hawkins Act. We have before us a policy report and a statement. You are welcome to excerpt from that or do as you please. We turn to you for your words of wisdom.

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

Mr. GREENSPAN. Thank you, Mr. Chairman. I have indeed made significant deletions in my prepared remarks but request, as usual, that the total statement be included in the record.

Mr. Chairman, I, as always, appreciate the opportunity to appear before this subcommittee to present the Federal Reserve's semi-annual report on monetary policy.

The U.S. economy performed reasonably well in 1995. One and three-quarter million new jobs were added to payrolls over the year, and the unemployment rate was at the lowest sustained level in 5 years. Despite the relatively high level of resource utilization, inflation remained well contained with the consumer price index rising less than 3 percent, the fifth year running at 3 percent or below. A reduction in inflation expectations, together with anticipation of significant progress toward eliminating Federal budget deficits, was reflected in financial markets where long-term interest rates dropped sharply and stock prices rose dramatically over the year.

With inflation contained and inflation expectations dropping, the Federal Reserve was able to ease monetary conditions twice in the second half of the year. As we entered 1996, information becoming available raised additional questions about the prospective pace of expansion. The situation was difficult to judge, but several indicators appeared to signal some softening in the economy.

A number of factors have prompted the recent tendency toward renewed weakness. Some are clearly transitory, related, for example, to bad weather or the Federal Government shutdown. Others may be somewhat more significant but still temporary. The constraint on government spending while permanent budget authorizations are being negotiated is one. Another may be a temporary reduction in output in some industries as businesses have further adjusted inventories to disappointing sales. As I noted last July, the change in the pace of inventory investment when the economy shifts gears can be substantial. Inventory investment surged in 1994 and into the early months of 1995 but proceeded to fall markedly throughout the rest of the year. This has placed significant downward pressure on output, which should lift as inventory adjustments subside. But for the moment, the pressures remain, in the motor vehicle industry and elsewhere.

Ultimately, of course, it is the path of final demand after the temporary influences work themselves out that determines the trajectory of the economy. There are some factors, such as high consumer debt levels, that may be working to restrain the spending. But as I shall be detailing shortly, a number of fundamentals point to an economy basically on track for sustained growth, so any weakness is likely to be temporary. Nonetheless, the subcommittee decided in late January that the evidence suggested sufficient risk of subpar performance going forward to warrant another slight easing of the stance of monetary policy. Given the subdued trends in costs and wages, the odds that such a move would boost inflation pressures seemed low.

In assessing the likely course of the economy and the appropriate stance of policy, one question is the significance, if any, of the age

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of the business expansion. Some analysts, viewing recent weakness, have observed that the expansion is approaching the start of its sixth year and is now one of the longest peacetime spans of growth in the past century, as you, Mr. Chairman, have pointed out. Economic expansions, however, do not necessarily die of old age. Although the factors governing each individual business cycle are not always clear, expansions usually end because serious imbalances eventually develop.

When aggregate demand exceeds the economy's potential, for example, inflationary pressures pick up. The inevitable increase in market interest rates, as inflation expectations rise and price pressures intensify, depresses final demand. Lagging demand in turn sets off an inventory correction that frequently triggers a downturn in the economy.

Capital expenditures by households and firms can also contribute significantly to the development of cycle-ending imbalances. The level of stocks of such real assets have effects on output very similar to those of business inventories. In typical cycles, capital expenditures tend to grow rapidly in the early stages of recovery. Pent-up demands coming out of a recession by consumers and businesses are satisfied by rapid growth of spending on capital assets. There is a limit, however, on, say, how many cars people choose to own or how many square feet of floor space retailers need to service customers. Spending on such assets generally tends to grow more slowly after the pent-up demand is met. As with business inventories, the downshifting of spending on consumer durable goods or business plant and equipment may not occur smoothly. The dynamics of expanding output and rising profit expectations often create a degree of exuberance which, as in much of human nature, tends on occasion to excess, in this case a form of a temporary overaccumulation of assets. The ensuing correction in demand for such assets triggers production adjustments that can significantly mute growth for a time or even cause a downturn if the imbalances are large enough.

The current extent of any asset overhang is very difficult to determine. The growth of demand for durables in some categories of capital goods evidently has slowed, but the available evidence does not suggest a degree of saturation in capital assets which would tip the economy into a downturn.

Moreover, financial conditions are likely to be generally supportive of spending. The low level of long-term interest rates should have an especially favorable effect. In addition, with the condition of most financial institutions strong, lenders are likely to remain willing to extend credit to firms and households on favorable terms.

Against this backdrop, Federal Reserve policymakers expect the most likely outcome for 1996 as a whole is further moderate growth. The unemployment rate is expected to remain around current levels.

The Federal Open Market Committee also anticipates a continuation of reasonably good inflation performance in 1996. The success during 1995 in keeping the increase in the Consumer Price Index below 3 percent in the fifth year of an expansion illustrates that an extended period of growth with low inflation is possible. Keeping inflation from rising significantly during economic expansions

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will permit a gradual ratcheting down of inflation over the course of successive business cycles that will eventually result in the achievement of price stability.

Determining whether further changes in the stance of monetary policy will be necessary in the months ahead to foster progress toward our goals will be a continuing challenge. In formulating monetary policy, while we have in mind a forecast of the most likely outcome, we must also evaluate the consequences of other possible developments. Thus it is sometimes the case that we take out monetary policy "insurance," so to speak, when we perceive an imbalance in the net costs or benefits of coming out on one side or the other of the most probable scenario. For example, in our most recent actions, we saw a decline in the Federal funds rate as not increasing inflationary risks unacceptably while addressing the downside risks to the most likely forecast. In assessing the costs and benefits of adjustments to the stance of policy, Members of the subcommittee recognize that policy affects the economy and inflation with a lag and thus needs to be formulated with a focus on the future. Over the past year, we have kept firmly in mind our goals of containing inflation in the near term and moving over time toward price stability, and they will continue to guide us in the period ahead.

Structural forces may be assisting us in this regard. Increases in producers' costs and in output prices proved to be a little lower last year than many had anticipated. While it is too soon to draw any definitive conclusions, this experience provides some tentative evidence that basic ongoing changes in the structure of the economy may be helping to hold down price increases. These changes stem from the introduction of new technologies into a wide variety of production processes throughout the economy.

The more rapid advance of information and communications technology and the associated acceleration in the turnover of the capital stock are being mirrored in a brisk restructuring of firms. In line with their adoption of new organizational structures and technologies, many enterprises are finding that their needs for various forms of labor are evolving just as quickly. Partly for that reason, most corporate restructurings have involved a significant number of permanent dismissals.

An important consequence of the layoffs and dismissals associated with restructuring activity is a significant and widely reported increase in the sense of job insecurity. Concern about employment has been manifested in unusually low levels of indicators of labor unrest.

Of particular relevance to the inflation outlook, the sense of job insecurity is having a pronounced effect in damping labor costs. For example, the increase in the employment cost index for compensation in the private sector, which includes both wage and salary payments and benefit costs, slowed further in 1995, to 2.75 percent, despite labor market conditions that by historical standards were fairly tight.

The more rapid pace of technological change is also reducing business costs through other channels. Initially most important, the downsizing of products resulting from semiconductor technologies together with the increasing proportion of national output

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accounted for by high-tech products, has reduced costs of transporting the average unit of the gross domestic product. Quite simply, small products can be moved more quickly and at lower cost.

More recently, dramatic advances in telecommunications technologies have lowered the costs of production for a variety of products by slashing further the information component of those costs. Increasingly, the physical distance between communications endpoints is becoming less relevant in determining the difficulty and cost of transporting information.

To be sure, advancing technology, with its profound implications for the nature of the economy, is nothing new, and the pace of improvement has never been even. But it is possible that we may be in the midst of a quickening of the process. Nonetheless, we have to be careful in projecting a further acceleration in the application of technology indefinitely into the future. Similarly, suppressed wage cost growth as a consequence of job insecurity can be carried only so far. While it is difficult to judge the timeframe on such adjustments, the risks to cost and price inflation going forward are not entirely skewed to the downside, especially with the economy so recently operating at high levels of resource utilization.

In light of the quickened pace of technological change, the question arises whether the U.S. economy can expand more rapidly without adding to inflationary pressures. The Federal Reserve would certainly welcome faster growth, provided that it is sustainable.

The particular rate of maximum sustainable growth in an economy as complex and ever-changing as ours is very difficult to pin down. Fortunately, the Federal Reserve does not need to have a firm judgment on such an estimate, for persistent deviations of actual growth from that of capacity potential will soon send signals that a policy adjustment is needed. Should the Nation's true growth potential exceed actual growth, for example, the disparity and lessened strain would be signaled in shorter lead times on the delivery of materials, declining overtime, and ebbing inflationary pressures. Conversely, actual growth in excess of the economy's true potential would soon result in tightened markets and other distortions which, as history amply demonstrates, would propel the economy into recession.

The hypothesis that advancing technology has enhanced productivity growth would be more persuasive if national data on productivity increases showed a distinct improvement. To a degree, the lack of any marked pickup may be a shortcoming of the statistics rather than a refutation of the hypothesis. Faulty data could be arising in part because business purchases are increasingly concentrated in items that are expensed but which market prices suggest should be capitalized.

In addition, the output of services, and the productivity of labor in that sector, is particularly hard to measure.

There is still a nagging inconsistency. The evidence of significant restructurings or improvements in technology and real costs within business establishments does not seem to be fully reflected in our national productivity measurements. It is possible that some of the frenetic pace of business restructuring is mere wheel spinning, changing production inputs without increasing output, rather than

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real increases in productivity. One cause of wheel spinning, if that is what it is, may be that it takes some time for firms to adapt in such a way that major new technology is translated into increased output.

It may be that the full advantage of even the current generation of information and communication equipment will be exploited over a span of quite a few years and only after a considerably updated stock of physical capital has been put in place.

To be fully effective in achieving potential productivity improvements, technological innovations also require a considerable amount of human investment on the part of workers who have to deal with these devices on a day-to-day basis. On this score, we may still not have progressed very far. Many workers still possess only rudimentary skills in manipulating advanced information technology. In these circumstances, firms and employees alike need to recognize that obtaining the potential rewards of the new technologies in the years ahead will require a renewed commitment to effective education and training, especially on-the-job training.

Our Nation faces many important and difficult challenges in economic policy. Nonetheless, we have made significant and fundamental gains in macroeconomic performance in recent years that enhance the prospects for maximum sustainable economic growth. Lower rates of inflation have brought a variety of benefits to the economy, including lower long-term interest rates, a sense of greater economic stability, an improved environment for household and business planning, and more robust investment in capital expenditures.

We have also made considerable progress on the fiscal front. Over the past 10 years and especially since 1993, our elected political leaders, through sometimes prolonged and even painful negotiations, have been successful in reaching several agreements that have significantly narrowed the budget deficit.

But more, obviously, remains to be done. As I have emphasized many times, lower budget deficits are the surest and most direct way to increase national saving. Higher national saving would help to reduce real interest rates further, promoting more rapid accumulation of productive capital embodying recent technological advances.

Lower inflation and reduced budget deficits will by no means solve all of the economic problems that we face, but the achievement of price stability and Federal budget balance or surplus will provide the best macroeconomic climate in which the Nation can address other economic challenges.

Thank you, Mr. Chairman.

[The prepared statement of Hon. Alan Greenspan can be found on page 38 in the appendix.]

Chairman CASTLE. Thank you, Mr. Chairman. We appreciate your statement always. It is very cogent and, I think, leads to a number of questions.

I think what we will do in this process is each take turns asking questions. Rather than use a clock, I am going to let it run for a bit for each of us, perhaps up to 10 minutes or so. We will go on a rotating basis so that we can fully develop the particular areas that we are interested in.

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I am told, by the way, that because a lot of people are very interested in your statement, the testimony that you have just given can be found on the Internet at http://www.house.gov/castle/banking/.

Mr. GREENSPAN. That sounds longer than my testimony.

Chairman CASTLE. It may be. I don't use the Internet on a regular basis.

In any event, I want to start with a question that is going to be an amalgamation of a number of things. It may be a little difficult to tie this together, but it is current in New Hampshire today as the voters vote in the first primary. Mr. Hinchey referred to it. I referenced some of this. You referenced some of it. It is something that is a little bit different. Even though it is in your testimony, one way some people are viewing some of this is in sort of a negative sense. I think we need to address the issue and see if there is anything that we can be doing about it, maybe not from the point of view of the Federal Reserve Board. Maybe we need to balance budgets and straighten out problems of young people, whatever it may be.

Starting with the concept of wage differentiation, in recent years there has been more and more discussion of slow wage growth and a greater differentiation between wages of the average employee of a corporation and the top management. We have heard that again and again, that perhaps the policies of the Fed are leading to that, and that is a problem.

We also know, as you have referenced, that there is corporate downsizing. The cover of this week's *Newsweek* may be an exaggeration, but it says corporate killers. It has corporate CEOs and discusses job cuts. In my State, Delaware, we know about some of those job cuts. In fact, some of these people on the cover of this magazine have been involved with the people in Delaware not being employed right now. When you have individuals coming to you who have lost jobs, that is different than corporate downsizing. That is family, which is a significant element. So we have the problem of corporate downsizing.

Employment taxes have grown in your work lifetime, my work lifetime. It has gone from the point of very little being taken out of your pay, to some 7.5 percent being taken out directly for employment taxes before income taxes. Probably the employer side of that gets shifted over to the employee as well, so you are looking at a lot less take-home pay even if one stayed even with the rate of inflation over all those years.

Then we have the further discussion of corporations moving offshore. I have seen that. I am not just talking about NAFTA. I am talking about the decision that it is less expensive to make certain products in other parts of the world. I think that can be expected because of huge wage differentials between the United States and other countries.

This is not to suggest that these same jobs have not been filled in some other way. Unemployment is relatively low. This is not to suggest that we don't still have good wages in many instances—we do—that we are basically sloughing off the jobs of less monetary reward to make room for others. But there is a growing discomfort among many people we talk to on a daily basis about where this economy is going. There are many people who are very uncertain.

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I see it with major corporations in Delaware. I am sure everybody in Congress does. And you have heard it as well, have heard about this particular problem.

I would like, I guess in the way of questions, to ask you if you believe that these factors are a problem in the country in general without regard to what the Fed may be doing. Would a loosening of monetary policy or any other adjustments which the Fed could make be helpful in this? Or are some of the things you are doing, such as lowering interest rates, aimed at helping in this particular area? Are Federal Reserve policies in general in some part responsible for this or not? If so, what adjustments can be made?

I know it is a broad question, but I think it combines many elements that a lot of us are concerned about. If you could take a crack at it, I would appreciate it.

Mr. GREENSPAN. I will try, Mr. Chairman.

It is raising issues with respect to really the fundamental changes that are going on in our economy and those which I think we are going to have to address as we move into the 21st century. Let me say first that probably since the dawn of the industrial revolution we have had a process by which there has been a significant shift in the nature of the goods and services we produce to increasingly more intellectual conceptual products. This has been especially the case in recent years when the major changes in computer-based technologies have created a very extraordinary set of changes which are only now in the process of really beginning to take hold.

The result of all this is that ideas are becoming increasingly more important in value added in the system. Therefore, education or knowledge is becoming increasingly more a major factor in who gets what type of wage payout. As a result, going back now about 15 years, there has been a very pronounced tendency in this country for the spread between the average income of college educated people relative to, say, high school graduates to increase fairly significantly, and indeed for high school graduates' income to increase relative to those who are high school dropouts. Indeed, we have been seeing this fairly pronounced dispersion in the income distribution, which is effectively a consequence of the dramatic changes in technology, which essentially go back to the extraordinary advances which occurred as a result of the invention of the semiconductor and the whole proliferation of technologies which have come as a consequence of this. This, I think, is a very important aspect of what our economy is doing. Even if the technology is not now creating major increases in productivity overall, there is every reason to believe that within a few years we will really begin to see those changes.

Indeed, I remark in my prepared statement the example that Professor David of Stanford brought out with respect to the analogy between the advent of the electric motor's development in the latter part of the 19th century and how long it took for that new technology to have a significant impact on national productivity. My expectation is that that analogy is probably correct and that we can envisage a significant pickup in overall productivity in the United States as we move out toward the beginning of the 21st century.

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It is difficult, however, to know precisely what the timeframe of that is.

But while that is in the process of occurring, we are nonetheless confronted with this very difficult and personally very disturbing concern in which we are seeing a major widening in the spread of incomes among various different segments of our work force. This is creating a very high degree of general insecurity which is not only related to jobs, but it is an insecurity which is created to a large extent by the rapid changes that technology is bringing us.

If you look at the basic data, what it shows is that the average age of our capital stock is falling very dramatically as we move toward high technology products. Since, on a day-by-day basis, all of our work force interfaces with this rapidly changing set of technologies, it is pretty obvious that the degree of insecurity one feels with respect to one's skills has got to be fairly significant. The extreme analogy I use is a skilled typist who finds that every 2 years somebody comes in and changes the structure of the keyboard. You can't adjust all that quickly.

I think what this says effectively is that we have got to address the issue of making the work force sufficiently skilled to deal with this. I think that we are making considerable progress; that is, a number of our younger people are doing exceptionally well on the new technologies, and the number of people who have been able to learn and pick it up in middle age is, in my judgment, quite persuasive. It has been quite extraordinary.

The problem is that there is something fundamental going on out there, and we have to address broad economic policies to meet it. There are several which I have mentioned and will mention again. One is the issue of getting the budget deficit down and creating far greater private saving to be made available for new equipment to adjust to the new technologies that will enhance the rate of increase in productivity and raise the overall level of everyone's incomes on average.

However, I do think that the old notion that we could somehow finish our schooling in our teens or in our early twenties and that will hold us for our life's work is rapidly changing. The issue of ongoing education and especially on-the-job training is a crucial issue in getting human capital, as economists like to call it, up to levels which enable the physical capital to function. It is in that context that I think maximum economic growth can be enhanced. The Federal Reserve has an indirect role in that. The indirect role is to make sure that longer-term inflationary expectations are subdued so that the real cost of capital can be sufficiently low that the rate of capital investment can be at a level which is consistent with the maximum sustainable economic growth.

It is a very complex issue. I don't think it is easy. The degree of frustration that a significant part of our work force feels is real. It is legitimate. They should have considerable concerns for the policies which have created that type of phenomenon.

I therefore think it is essential that we focus on this in a manner which addresses the fundamental causes of the problem but recognize that, as difficult as technology is in many respects as we change the structure of our economy, it has propelled the United States to the highest standard of living the world has ever known.

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If we proceed in that regard, I suspect we are going to find that we will maintain that position well into the 21st century.

Chairman CASTLE. Thank you. Clearly that question didn't catch you by surprise. You have thought about those issues a lot. We appreciate it, because that is a very important subject to all of us.

You did touch on something that I would like to follow up on and which is a little bit different but interesting. That is, and I agree with the hypothesis, and that is that Americans must save more. That means as individuals we must save more, as I perceive it. My question to you is, what role, if any, should government play in that?

I realize we should spend less and be more conservative in terms of what we do, but should we be changing laws with respect to, for example, IRAs or pension plans, or even Social Security? The Kerrey-Danforth entitlement commission recommended looking at that. Chile and other places are beginning to go toward equity investments of Social Security type funds. Are these the kinds of things that Congress should be considering? Or should it be a matter of human restraint and living under the laws we presently have?

Mr. GREENSPAN. No, I think the Congress has a significant role in a number of areas. I would agree that the Kerrey-Danforth commission raised some very important issues. It is very difficult to look at the arithmetic of Social Security as we get well into the 21st century without recognizing that there are significant problems out there which have to be addressed. And the longer we wait to address them, the more difficult they are going to be to alter.

There has been considerable discussion of late about the prospect of trying to envisage how one can alter the Social Security/personal savings interrelationship. It is very important and very useful for the Congress to delve into that.

It is a very complex subject. I don't think there are simple ways out of that. But the arithmetic is daunting. If you don't get to it now, when marginal, relatively minor changes can solve the long-term problem, it is going to become extraordinarily difficult if you wait until after the turn-of-the-century to start looking at this sort of thing.

The one thing we are reasonably sure of is what the structure of our population is going to look like as we move into the 21st century. It is very difficult to argue that some of those various trends are not pretty much locked in cement in the sense that the deviations that a lot of those trends can take are really relatively minor. The crucial issue out there is it is difficult to make the problem go away by saying maybe the economy will change or something else will change. It is very unlikely.

The question of how one views the educational structure is important. What role government has in that I am not sure, but it is clearly an issue which I think has to be addressed. There are a number of corporations who have found it to their advantage to require a lot of their people, maybe once or twice a week, to take certain skilled training courses, either in-house or in some other place, specifically directed toward the type of work that they do. And I would suspect that on-the-job-training is going to become and should become important, if we are going to confront this particular

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technological structure that we are looking toward. We are going to have to do numbers of things to change the incentive structure of businesses to focus on this issue in the same sense that they now focus on long-term capital investment. They are going to have to start to look at their human capital in a way which they have not looked at people in the past. Human beings have got certain characteristics that will not be replicated by computers, and I think it is getting to a point we ought to start to recognize how important those things are.

Chairman CASTLE. Thank you very much, Mr. Chairman. I guess the recent chess match showed that computers aren't ready for human beings yet.

Mr. GREENSPAN. I was thinking of that.

Chairman CASTLE. Close, but not ready. I would like to ask dozens of other questions and maybe I will have the chance to, but in fairness, I think we should cycle the questioning a little bit. I will turn now to Mr. Hinchey who has, I am sure, some questions.

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

And thank you, Mr. Chairman for your testimony. I think as always, your testimony is not just interesting, but fascinating, I think very important, and it should be studied by all the Members of the Congress.

I would like to focus for a moment on what you said about the need for education and job training, and I think that that is undeniably true and this is something that has been observed by a number of other people, as a matter of fact, in recent years. In fact, I closed my eyes for a moment while you were speaking and thought I heard the voice of Robert Reich. In any case——

Mr. GREENSPAN. He and I actually agree on a lot of this, I must say, quite to the surprise of both of us.

Mr. HINCHEY. Well, I am not surprised, actually. I might have been, but I am not surprised after your testimony today. There are a lot of things that you said today which I think make a great deal of sense, not that other things you have said in the past haven't made a great deal of sense, but in my particular frame of mind, they make a great deal of sense.

My concern is that although it is undeniably true that our focus on education, that is, our Nation's focus on education, dating back to the time of our creation of the first system of free elementary and secondary education, has been a major if not the major driving force in stimulating economic growth and making us the economic—the number one economic engine in the world.

However, as you point out in your testimony, there are disturbing indications and trends in the present economic framework that may lead us to conclude that the lessons of the past may not in every instance be applicable to the present and indeed future circumstances. I observe, for example, that one out of every four BA graduates is now working; those who are working, are working in jobs that do not require the application of the learning that they have been exposed to. They are underperforming and they are underutilizing their skills.

I think that what we may be seeing is the creation of an economic and technological elite, which will be essential to the continuing economic progress that our country has to make, but at the

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same time, the danger that more and more people are going to be left behind and that education in and of itself is not the answer to our economic problems, if we include among our economic challenges the provision of economic opportunity for all of our citizens.

As you noted in your testimony, more and more people are indeed being left behind by this present economy. Others have used that metaphor, first coined I think by John Kennedy, of the rising tide lifting all boats, observing that this rising tide is lifting the yachts but leaving a lot of the smaller boats behind. And we have to ask ourselves what is it that we can do, how are we going to face this challenge; the challenge being how to ensure that the growing, enormous economic products of this economy and this society are being shared with some degree of equanimity with all of our citizens and not just by a select few. And I know that this is not entirely within the province of the Federal Reserve Board, but there are certain aspects of your responsibilities that do deal with this, and certainly this is of concern to you because you addressed it in your remarks, and I know that you think about these things.

Let me just ask you, what in addition to our concentration on education ought we be thinking about? Is it something—some thing, for example, as simple as raising the minimum wage to a standard of where it ought to be, had it followed its historical precedent? Should we be investing more in our economy to upgrade our infrastructure? The regional plan in the New York metropolitan area, for example, Regional Planning Agency just issued a report, I am certain that you are aware of it, that makes the observation that the 31 counties in New York, New Jersey, and Connecticut surrounding the metropolitan area are going to be in a state of increasing decay as a result of the decline of the infrastructure in that area, which is particularly observable in the New York City metropolitan region. Are there things that we ought to be doing to stimulate our economy in that regard, upgrading our infrastructure, investing in the future of our country so that, in fact, more people can share in these economic benefits?

Mr. GREENSPAN. Mr. Hinchey, let me just say one of the areas where I find myself in disagreement with my friend Bob Reich is on the minimum wage. There is a big dispute among economists recently as to whether in fact increasing the minimum wage significantly decreases employment, and there is, as you are probably aware, debate going on. I happen to come out on the side where the evidence is pretty persuasive that it increases unemployment and is not an effective tool.

The issue you raise about a significant portion of BA's, for example, working on lower skilled jobs has always been the case and probably will always continue to be the case in the same sense that there are always high school graduates who get to the top of the heap, too. There is some interesting evidence which does suggest that although we were confronted with significant technological change in the 1950's, 1960's and 1970's, we were not confronted with a significant spreading of income distribution; indeed, it is my recollection the income distribution actually tightened. And one of the reasons was that there was a relative plethora of higher educated people so that the supply did apparently effectively constrain

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the dispersion of the income distribution, and that is why I suspect that that still is the most effective tool.

If what we are dealing with is a fundamental problem, on which the evidence is overwhelming, that it is technology which is creating this dispersion of incomes, then the best and most effective way to address it is to bring up the skills of all segments of our population and in that sense contain it. I am not saying it is the only thing that can or should be done; I suspect there are other things. And it is a type of issue which I don't think we have ever really confronted in this Nation, and so it is easy to hypothesize lots of different solutions, a number of which are surely not going to work, but I do think that what we are observing at this stage is strongly suggestive that education is what the issue is. It might not be the total answer, but without it, I don't think we can confront this issue in an adequate manner and I don't think it is in the interest of this country to have a society in which there are very considerable increasing numbers of people who do not participate in the overall growth of the system.

Mr. HINCHEY. Well, that is my point exactly, that there are increasing numbers of people who are not participating in the overall growth of the system, and I was hoping that you might give us some direction as to what we might—direction we might pursue to try to deal with that problem.

Mr. GREENSPAN. Well, Mr. Hinchey, a major emphasis on what we used to call adult education is probably where the emphasis ought to be. The longevity of one's skills is becoming increasingly foreshortened because the capital stocks' age is shortening because of very significant turnover. What that implies is that you have to be continuously learning what it is you need to know on the job as the types of things with which you deal on a day-by-day basis are themselves continually changing.

I find that I have to sit down and learn a word processor. The reason I have to do that is over time, I won't be able to find any replacement parts for my old typewriter. The system will change and the skills that one must continue to enhance, I think, are there all the time. I mean I have had to learn a lot of the mathematics of the derivatives business. I spent an awful lot of time on what would ordinarily be termed education, and the reason I have to do it is I couldn't do my job if I didn't, and I suspect that is true of a very significantly increasing part of this population.

So my own guess is that if we can find a way to create a combination of work and learning that exists at all levels of the income distribution, I think we will finally come to grips with this issue. Unless we do something like that, I frankly don't know how we do it.

Mr. HINCHEY. Then at a minimum we should conclude, I suspect, that the Congress should not be decreasing funds for education at all levels but should in fact be increasing those funds.

Mr. GREENSPAN. Well, I don't want to comment on basically whether it is private or government, because there is no doubt that a very substantial part of this, no matter what government does, is going to have to be private because it is in the interests, the very clear interests of corporate America to do this, and we are already beginning to see it emerging.

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I would think that in discussing any governmental programs, it is important to ask ourselves does it help or does it hinder the overall process? But I don't think it is basically either a private or public solution. I think the question essentially is how do we do it best.

Chairman CASTLE. Thank you, Mr. Hinchey. We will come back for another round of questions if you have further. Let's go to Mr. Leach.

Mr. LEACH. Thank you, Mr. Chairman. I am just trying to parse your testimony, and it strikes me that what you presented us is a lot of good news in the immediate past, tempered by some large question marks for the immediate future: the good news being 60 months of sustained growth, inflation at less than 3 percent, which is extraordinary, and the transition occurring in the economy from one kind of industrial job base to another, which is rather impressive.

The tempered news is that the share of economic growth going to workers is declining, and I understand the Fed has studies indicating that in the 1980's, about 60 percent of economic growth was returned to the workers; in the last 3 years it has probably been about 53 percent, which is an awkward circumstance in the sharing of newly created wealth.

Second, you have indicated that there appears to be a not exactly bullish outlook on the economy this year with 2 to 2¼ percent fourth quarter to first quarter growth, and so the obvious question becomes does the Fed consider that adequate? Are we looking at the possibility of breakage, either months or on the quarterly basis, of sustained growth? Might we see a quarter or so of negative growth? And let me first begin with that.

Mr. GREENSPAN. It is very difficult to say, Mr. Chairman. The numbers that we saw for the month of January, obviously were dismal. It seems that February is doing a shade better, looking at some of the weekly data, but we have very little on the month of February to tell us much about that. I would be doubtful that we will get to negative growth, but there is no question that this is a soft economy. The fourth quarter was soft. The first quarter is soft. The issue of whether in fact we consider a particular growth rate adequate, as I tried to indicate in my prepared testimony, is not the way we come at the issue.

Our view—and I have said this many times before this subcommittee—is that our goal, the ultimate goal, is to maximize long-term sustainable growth. It is our judgment, and we think the evidence very strongly supports the view, that low inflation or stable prices enhances that. In other words, maximum sustainable growth is achievable when individuals and businesses no longer have to be concerned about what is going to be happening to prices over the longer run. As a consequence of that, we will respond to evidences of distortions which imply imbalances that could create significant contractions, whether the underlying growth rate is 2 percent, 3 percent, 4 percent, or 5 percent.

Mr. LEACH. I appreciate that. Let me just make a couple of observations, though, on this. One of the things, I think Congress has been looking to the Fed with the understanding that monetary policy to some degree has to accommodate fiscal policy and fiscal pol-

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icy to some degree drives monetary policy, and so we are all—have been hopeful of some sort of budget agreement that could lay forth the framework where there could be greater confidence of Fed action.

And I would only like to add, as one who strongly believes a budget agreement is important and can be achieved at this time with some question mark of the political will, that from the Federal Reserve's perspective, it has struck me that as I listened to the inside leadership kind of decisions on the budget this year, that lack of an agreement will lead to lower spending rates this year; that is, the alternative to no budget agreement is going to be a fiscal circumstance where there is going to be increasing uncertainty and almost no likelihood of anything except lower levels of spending. The reason I raise this is that from the Federal Reserve's perspective, the notion of waiting for a budget agreement may be less consequential than I would have thought a month or 3 or 4 or 5 months ago in terms of making decisions and whether to accommodate certain things in the economy. And so I think the impulse of fiscal stimulus is likely to be lessened without an agreement and, ironically, at least for this year, increased with an agreement. And I think that is something the Fed should take into consideration.

Having said that, I also think the long-term circumstance is one that has gotten very little attention in public policy debate, and that relates to the demographics of America. We are looking at this particular time, with the best competition for jobs we are likely to see for the next half century, with the 3.3 working Americans supporting every retiree, with the prospect in a generation that that starts to come down to two. If we don't have higher but sustained levels of growth in a highly competitive job market, I think we are in some difficulty. And the reason I say this is that one never wants to get in the position of competing with numbers. I mean, the President of the United States last week hinted that he would like to see 2.7 percent growth, and that if you have 2.7 percent growth, some of the deficit issues become much more manageable. A competitor can say I—they favor 2.8 or 2.9—so you can always leapfrog.

But it strikes me that given the competition for jobs, given the restructuring that is going on in the economy, that very substantial rates of growth above those levels that have been in existence the last decade could well be in reach. And I think this economic growth theme is one that we are all going to have to spend an awful lot of attention to, and I am wondering if you would care to comment on that.

Mr. GREENSPAN. Yes, Mr. Chairman. There is no question that when you are dealing with an economy as complex as ours, that it had better grow and grow at a reasonably good rate if we are not going to run into all sorts of significant types of problems. As you point out, we run into changing demographies which require ever-increasing notions of saving, investment, and economic growth to basically allow an increasing part of our population—as we move through the 21st century—to retire with the wherewithal to enable that to happen.

The short-term issue that you raise, namely the question of the issue of government spending slowing down quite significantly,

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which I mentioned in my remarks, is something that we at the Federal Reserve obviously are aware of and follow very closely. As I have said before this subcommittee on numerous occasions, we respond to fiscal policy as it affects the economy. In other words, to the extent that a budget agreement or significant curtailment in outlays or various different appropriations programs affect what is going on in the economy, we respond to that. We don't respond directly to what fiscal policy is, only to its consequences. And because of that, it is an issue of numerous different things which affect the economy, and therefore I wouldn't want to say that we do or should respond to any particular configuration of fiscal policy, except to recognize that it has a very important impact on what is going on in the economy. It has certainly been a factor in the short run, and if, hopefully, a budget balance deal can be reached, I think the effects will be quite extraordinary.

There is a deterioration in expectations that that is going to happen, and that is probably having some market effect. But I do think that the dramatic decline that we saw in long-term interest rates throughout 1995 was very significantly affected by the expectation that, contrary to the general cynicism which tends to pervade the financial sector, something real was happening and indeed something real has been happening. I mean, the deficit has been coming down and that has been a very major factor in the decline in long-term interest rates and, over the long run, a necessary condition for significant growth in this economy.

Mr. LEACH. I thank you, Mr. Chairman. My time has expired.

Mr. GREENSPAN. I just want to basically say that the importance of getting that budget under control in the intermediate period so that we are in a state after the turn of the century that we can address these broader questions, I think is terribly urgent.

Mr. LEACH. Thank you.

Chairman CASTLE. Thank you, Mr. Leach. Mr. LoBiondo.

Mr. LOBIONDO. Thank you, Chairman Castle.

Chairman Greenspan, you were talking about the progress that we have been making with working on the budget and the result that that has had with decline of long-term interest rates and the need to continue with that. Would you care to speculate if we were to reach an agreement that would result in a balanced budget, a true agreement, what that could or would mean in terms of lower interest rates?

Mr. GREENSPAN. I have said before, Congressman, that I expect that, as indeed a number of analysts have, there is probably 100 to 200 basis points in a significant credible agreement, and we picked up a chunk of that through 1995 as the market began to discount that particular agreement. If the agreement is finally reached and it is credible, we will find that long-term rates will fal quite a bit further. If we fail and there is an expectation in the market that we have lost interest in resolving this issue, we are going to find that long-term rates, as I indicated in public statements in the last month or so, could back up some. And therefor what we are observing is we have gotten a down payment in th marketplace in the expectation of a significant agreement, and we get the agreement, there will be more to come. But if we do no some of that down payment, I suspect, will have to be refunded.

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Mr. LoBIONDO. Thank you, Chairman Greenspan.

Mr. Castle, that is all I have.

Chairman CASTLE. Actually, I would like to ask some questions along that same line Mr. LoBiondo did. You said that before that—actually I have 200 points or 2 percent rather than 100, but you indicated if there was a significant credible agreement. Let me, by the way, urge you to look at the 6-year balanced budget which I and some others have proposed, without a tax increase, which the Concord coalition and others have endorsed. We hope that is a significant and credible agreement, and if you really like it, you can endorse it as well.

But not having the time to do that right now, let me ask you this question. I think I understood what you said, but I have wondered about this for some time, and that is a time line on all of this. Let's assume, setting aside kidding about what particular budget may be, we really do have a significant credible budget agreement—have we already entered into that phase, is this the down payment on that that we are talking about—and that we have had slightly reduced rates and the expectation during this last 6 months or so that we might get there and therefore interest rates, long-term interest rates are down a little bit now, and then if we don't get there, they might go back up, whereas if we do get there they might go down more. Can you give us some rough diagram of where we might be in that cycle or if I said it correctly?

Mr. GREENSPAN. It is very tough to, in a sense.

Chairman CASTLE. I realize that.

Mr. GREENSPAN. Let me say this. We brought long-term interest rates down from a little over 8 percent to a little under 6 percent over a little more than a year. Part of that was a changing sense of inflation expectations in the economy, I think for reasons which I outlined about the technological changes that are going on in our society which are bringing costs down. The rest is, in my judgment, anticipation of a significant improvement in our long-term fiscal stance.

It is very difficult to judge how much of that particular decline, which has backed up some as you know in recent days, was directly attributable to an expected budget agreement, how much was expectation that underlying long-term forces are improving on the inflation side. However one divides that, a fairly large part of the 2 percentage point decline that we saw is down payment on the budget agreement; and even if we don't get an agreement but there is a general expectation that fiscal restraint will be in place, we won't lose all the down payment. But we also will not get the rest of the decline, which is probably still in the pipeline and available, should an agreement of credible nature be passed and signed into law and implemented.

Chairman CASTLE. As you well know, the various budget agreements with which we have dealt here have been realistically 7 years, some 6 years, but basically 7 years. Obviously we don't balance the budget in the first year; we balance it in the seventh year, so we continue the deficit. But we have a fiscal policy in which we will have a less percentage of GNP being debt and a less percentage of the budget being interest payments, so that we start to address that. And as to that remaining part of the—and also it is all

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a series of variables, as you know, and as anyone who has really looked at it knows, the economy could do something completely different next year and completely offset whatever we do to try to balance the budget.

But I was just curious as to whether or not if we did do that if we would get the rest of that down payment, the full payment on it, almost immediately; or it would be a period of 6 or 7 years in which you probably would see an easing of interest costs upwards of perhaps 2 percent or whatever?

Mr. GREENSPAN. It depends on the structure of the agreement. Assume you locked into law a set of agreements which, unless the Congress did something, would get the deficit reduction, which I understand is, without entitlements not easy to do. Needless to say, my expectation is that the markets would look upon that with some degree of credibility, largely because it has become increasingly evident that the issue of budget deficits is not something which is taken as an unimportant issue anymore. People who advocate increasing the deficit are few and far between in this House and in the other House, compared to the way it was, say, 30 years ago. There has been a really quite dramatic change. For example, I thought the pay-go rules, which can be overthrown with a majority, are holding relatively firm, much to my surprise, and I think it is the culture that has evolved against deficits which has done that. Consequently, if you have comparable type of legislation in a 7-year agreement or a 6-year agreement or whatever it is we are talking about, the evidence of recent years probably works in favor of that being accepted as reasonably credible, and I think the markets would respond to that. But smoke and mirrors won't work.

Chairman CASTLE. Right. And I agree with that. I point that out to people back home when I speak to them, because I think sometimes we don't tell the story of the importance of balancing the budget. But when you apply it to people's mortgages, for example, or their car loans or student loans or just general credit loans, be it credit cards or other loans they may have, and you apply it against the budget of a household and you start to reduce it by a point or two of interest, frankly it is a significant impact, probably far beyond any tax reduction we could possibly propose.

I think it is important we all understand that and it is the reason I wanted to—and I think you more than anyone else is looked to as an expert in this particular subject and why it is so important to all of us.

Let me go on to just one more question—I will turn to Mr Hinchey on the same subject of interest rates—and that is the timing of all that you are doing. I think of all the things that the Federal Reserve does which would seem to get notoriety is your meetings in which the white smoke or the black smoke goes up th chimney, and you have cut interest rates or you have raised ther or you have kept them the same or whatever it may be. I can't usu ally predict what you are going to do, don't even really try to.

I did think that—I guess in 1994 there were more tax—more ir terest rate increases than I had expected in that particular yea now they seem to be going down. Sometimes I worry that mayl we adjust too quickly, we are too hyper—or the Fed is, the Boar of Governors is too hypersensitive to inflation or to the nuances

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the economy, and adjustments and shifts are made on too rapid a basis, and therefore people—it doesn't have time to flow through the economy and it doesn't have the impact that one would have expected it to have, or we may get into a situation in which we don't move quickly enough to go back to increasing again, as opposed to decreasing, whereas if we kept them level for a while it would be more obvious what you have to do.

I was just interested in your comments on all that. I am not suggesting I am correct, but those things have gone through my mind as I have watched the transactions of the Board over the years.

Mr. GREENSPAN. Well, Mr. Chairman, that is one of the key issues which we are concerned about as well. In theory, if one could find an economy in which you could lock in a specific interest rate and it would be the equilibrium interest rate which would prevail for all time and one needn't do anything beyond that, that would be just fine. However, in a free market, complex society, the type that we have, the dynamics of it coupled with the fact that people get excessively exuberant on occasion and inordinately depressed on occasion, you get a cycle that gets built into the system. What we try to do is to try to clip the top and the bottom, so to speak, to flatten it out to the extent that we can on both sides, and that is not an easy thing to do because it implies that one is forecasting how the economy is going to develop.

We are trying to understand the dynamics of the system which sometimes says don't change rates for a long period of time. In 1993, for example, we hardly changed the rates at all. In 1994, we changed them quite often. In earlier periods, we did it in small increments quite often, in still other periods we did it fairly rarely, but in large chunks.

It depends to a large extent what type of problem or issue you are confronting. There are different types of policies that have to be addressed to different types of situations, and that is basically the major part of our analysis and Federal Open Market Committee deliberations in which we focus on those types of questions.

Chairman CASTLE. Thank you, Mr. Chairman.

Mr. Hinchey.

Mr. HINCHEY. Mr. Chairman, in the context of the discussions here about the budget deficit, let me invite your remarks about—or your comments on an issue that was raised in an article that was in the *Washington Post* this past Sunday. The article makes a rather convincing argument that President Clinton's 1993 deficit reduction plan has been very instrumental in improving the economy. It cites a number of facts, notably that in November of 1992, the annual budget deficit stood at nearly $300 billion. It is now at $164 billion. In 1992, inflation was 3 percent. In December of 1995, it was at 2½ percent. Unemployment was at 7.3 percent, and has dropped to 5.8 percent. Mortgage rates have dropped from 8.29 percent to 6.94 percent, and finally, as we all have witnessed, the Dow Jones Industrial Average increased from 3,244 to 5,503.

You have in the past commented on that 1993 deficit reduction program. To what extent do you believe that was instrumental in promoting the kind of improvements that have been cited in this article on the economy?

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Mr. GREENSPAN. Well, Mr. Hinchey, I said at the time without getting into the composition of how the deficit reduction was implemented—that were that to occur, that is, a deficit reduction of the type that had been talked about, I would have expected that we would have seen lower long-term interest rates, improved economic growth and a number of the issues that you cite.

Without getting into the question of whether the mix was right or anything else like that, the fact of the deficit reduction in and of itself was very positive and an unquestioned factor in contributing to the improvement in economic activity that occurred thereafter.

Mr. HINCHEY. You have said that the economy the last quarter was very soft and the recent indicators were dismal, to use your phrase a moment ago. In retrospect, given the circumstances that you see existing today in the economy, is there anything that you would have done differently in 1994 and 1995? Would you have raised interest rates less rapidly, perhaps, than you did?

Mr. GREENSPAN. No, I think not. Let me say why, very specifically. The type of pattern of problems that were emerging in 1994 were the classic business-cycle expansion, inflation-prone type of economy. It is the type of economy which, if interest rates were kept at the levels that they were in 1993, would have almost surely engendered a huge increase in inventory excess, probably kept the economy at very strong levels through a goodly part of the first half, probably maybe more, of 1995, but we would have run into a very severe inventory excess and, in my judgment, probably other forms of excess, which would have created a very marked cyclical decline and ended like so many previous business expansions have ended.

In retrospect, I think we cut the top off of that expansion and in so doing prolonged the recovery, hopefully, for quite a considerable period of time. I do not believe that long-term interest rates would have come down as much as they did, even with the budget agreement, as they did through 1995, because I don't think inflation expectations would have fallen in any material degree as they did. We would have had a situation which by now I think would have been pretty much intolerable.

So if we look back and say would we have done it differently o if we could go back and change the pattern, I don't really see wher we would have done it all that differently, and indeed I think th timing struck me as pretty reasonable. The way we worked it ou sometimes we were a little behind the curve, sometimes we wer a little ahead of it, but on average I thought it worked out reason ably well.

Mr. HINCHEY. You say you would not have expected inflation e pectations to have fallen, and I think that that is a very poigna phrase in this context because there was in fact inflation expect tions. There was no real inflation in the economy. One looked ve hard to find evidence of inflation, and while obviously some peop could see evidence, a lot of others found none. So your actions we based upon inflation expectations which in fact might have be illusory.

Mr. GREENSPAN. No. The evidence is pretty persuasive.

Mr. HINCHEY. What is that evidence?

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Mr. GREENSPAN. Let me give you an analogy. There is a sense in which you can argue that if the river which runs by your shore has got a flood crest coming down and you take sandbags and you build them all up and the crest goes by, and the screaming, the yelling that you were going to be flooded never happened, and you could basically say well, look, we didn't get flooded, we didn't have to go through all of this activity—well, the sandbags are basically the interest rates.

The reason we know that had we not moved we would have been in trouble is that we were beginning to get very significant evidences of the type of stress in the economy which historically has almost invariably preceded significant actual inflation accelerations. The lead time on the deliveries of products, for example, which had been quite subdued through 1993 and earlier, started to rise very dramatically. Overtime hours in manufacturing and elsewhere went up quite dramatically, evidencing the type of strain that one usually foresees.

Had we not raised rates in that type of environment, history tells us, with very strong conviction, that we would have been confronted with an inflationary problem with prices accelerating and the economy running into trouble. I don't know whether it would have been in late 1995, whether it would have been now, I am not sure. But that it would likely happen was too high a probability for us not to confront that. I think it would have been irresponsible on our part not to address the problems that we saw emerging.

Mr. HINCHEY. Well, the analogy about the river is interesting. Rivers, I guess, are in the eye of the beholder. Many of us looked at that same river and saw a mere trickle of a stream, not threatening anyone at all, and placing of sandbags up around such a benign trickle of a stream seemed in themselves extreme, so——

Mr. GREENSPAN. I put my scuba diver stuff on, so I got a good look at it.

Mr. HINCHEY. Well, many of us were very high and dry and in fact feeling very thirsty during that period of time.

Chairman CASTLE. Chairman Leach.

Mr. LEACH. Well, I think what we want you to do is now put on /our astronaut gear and look to the future. It strikes me there is ibsolute consensus in both political parties that we would like to ee greater economic growth and greater sharing of the wealth. The reat question at this time is how we achieve it. And here I just vant to leave with whether or not you—the question of are we oing to achieve it through greater spending of money we don't ave or are we going to achieve it more likely through a little more estraint in Congress and some long-term planning. And that is eally the question we in Congress face. And that comes back to ne—whether or not we can achieve a budget agreement, whether r not we can create certainty in the economy on that basis.

Frankly, my own guess is we will have a little more restrained >ending this year without an agreement because of the way Con- ess controls the appropriations process, but that we will have eater benefits with an agreement because we will have longer- rm certitude.

And so the only question I would leave for you is can you tell us hether we will have greater economic growth with an agreement,

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without an agreement, with greater restraint or without greater restraint, and isn't that the real message the Federal Reserve Board has for the Congress of the United States?

Mr. GREENSPAN. I would say over the long run that a credible budget agreement, or more importantly the implementation of an important budget balancing agreement, would enhance long-term growth conceivably significantly. If we fail to do that, if we continuously have heavy drains on our aggregate private saving through government deficits and are required to import saving from abroad to finance our domestic capital investment, I think we cut the path of long-term growth by a not immaterial amount; and consequently, while it is hard to know exactly where or how or what the numbers are, I have very little doubt that there is something very important in play here.

Mr. LEACH. Thank you, sir. I have no further questions.

Chairman CASTLE. Thank you, Chairman Leach.

I would just like to ask a couple of random questions in an effort to try to get a few more things in, if we could, that I think are important.

I keep going back to this whole balancing of the budget, which obviously I believe is very, very important, and you have indicated the same. And the question I have is the Consumer Price Index, the CPI figure, which is in practically all—is at least faced in all of the budget plans which I have seen. A lot of them don't adjust it at all, or adjust it very minimally in accordance with what the Bureau of Labor statistics says it has already done. Others adjust it quite significantly, up to I think .66, a two-thirds of 1 percent reduction per year. This obviously impacts certain payments which go out by the Federal Government which would reduce those expenditures, most notably Social Security, but other pensions of Federal employees and a variety of other entitlement type programs. It also impacts our revenues because they are adjusted by inflation and so we would see them also impacted in a sense that would help balance the budget, because if you don't have that adjustment, then you are going to receive more revenue.

I believe—I don't mean to misstate this, but I believe you have stated on occasion that you also have concluded that the CPI is too high and perhaps should be looked at. I don't know where you are today on that subject, but I don't think it is one that we should ignore, for better or for worse. It is one that we as a Congress should at least be aware of. I am not sure if any of us have much desire to vote on it one way or another, but I think the awareness factor is very important; and as an expert, I would just like to ask your opinion of the status of the CPI today as you see it.

Mr. GREENSPAN. Well, Mr. Chairman, there are two issues, and I emphasize them as being distinct because I hear too often what appears to be a mixing of two separate tracks: Track number one which does not require any legislation except funding of the Bureau of Labor Statistics so that they can proceed with major changes in the way they calculate the index, which will remove some of the bias. At the moment, I think in the President's budget, they have calculated that the CPI, strictly for technical reasons removing some of the biases in the system, will be reduced by an average .3 percent a year after a certain period of time as a consequence

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of superior statistical techniques which remove the bias. That will automatically affect the indexing of retirement programs and the revenue income tax, which are indexed, and other elements of our Federal system which are indexed, as well as all the private con- tracts outside which are linked to the CPI. I say that requires no legislation and I put that aside.

There is a wholly different issue which gets to the point. No mat- ter what the BLS does, so long as they do not revise the data his- torically and hence be able to pick up new products, for example, which only get picked up late, and so long as they have a fixed weight system and a number of other things which they do to cal- culate the index, you will never be able to statistically remove from the Consumer Price Index enough of the bias which enables it to be truly a cost-of-living index. And indeed, the BLS says in its dis- cussion of the CPI that it is not a cost-of-living index.

Nonetheless, I interpret the indexing that the Congress imple- mented with respect to all of these programs to keep retirees whole with respect to changes in the cost of living, real changes in the cost of living, and to do similarly to the tax structure.

Therefore, a wholly second issue is something which does require some legislative initiative. That would be, for example, to say that on the basis of a commission of experts meeting every year to de- termine that as of this year or last year that the bias in the CPI that had not been corrected by the statisticians in the BLS was X. Then it would be appropriate for a new index calculated as the CPI minus X to be employed as a cost-of-living index to escalate all gov- ernment programs, retirement and tax.

Chairman CASTLE. Thank you, Mr. Chairman. That is interest- ing. On a somewhat related subject to that is what it means to ndividuals.

I would like to ask another question, because sometimes I think he issues of interest rates and debt come down again to the fami- ies and of the individuals in this country; and that is, the way hey view it as opposed to a monetary policy that we may talk ibout in this subcommittee or in the board room of the Federal Reserve.

And one of the things that interested me in a conversation you nd I had in a private meeting one day was the whole business of ndividual consumer debt and credit cards and what is happening ı the country. My father, who is no longer with us, essentially ever really had credit cards or used credit cards. They were round but he just never got in the habit of using them, and I ink that is the way a whole generation lived. And now we are the point where a lot of us are borrowing up to the limits and king on new credit cards or whatever, and there is a belief, I ink by some that the long-term consequences of this to individ- ıls and maybe even to the economy as a whole is potentially nega- ve if we don't watch it carefully and keep it under some control. would be interested in your views on that if you wish to share em.

Mr. GREENSPAN. Credit cards have become ubiquitous, to say the ıst. The numbers that people tell me are issued each year are so ge that I can never remember the number. I think we all see the traordinary number of cards that just keep coming in the mail.

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The problem that they have created is that, while they have clearly served a very important purpose and they have been very useful to consumers, there is a limited number of people who tend to use the cards up to their limits and then keep jockeying the limits and keep everything in play until all of a sudden one day they are broke. And they go not from 30-day delinquencies or 60-day delinquencies to bankruptcy; they go from paying on time to bankruptcy.

Now, the way that most issuers of cards have endeavored to try to prevent that from occurring is that there are central clearinghouses in various different areas that exchange information. And if it were immediately current, in other words, if they literally knew exactly what everybody was doing as of 5 minutes ago, then clearly we wouldn't be getting into these relatively minor situations where you find an increase in bankruptcies in which people go off the cliff without any evidence beforehand that they are in trouble. The answer to this is probably technology in the sense that the types of things we have been talking about earlier today are enabling us to get ever closer to real-time transactions and real-time evaluations so that it would not be possible for somebody to be playing games with borrowing against one card to pay off another because it would become immediately evident and the whole system would become quite restrictive.

It is not an issue that is a big problem. I don't want to say here that we are on the edge of some serious issue. We are not. It is true that delinquencies have risen on credit cards whereas they have not risen particularly in other consumer debt or in mortgage debt. It is certainly the case that personal bankruptcies have risen, and it is probably in part related to the extent that we have cards. It is not a serious issue at this stage, but it could be. It is important to be looked at, and I do think that one of the reasons why recently we have seen evidence of certain credit card issuers beginning to tighten up is precisely this issue. We are going to find that, after we get over this particular episode, that there will be more rational use of cards and greater control. And as I said before, they are clearly a very extraordinary advance in consumer finance, and it is not something we should forget. It is very useful to the average household.

Chairman CASTLE. They are an advance when you are using them but are a little more questionable when you are trying to pay them, I might say, on a personal level. Are you suggesting there be an electronic clearinghouse? Will that be the way that will function so that debt as a whole can be watched as opposed to individual card debt?

Mr. GREENSPAN. If you look into the 21st century and ask what is our financial system going to look like and what is the central bank going to look like, I think we will move increasingly toward a type of system which will be closer and closer to a real-time transaction settlement clearing system in which everything occurs at the same time. That means that the float, which is very substantial, will eventually be squeezed out of the system to a greater or lesser extent. That is a long way away. It is not imminent, but that is the direction in which we are going.

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Indeed, when we look at another issue, which is not quite related to this but very important to us, the whole question of systemic risk, one of the most important ways in which we can reduce the possibilities of a significant breakdown financially, internationally, domestically or whatever, is to remove a good deal of this float from the system. Indeed, a lot of it is already coming out.

They are moving in the direction which will make everything electronic in the payment system. That will be a major contribution to the effectiveness of finance. This particular type of central clearing issue for credit cards is likely to be part of the overall system.

Chairman CASTLE. Thank you. One final question and then we will see if any of the others have final questions to ask.

We have been hearing a lot more lately about a flat tax. We also hear in our budget proposals that we may have a capital gains tax reduction. We also hear of a tax break for children. These all have huge implications to the economy of the United States of America, to dealing with the revenues of the United States as well as balancing our budget. I was wondering if you would be willing to make a comment concerning whether you conclude that we need any changes in our present tax policy or there are certain changes that you would prefer more than others or some which are anathema such as one that might not work at all.

I would like to put on record your thoughts about basic tax policy as it exists now or might be changed in the near future, because we as Members of Congress may be dealing with this, if not this year, sometime in the near future.

Mr. GREENSPAN. Mr. Chairman, I don't mind discussing in detail some of the technical aspects of a lot of these programs, and I am sure you will have me before the subcommittee doing just that at some point. The issue, however, is a very complex one which gets far beyond the question of really the technical aspects of taxation. The reason I say that is when we look at our tax system, we are reflecting some of the fundamental values in our society.

I have recently been reviewing, for example, the degree of progressivity in taxes over the last couple of hundred years to get a sense as to why it varies from period to period. What is very clear s that it is the underlying view of whether in fact the private market system is perceived of as just or whether it is perceived of as exploitive. In the periods where it is perceived of as exploitive, you have a high degree of progressivity. Those where it is perceived of is just rewards, taxation is perceived of as government onfiscation.

There is a very broad set of issues here, and I think really to talk n terms wholly of what the economics are, is to miss a lot of these ssues. I would just as soon, as part of the central bank, at this articular point to stay out of this particular discussion. At the moment, it is really talking about fundamental values, fundamental olitical values in the good sense, and that is not something which think that we at the central bank should basically be involved ith.

Chairman CASTLE. That is a very good answer, Mr. Chairman. am not sure I totally agree with whether or not you should be volved in it, but we will let it go for now.

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I appreciate your earnest attempts to answer all my questions. Mr. Hinchey.

Mr. HINCHEY. We have kept you awhile, Mr. Chairman. I want to pose one last question in sort of a larger context. We have been talking about the deficit today to some extent and the impact of the deficit on the economy and what might happen to the economy if the deficit came down, and so forth. In fact, the deficit is down substantially in real terms and also as a function of the gross domestic product. The deficit today, I think, is about 2.5 percent of GDP whereas just a few years ago, at the end of 1992, it was 4.5 percent of GDP. The political rhetoric is changing also, and it seems to be changing at least from moving away from denying people benefits in the society to talking more about growth.

That to me raises a question about this deficit and our present economic circumstances in its historical context. We have a national debt now of almost $5 trillion, most of which was accumulated during the decade of the 1980's, ostensibly in the struggle during the cold war, the struggle against the Soviet Union. That national debt is about, as I understand it, 60 percent of GDP. At the end of the Second World War we had a national debt of about 120 percent of GDP. We didn't embrace a program of austerity at this particular moment to deal with that particular circumstance, but, rather, in the Truman and the Eisenhower Administrations we moved forward with the interstate highway system. We created the GI Bill of Rights, and we sought to expand opportunities within the society and to promote growth and to stimulate economic development in transportation and other areas.

None of that discussion seems to be relevant today, or at least very few people are talking about addressing our economic problems in the context of promoting that kind of growth although Mr. Buchanan, I believe to his credit, recently has said something to the effect that no one can tell me that there is no relationship between the deficit and the loss of jobs that pay a good salary; he said $40 to $50 an hour. They would be very good jobs indeed, but in any case, the loss of jobs that pay a decent salary.

My question to you is, should we be in this context of, if we continue to talk about the deficit and the debt and that continues to dominate our political discussion, should we be talking about it in the context of austerity, taking people's health care away, cutting back on education, removing financing from environmental protection? Or should we more profitably be talking about it in the sense of economic growth, increasing opportunity, expanding the economy?

Mr. GREENSPAN. First let me put a little perspective on the immediate post-World War II issue. We came out of the war and the Great Depression of the 1930's with a huge pent-up demand which created an extraordinary period of very strong growth for a protracted number of years. A not insignificant element in that was the fact that the population was growing fairly rapidly, that the labor force and household formation, for example, were moving fairly rapidly as we moved into the 1960's and the 1970's. And as a consequence of that, with labor force growth probably twice wha it is now, you actually had a very dramatic increase in overall eco nomic growth from which very large revenues, Federal revenues

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were achieved. Where at the same time, even though we had a very large military budget, a goodly part of the retirement programs which we put in place in that period did not take hold until a couple of decades later. So you had a situation there in which you kept the budget balanced. And with nominal GDP rising reasonably fast, even though inflation wasn't a big issue, the debt level did not increase; but as a ratio to gross domestic product, it came down very dramatically.

In today's environment we do not have the demographics which enable us to have the type of growth in employment and labor force and household formation which we did back then. So we are fighting the demographic problem, which is not insignificant.

If we knew for certain that we could create a major increase in economic growth, yes, that would resolve our budget problems in the same way that it did back then. We cannot know for certain. But we can know for certain that, if we don't address these issues and we get the types of numbers which research operations are indicating—for example, for Social Security in the year 2030—we are going to have some very serious problems in this country.

So my judgment is we try to do both. We recognize that getting increased growth will be very helpful for a lot of reasons in this country. But we also have to recognize that it is not easy to increase growth and that, if we count on it and fail, we are putting at risk too much of the standard of living of this country.

So I would say to you that in the event that you aggressively address the expenditure side of the budget and get the deficit down under very modest economic assumptions, and find after the fact that you are also able to get economic growth moving at a fairly pronounced rate, and suppose this issue I raised earlier about the technology kicks in sooner rather than later, we will be in a very fortunate position. Then we will have far more in the way of resources both private and public to do lots of things.

But my own judgment is that is not a foregone conclusion. I don't know what the timing of it is, but if we count on it and we are wrong and we don't do anything, I think the costs are wholly unacceptable.

Mr. HINCHEY. I thank you for that. I would just suggest that, insofar as the demographics are concerned, that there are substantial similarities between the demographics of today and those of the post-World War II era, and they exist in this country in a very dramatically increasing underclass in which there is extraordinary pent-up demand, and in the shrinking middle class and the uncertainty that exists as a result of declining job availability, and that unless we deal with those problems, unless we deal with the problems of job opportunities for what is rapidly becoming almost half of the American population, then we will have placed ourselves in a very serious situation indeed. Those demographics when you consider them in that way, I think, are not too dissimilar from the circumstances that existed just after the end of the Second World War.

Mr. GREENSPAN. I think that the issue of job opportunities and the reduction of the pervasive sense of job insecurity is an issue which I think we have to address and address as expeditiously as we can.

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Mr. HINCHEY. Thank you.

Chairman CASTLE. Thank you, Mr. Hinchey. Mr. Leach or Mr. LoBiondo.

Mr. LOBIONDO. I have a brief question.

Gold has been used by many as an indicator of inflationary pressure. Yesterday it was trading at just over $405, and we have seen even higher than that this year. Last week Ed Baney, the President of the Philadelphia Federal Reserve, was quoted as saying, there are many nonmonetary influences on the price of gold, and he wouldn't necessarily read any monetary or inflationary implications into what is happening in the price of gold. To look at the price of gold to automatically derive an inflationary message from it, he thinks, just isn't compatible with our experience.

Could you please tell us what kind of message we should get from these rather high gold prices?

Mr. GREENSPAN. My colleague here just indicated to me that the price of gold is now $399 bid, which is down significantly. I have said before this subcommittee on many occasions that I think the price of gold itself is a very good indicator, useful indicator of inflationary expectations. The reason is that virtually all of the gold that has ever been produced still exists in the world. Small changes in production or consumption in any particular year do not really affect that base.

As a consequence, what you are looking at over the years is a metal which people have classically run to in periods where there have been concerns about the nature of the currency or paper money, so to speak. It is important for us to know when inflationary expectations are rising and when they are falling. Indeed, we can do that in a number of ways, of which gold is a very important indicator.

I don't want to say in any particular instance exactly how we evaluate it, because that is getting into the details of how we look at the world as a whole and the degree of potential problems which might or might not require central bank policy to adjust to it. But I would say to you that we do watch the price of gold, as indeed we watch a lot of other indicators, because we find that they are very useful in giving us an insight into the overall process, namely the inflation process, which over the years has been very detrimental to the structure of our economy when it has been pervasive and very detrimental to growth.

So we are concerned when we see the gold price fluctuate significantly, because it is probably telling us something. And we better find out whether it is telling us something about inflationary expectations that are changing or whether there are, as there occur on occasion, short-term technical factors which create changes in the price which are not necessarily directly related to change in inflation expectations.

Mr. LOBIONDO. Thank you.

Chairman CASTLE. Does any Member of the subcommittee have anything further they wish to ask or state?

If not, Mr. Chairman, let me again thank you for being here. You have always impressed me when you come here at your willingness to listen to our questions and actually answer the questions. That

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doesn't always happen when one deals with politicians, and we appreciate that.

I haven't seen a question on the economy that you could not answer. I have seen some that you would not answer, but maybe next time we will get some of those answered as well. I think your appearance here and before the Senate, which I believe is tomorrow, is reassuring to all of us who do have questions. We hope we represent our constituents when we ask these questions to make sure we understand how the economy is doing, what steps are being taken at the Federal Reserve. While it is somewhat of a mystery to a number of individuals, it is vitally important to this country.

We thank you again and wish you the very best of luck in the future and look forward to having you before us the next time around in 6 months or so. Thank you.

The subcommittee stands adjourned.

[Whereupon, at 4:20 p.m., the hearing was adjourned.]

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# A P P E N D I X

February 20, 1996

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House Committee on Banking and Financial Services

*Subcommittee on Domestic and International Monetary policy*

Humphrey-Hawkins Hearing with testimony from Alan Greenspan, Chairman of the Federal Reserve Board, February 20, 1996, Room 2128 Rayburn House Office Building

**Chairman Michael N. Castle's Opening Remarks:**

The Subcommittee will come to order.

This subcommittee is meeting today to once again receive the semi-annual report of the Board of Governors of the Federal Reserve System on the conduct of monetary policy and the state of the economy as mandated in the Full Employment and Balanced Growth Act of 1978.

Chairman Greenspan, it is always a pleasure to welcome you to the Subcommittee on Domestic and International Monetary Policy of the House Banking and Financial Services Committee. Today, we have fewer members than usual because the House is in recess. Nevertheless, those who are present look forward to our exchange. As usual, any prepared remarks submitted by members will be accepted for the record.

Since our last hearing, we have seen the Fed continue on its new course of gradually lowering interest rates. Currently, the US economy is in its sixtieth month of economic expansion, approximately ten months beyond the average expansion. While we welcome continued expansion, concern tempers our enthusiasm. The economy slowed to a growth rate of 1.4% for the first three quarters of 1995; this growth rate is below Fed targets. Pundits divide on whether the "soft landing" to slower growth has been achieved or the economy is being pushed back into recession. Some dispute whether the economy is softening too much, or alternatively, we are merely experiencing a current inventory draw-down cycle which will be succeeded by increased demand and additional non-inflationary growth. Interpreting the indicators at these junctures is a chancy business, so we welcome any comments you care to make on what you see ahead with regard to inflationary pressures, the international value of the dollar and the future of interest rates, to name a couple of items.

As we are in the run up to a national election, we would be most interested in hearing your opinion on the impact of a balanced budget agreement on the financial markets and on inflationary expectations both here and abroad.

Your Chairmanship of the Federal Reserve continues to be marked by unprecedented openness both with Congress and the public. Indeed, you have personally become a symbol of probity and stability that markets and the public look to for reassurance

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on the economy. We appreciate this and look forward to your timely reappointment.

Finally, the Humphrey-Hawkins bill sets goals for the Administration and the Federal Reserve System to pursue that are outdated, inconsistent or conflicting. Most of the bill's mandates have been more honored in the breach, especially those that apply to the Executive. To the extent that these inconsistent goals actually hamper the Fed's ability to optimize its operations, we may have an opportunity to revisit this legislative charter in conjunction with the other house. We might then consider improvements or adjustments to your mandate that would make monetary operations more effective.

We are prepared for a lively discussion.

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**Statement of Congressman Frank A. LoBiondo**
**Subcommittee on Domestic and International Monetary Policy**
**Committee on Banking and Financial Services**
**Humphrey-Hawkins Hearing**
**February 20, 1996**

I would like to welcome Chairman Greenspan to the Subcommittee again. I look forward to hearing the Chairman both today and later this summer once he has been reappointed and confirmed as head of the Federal Reserve Board.

This is the third time that I have had the pleasure of participating in the semiannual Humphrey-Hawkins hearings. One thing that I have learned from the two previous occasions is that there are many different statistics and indicators used by economists to predict future trends in our economy. I have further found that many of these predictions can be likened to necromancy. That is why having the Chairman to testify is so very helpful and enlightening.

In July, Chairman Greenspan told us that inventory overhang had been substantial in several important areas, and that "attempts to control inventory levels triggered cutbacks in orders and output that inevitably put a damper on employment and income."[1] Last Friday, the Federal Reserve reported that industrial production had fallen by .6 percent in January. While some of this is attributable to the severe weather, I would like to know how much of this the Chairman would attribute to continued inventory cutbacks.

In its recent decision to reduce both the federal funds rate and the discount rate by 25 basis points, the Federal Open Market Committee cited "moderating economic expansion." This decision has provided additional impetus to a discussion over what the appropriate rate of economic growth should be. Last fall, different people began to argue for a sustainable growth rate of anywhere between 3 and 4 percent. In the past week, we have heard another call for a "debate" on what is the appropriate rate of growth for the economy.

At first glance, a call for higher growth and more jobs seems like an excellent idea that benefits everyone. However, closer examination of this issue in the context of monetary policy brings many other questions to the surface. One of the most significant impacts of higher growth estimates occurs in the budgetary process. By predicting higher "sustainable

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[1]Alan Greenspan, Chairman, Board of Governors of the Federal Reserve System, Testimony before the House Subcommittee on Domestic and International Monetary Policy, July 19, 1995, p. 3.

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growth" which implies more economic development without surges in inflation that increase the cost of government borrowing, it becomes very easy to balance the budget in seven years. Taken in concert with calls for higher levels of government expenditure and taxes, the problem with this approach is that is has been tried before and proven to work only on paper and in rhetoric. We quickly learned the opinion of the bond market in this debate when it responded with falling prices and increased interest rates.

I am deeply concerned about the economy in my district in Southern New Jersey and am working to promote economic growth in the region. According to data from the Federal Reserve Bank of Philadelphia, we have seen unemployment rates fall from double digits in 1994 to 8.9 percent in the Vineland-Millville-Bridgeton area and to 8.6 percent in the Atlantic City area. While this is very encouraging, we must do whatever we can to bring this rate down even more. I do not believe, however, that continued deficit spending will help the situation. Even John Maynard Keynes did not support the notion of constant government interference. As he wrote in 1934, "I see the problem of recovery [from the Depression] in the following light: how soon will normal business enterprise come to the rescue? On what scale, by which expedients, and for how long is abnormal government expenditure advisable?"[2] I believe that it is clear to most of us that deficit spending of more than $200 billion each year, in conjunction with $4.9 trillion in debt, qualifies as abnormal and that it is no longer advisable to continue down such a path.

Chairman Greenspan has told us repeatedly that "[e]conomic prospects for the long run will be further enhanced if Congress and the Administration succeed in making further progress in reducing the federal budget deficit."[3] Rather than debating whether monetary policy should allow a growth rate of 3 to 4 percent which might cause the economy to overheat and thereby spur inflation, I believe that we should finish the work that we have begun on balancing the budget and allow the private sector to come to the rescue and operate without the market distortions caused by massive government borrowing and spending.

I have several questions for Chairman Greenspan and look forward to his answers. Thank you, Mr. Chairman. I yield back the balance of my time.

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[2]John Maynard Keynes. New York Times, June 10, 1934, *quoted in* Robert L. Heilbroner, The Worldly Philosophers 277 (Updated sixth ed, Touchstone 1992).

[3]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, Feb. 21, 1995, p. 4.

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Statement by

Alan Greenspan

Chairman

Board of Governors of the Federal Reserve System

before the

Subcommittee on Domestic and International Monetary Policy

Committee on Banking and Financial Services

U.S. House of Representatives

February 20, 1996

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I appreciate the opportunity to appear before this Committee to present the Federal Reserve's semiannual report on monetary policy.

The United States economy performed reasonably well in 1995. One-and-three-quarter million new jobs were added to payrolls over the year, and the unemployment rate was at the lowest sustained level in five years. Despite the relatively high level of resource utilization, inflation remained well contained, with the consumer price index rising less than 3 percent--the fifth year running at 3 percent or below. A reduction in inflation expectations, together with anticipation of significant progress toward eliminating federal budget deficits, was reflected in financial markets, where long-term interest rates dropped sharply and stock prices rose dramatically over the year.

This outcome was influenced in part by monetary policy actions taken by the Federal Reserve in recent years. Responding to evidence that inflationary pressures were building, we progressively raised short-term interest rates over 1994 and early 1995. Rates had been purposely held at quite low, stimulative levels in 1993. We moved in 1994 to levels more consistent with sustainable growth. Our intent was to be preemptive--to head off an incipient increase in inflationary pressures and to forestall the emergence of imbalances that so often in the past have undermined economic expansions.

As we entered the spring of 1995, it became increasingly evident that our policy was likely to succeed. Although various price indexes were rising a bit more rapidly, there were indications that pressures would not continue to intensify, and might even reverse to a degree. Moderating overall demand growth left businesses with excess inventories. In response, firms initiated production cutbacks to prevent serious inventory imbalances, and the growth of economic

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activity slowed substantially. With inflation pressures apparently receding, the previous degree of restraint in monetary policy was no longer deemed necessary, and the Federal Open Market Committee consequently implemented a small reduction in reserve market pressures last July.

During the summer and early fall, aggregate demand growth strengthened. As a result, business stocks of raw materials and finished goods appeared somewhat better aligned with sales. In sum, the economy, as hoped, appeared to have moved onto a trajectory that could be maintained--one less steep than in 1994, when the rate of growth was clearly unsustainable, but one that nevertheless would imply continued significant growth in employment and incomes.

Importantly, the performance of the economy seemed to be consistent with maintaining low inflation. Despite the step-up in growth and the relatively high levels of resource utilization, measured inflation abated a little, and many of the signs that had been pointing toward greater price pressures gradually disappeared. Expectations of both near- and longer-term inflation fell substantially over the second half of the year, as gauged by survey results as well as by the downward movements in longer-term interest rates. The fall in bond rates was also encouraged by improving prospects for significant progress in reducing the federal budget deficit. The declines in actual and expected inflation meant that maintaining the existing nominal federal funds rate would raise real short-term interest rates, implying a slight effective firming in the stance of monetary policy. Such a shift would have been particularly inappropriate because economic growth near the end of the year seemed to be slowing, and some FOMC members were concerned about the risks of

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prolonged sluggishness. Consequently, the Committee decided in December that a further reduction in the funds rate was warranted.

Information becoming available in late December and January raised additional questions about the prospective pace of expansion. The situation was difficult to judge, partly because economic statistics were more sparse than usual, owing mainly to the government shutdowns. In addition, harsh weather in January disrupted both data flows and patterns of economic activity. But several indicators--including initial claims for unemployment insurance, purchasing managers' surveys, and consumer confidence measures--appeared to signal some softening in the economy. Consonant with this pattern, some Reserve Bank Presidents reported that they seemed to be detecting anecdotal indications of weakness in the expansion within their districts with somewhat greater frequency than previously. Moreover, growth in several of our major trading partners seemed to be lagging, which could tend to moderate demand for exports.

A number of factors have prompted the recent tendency toward renewed weakness. Some are clearly quite transitory--related, for example, to bad weather or the Federal government shutdown. Others may be somewhat more significant, but still temporary. The constraint on government spending while permanent budget authorizations are being negotiated is one. Another may be a temporary reduction in output in some industries as businesses have further adjusted inventories to disappointing sales. As I noted last July, the change in the pace of inventory investment when the economy shifts gears can be substantial. Inventory investment surged in 1994 and into the early months of 1995, but proceeded to fall markedly throughout the rest of the year. This has placed significant downward pressure on output, which should lift

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as inventory adjustments subside. But for the moment, the pressures remain, in the motor vehicle industry and elsewhere.

Ultimately, of course, it is the path of final demand after the temporary influences work themselves out that determines the trajectory of the economy. There are some factors, such as high consumer debt levels, that may be working to restrain spending. But as I shall be detailing shortly, a number of fundamentals point to an economy basically on track for sustained growth, so any weakness is likely to be temporary. Nonetheless, the Committee decided in late January that the evidence suggested sufficient risk of subpar performance going forward to warrant another slight easing of the stance of monetary policy. Given the subdued trends in costs and wages, the odds that such a move would boost inflation pressures seemed low.

In assessing the likely course of the economy and the appropriate stance of policy, one question is the significance, if any, of the age of the business expansion. Some analysts, viewing recent weakness, have observed that the expansion is approaching the start of its sixth year and is now one of the longer peacetime spans of growth in the past half century. Economic expansions, however, do not necessarily die of old age. Although the factors governing each individual business cycle are not always clear, expansions usually end because serious imbalances eventually develop.

When aggregate demand exceeds the economy's potential, for example, inflationary pressures pick up. The inevitable increase in market interest rates, as inflation expectations rise and price pressures intensify, depresses final demand. Lagging demand in turn sets off an inventory correction that frequently triggers a downturn in the economy. As I noted, we acted in 1994 to forestall such a

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process. Monetary policy began to tighten in advance of the buildup of inflationary pressures and, at least to date, these pressures appear to have been held in check.

Capital expenditures by households and firms can also contribute significantly to the development of cycle-ending imbalances. The level of stocks of such real assets have effects on output very similar to those of business inventories. In typical cycles, capital expenditures tend to grow rapidly in the early stages of recovery: Pent-up demands coming out of a recession by consumers and businesses are satisfied by rapid growth of spending on capital assets. There is a limit, however, on, say, how many cars people choose to own, or how many square feet of floor space retailers need to service customers. Spending on such assets generally tends to grow more slowly after the pent-up demand is met. As with business inventories, the downshifting of spending on consumer durable goods or business plant and equipment may not occur smoothly. The dynamics of expanding output and rising profit expectations often create a degree of exuberance which, as in much of human nature, tends on occasion to excess--in this case, in the form of a temporary over-accumulation of assets. The ensuing correction in demand for such assets triggers production adjustments that can significantly mute growth for a time or even cause a downturn if the imbalances are large enough.

The current extent of any asset overhang is difficult to determine. The growth of demand for durables and some categories of capital goods evidently has slowed, but the available evidence does not suggest a degree of saturation in capital assets that would tip the economy into a downturn.

Moreover, financial conditions are likely to be generally supportive of spending. The low level of long-term interest rates

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should have an especially favorable effect. Low rates increase the affordability of housing for consumers and foster investment in productive plant and equipment by businesses. The decline in interest rates also has contributed to a pronounced rise in stock prices. The spread of mutual fund investments has meant that the gain in wealth as financial asset prices have risen has been shared by an ever-wider segment of households. These developments should tend to counter, in part, the depressing effects on spending of rising debt burdens. In addition, with the condition of most financial institutions strong, lenders are likely to remain willing to extend credit to firms and households on favorable terms. We have seen some move by lenders toward tighter standards, but these actions are a modest correction after a marked swing toward ease and should not constrain the availability of funds to creditworthy borrowers.

Against this backdrop, Federal Reserve policymakers expect the most likely outcome for 1996 as a whole is further moderate growth. On the new chain-weighted basis, the central tendency of the forecasts of Board members and Reserve Bank Presidents is for real gross domestic product to expand 2 to 2-1/4 percent on a fourth-quarter to fourth-quarter basis, similar to the Administration's outlook. With output expanding roughly in line with standard estimates of the increase in the productive capacity of the economy, the unemployment rate is expected to remain around recent levels, as is also forecast by the Administration.

The Federal Open Market Committee expects a continuation of reasonably good inflation performance in 1996. The success during 1995 in keeping the increase in the consumer price index below 3 percent in the fifth year of an expansion illustrates that an extended period of growth with low inflation is possible. And most on the

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Committee anticipate consumer price inflation at or somewhat below 3 percent in 1996. Although well-known biases in the CPI, as well as the more favorable price performance of business equipment, which is not included in that index, indicate that the true rate of inflation for the whole economy would be significantly lower than 3 percent, the Committee recognized that its expectations for inflation do not imply that price stability has as yet been reached. Nonetheless, keeping inflation from rising significantly during economic expansions will permit a gradual ratcheting down of inflation over the course of successive business cycles that will eventually result in the achievement of price stability.

To emphasize its continued commitment to price stability, the Committee chose to reaffirm the relatively low ranges for money growth in 1996 that it had selected on a provisional basis last July. These ranges are identical to those employed in 1995--1 to 5 percent for M2 and 2 to 6 percent for M3. The Committee also reaffirmed the 3 to 7 percent range for debt. Patterns of money growth and velocity have been erratic in recent years, but should the monetary aggregates at some point re-establish their previous trend relationships with nominal income, average growth near the center of these ranges should be consistent with the eventual achievement of price stability.

Determining whether further changes to the stance of monetary policy will be necessary in the months ahead to foster progress toward our goals will be a continuing challenge. In formulating monetary policy, while we have in mind a forecast of the most likely outcome, we must also evaluate the consequences of other possible developments. Thus, it is sometimes the case that we take out monetary policy "insurance" when we perceive an imbalance in the net costs or benefits of coming out on one side or the other of the most probable scenario.

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For example, in our most recent actions, we saw a decline in the federal funds rate as not increasing inflationary risks unacceptably, while addressing the downside risks to the most likely forecast. In assessing the costs and benefits of adjustments to the stance of policy, members of the Committee recognize that policy affects the economy and inflation with a lag and thus needs to be formulated with a focus on the future. Over the past year, we have kept firmly in mind our goals of containing inflation in the near term and moving over time toward price stability, and they will continue to guide us in the period ahead.

Structural forces may be assisting us in this regard. Increases in producers' costs and in output prices proved to be a little lower last year than many had anticipated. While it is too soon to draw any definitive conclusions, this experience provides some tentative evidence that basic, ongoing changes in the structure of the economy may be helping to hold down price pressures. These changes stem from the introduction of new technologies into a wide variety of production processes throughout the economy. Successive generations of these new technologies are being quickly embodied in the nation's capital stock and older technologies are, at a somewhat slower pace, being phased out. As a consequence, the nation's capital stock is turning over at an increasingly rapid pace, not primarily because of physical deterioration but reflecting technological and economic obsolescence.

The more rapid advance of information and communications technology and the associated acceleration in the turnover of the capital stock are being mirrored in a brisk restructuring of firms. In line with their adoption of new organizational structures and technologies, many enterprises are finding that their needs for

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various forms of labor are evolving just as quickly. In some cases, the job skills that were adequate only five years ago are no longer as relevant. Partly for that reason, most corporate restructurings have involved a significant number of permanent dismissals.

The phenomenon of restructuring can be especially unfortunate for those workers directly caught up in the process. Many dedicated, long-term workers in all types of American businesses--including long-established, stable, and profitable firms--have been let go.

An important consequence of the layoffs and dismissals associated with restructuring activity is a significant and widely reported increase in the sense of job insecurity. Concern about employment has been manifested in unusually low levels of indicators of labor unrest. Work stoppages, for example, were at a fifty-year low last year. And contract negotiators for labor unions have sought to obtain greater job security for their members through very long-term labor contracts, including some with virtually unprecedented lengths of five or six years.

Of particular relevance to the inflation outlook, the sense of job insecurity is having a pronounced effect in damping labor costs. For example, the increase in the employment cost index for compensation in the private sector, which includes both wage and salary payments and benefit costs, slowed further in 1995, to 2-3/4 percent, despite labor market conditions that, by historical standards, were fairly tight. With productivity also expanding, the increase in unit labor costs was even lower. In manufacturing, such costs have actually been falling in recent years. While the link between labor costs, which account for two-thirds of consolidated business sector costs, and prices is not rigid, these very limited

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increases in labor expenses nonetheless constitute a significant restraint on inflation.

In addition to its effect on labor costs, the more rapid pace of technological change is reducing business costs through other channels. Initially most important, the downsizing of products resulting from semiconductor technologies, together with the increasing proportion of national output accounted for by high-tech products, has reduced costs of transporting the average unit of GDP. Quite simply, small products can be moved more quickly and at lower cost.

More recently, dramatic advances in telecommunications technologies have lowered the costs of production for a variety of products by slashing further the information component of those costs. Increasingly, the physical distance between communications endpoints is becoming less relevant in determining the difficulty and cost of transporting information. Once fiber-optic and satellite technologies are in place, the added resource cost of another 200 or 2,000 miles is often quite trivial. As a consequence, the movement of inputs and outputs across geographic distance is progressively becoming a smaller component of overall business expenses, particularly as intellectual--and therefore immaterial--products become proportionately more important in the economy. This enables an average business firm to broaden markets and sales far beyond its original domicile. Accordingly, fixed costs are spread more widely. For the world market as a whole, the specialization of labor is enhanced to the benefit of standards of living of all market participants.

To be sure, advancing technology, with its profound implications for the nature of the economy, is nothing new, and the pace of improvement has never been even. But it is possible that we

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may be in the midst of a quickening of the process. It is possible that the rate at which earlier computer technologies are being applied to new production processes is still increasing. This would explain the recent decline in the growth of unit costs. Nonetheless, we have to be careful in projecting a further acceleration in the application of technology indefinitely into the future, as would be required for technological change to depress the rate of increase in unit business costs even more. Similarly, suppressed wage cost growth as a consequence of job insecurity can be carried only so far. At some point in the future, the tradeoff of subdued wage growth for job security has to come to an end. While it is difficult to judge the time frame on such adjustments, the risks to cost and price inflation going forward are not entirely skewed to the downside, especially with the economy so recently operating at high levels of resource utilization.

In light of the quickened pace of technological change, the question arises whether the U.S. economy can expand more rapidly on an ongoing basis than the 2 to 2-1/4 percent range for measured GDP forecasted for 1996 by government agencies and most private forecasters without adding to inflationary pressures, which in turn would undermine growth. The Federal Reserve would certainly welcome faster growth--provided that it is sustainable.

The particular rate of maximum sustainable growth in an economy as complex and ever-changing as ours is difficult to pin down. Fortunately, the Federal Reserve does not need to have a firm judgment on such an estimate, for persistent deviations of actual growth from that of capacity potential will soon send signals that a policy adjustment is needed. Should the nation's true growth potential exceed actual growth, for example, the disparity and lessened strain

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would be signaled in shorter lead times on the delivery of materials, declining overtime, and ebbing inflationary pressures. Conversely, actual growth in excess of the economy's true potential would soon result in tightened markets and other distortions which, as history amply demonstrates, would propel the economy into recession. Consequently, we must be cautious in reaching conclusions that growth in productivity and hence of potential output has as yet risen to match the evident step-up in technological advance.

The hypothesis that advancing technology has enhanced productivity growth would be more persuasive if national data on productivity increases showed a distinct improvement. To a degree, the lack of any marked pickup may be a shortcoming of the statistics rather than a refutation of the hypothesis. Faulty data could be arising in part because business purchases are increasingly concentrated in items that are expensed but which market prices suggest should be capitalized. Growing disparities between book capital and its valuation in equity markets may in part reflect widening effects of this misclassification. If this problem is indeed growing, we may be underestimating the growth of our GDP and productivity.

This classification problem compounds other difficulties with measuring output in the increasingly important service sector. The output of services--and the productivity of labor in that sector--is particularly hard to measure. In part, the statisticians have simply thrown up their hands, gauging output in some service industries just in terms of labor input. By construction, such a procedure will miss improvements in productivity caused by other inputs. In manufacturing, where output is more tangible and therefore easier to

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assess, measured productivity has been rising briskly, suggesting that technological advances are indeed having some effect.

Nonetheless, there is still a nagging inconsistency: The evidence of significant restructurings and improvements in technology and real costs within business establishments does not seem to be fully reflected in our national productivity measurements. It is possible that some of the frenetic pace of business restructuring is mere wheel spinning--changing production inputs without increasing output--rather than real increases in productivity. One cause of the wheel spinning, if that is what it is, may be that it takes some time for firms to adapt in such a way that major new technology is translated into increased output.

In an intriguing parallel, electric motors in the late nineteenth century were well-known as a technology, but were initially integrated into production systems that were designed for steam-driven power plants. It wasn't until the gradual conversion of previously vertical factories into horizontal facilities, mainly in the 1920s, that firms were able to take full advantage of the synergies implicit in the electric dynamo, thus achieving dramatic productivity increases. Analogously, existing production systems today to some degree cannot be integrated easily with new information and communication technologies. Some existing equipment is not capable of control by computer, for example. Thus, it may be that the full advantage of even the current generation of information and communication equipment will be exploited over a span of quite a few years and only after a considerably updated stock of physical capital has been put in place.

While the Federal Reserve does not need to establish

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targets--and definitely not limits--for long-term growth, it is helpful in coming to shorter-run policy insights to have some judgments about the growth in potential GDP in the past and what it is likely to be in the future. Judgments of potential, quite naturally, are based on experience. Through the four quarters of 1994, for example, real GDP, pressed by strong demand, rose 3-1/2 percent. If that were the true rate of increase in the economy's long-run potential, then we would have expected no change in rates of resource utilization. Instead, industrial capacity utilization rose nearly 3 percentage points and the unemployment rate dropped a percentage point. Moreover, we began to see signs of strains on facilities: deliveries of materials slowed appreciably and factory overtime rose sharply. These signs of developing pressures on capacity suggest that the growth rate in economic potential in 1994 was below 3-1/2 percent. In general, as we get close to presumed potential, we are required to step up our surveillance for inflationary pressures.

Estimates of potential growth necessarily recognize that expansion in the economy over time comes essentially from three factors--growth in population, increases in labor force participation, and gains in average labor productivity. Of these factors, the first two are determined basically by demographic and social factors and seem unlikely to change dramatically over the next few years. Thus, the source of any significant pickup of output growth would need to be a more rapid pace of productivity growth. Here, the uncertainty of the pace of conversion of rapid technological advance into productivity gains is crucial to the determination.

To be fully effective in achieving potential productivity improvements, technological innovations also require a considerable amount of human investment on the part of workers who have to deal

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with these devices on a day-to-day basis. On this score, we still may not have progressed very far. Many workers still possess only rudimentary skills in manipulating advanced information technology. In these circumstances, firms and employees alike need to recognize that obtaining the potential rewards of the new technologies in the years ahead will require a renewed commitment to effective education and training, especially on-the-job training. This is especially the case if we are to prevent the disruptions to lives and the nation's capacity to produce that arise from mismatches between jobs and workers. We need to improve the preparation for the job market our schools do, but even better schools are unlikely to be able to provide adequate skills to support a lifetime of work. Indeed, the need to ensure that our labor force has the ongoing education and training necessary to compete in an increasingly sophisticated world economy is a critical task for the years ahead.

Our nation faces many important and difficult challenges in economic policy. Nonetheless, we have made significant and fundamental gains in macroeconomic performance in recent years that enhance the prospects for maximum sustainable economic growth. Inflation, as measured by the consumer price index, has been gradually reduced from a peak of more than 13 percent in 1979 to 2-1/2 percent last year. Lower rates of inflation have brought a variety of benefits to the economy, including lower long-term interest rates, a sense of greater economic stability, an improved environment for household and business planning, and more robust investment in capital expenditures. The years ahead should see further progress against inflation and the eventual achievement of price stability.

We have also made considerable progress on the fiscal front Over the past ten years and especially since 1993, our elected

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political leaders, through sometimes prolonged and even painful negotiations, have been successful in reaching several agreements that have significantly narrowed the budget deficit. But more remains to be done. As I have emphasized many times, lower budget deficits are the surest and most direct way to increase national saving. Higher national saving would help to reduce real interest rates further, promoting more rapid accumulation of productive capital embodying recent technological advances. Agreement is widely shared that attaining a higher national saving rate quite soon is crucial, particularly in view of the anticipated shift in the nation's demographics in the first few decades of the next century.

Lower inflation and reduced budget deficits will by no means solve all of the economic problems we face. But the achievement of price stability and federal budget balance or surplus will provide the best possible macroeconomic climate in which the nation can address other economic challenges.

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## Alan Greenspan

Alan Greenspan was appointed in March of 1992 for a second four-year term as Chairman of the Board of Governors of the Federal Reserve System. Mr. Greenspan also serves as Chairman of the Federal Open Market Committee, the System's principal monetary policymaking body. He is currently serving a second full term as a member of the Board of Governors, ending in January of 2006. His reappointment status as Chairman is expected to be announced in March of 1996.

Mr. Greenspan served as Chairman and President of Townsend-Greenspan & Co., Inc., an economic consulting firm in New York City. He was Chairman of the President's Council of Economic Advisors under President Ford and was Chairman of the National Commission of Social Security Reform. Mr. Greenspan has also served as a member of President Reagan's Economic Policy Advisory Board, a member of Time magazine's Board of Economists, a senior advisor to the Brookings Panel on Economic Activity, and a consultant to the Congressional Budget Office.

Former presidential appointments have included the President's Foreign Intelligence Advisory Board, the Commission on Financial Structure and Regulation, the Commission on an All-Volunteer Armed Force, and the Task Force on Economic Growth.

His education was received at New York University. He earned a B.S. in economics in 1948, a M.A. in economics in 1950, and a Ph.D. in economics in 1977. Mr. Greenspan has also performed advanced graduate study at Columbia University.

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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

February 20, 1996

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# Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM
Washington, D.C., February 20, 1996

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

The Board of Governors is pleased to submit its Monetary Policy Report to the Congress, pursuant to the Full Employment and Balanced Growth Act of 1978.

Sincerely,

Alan Greenspan, Chairman

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## Section 1: Monetary Policy and the Economic Outlook

The economy performed well in 1995. Moderate economic growth kept the unemployment rate at a relatively low level, and inflation, as measured by the change in the consumer price index, was in a range of 3 percent or less for the fifth straight year, the first such occurrence in thirty years. This desirable combination of low inflation and low unemployment provided further substantiation of a fundamental point that the Board has made in past reports—namely, that there is no trade-off in the long run between the monetary policy goals of maximum employment and stable prices set in the Federal Reserve Act. Indeed, it is by fostering price stability that a central bank can make its greatest contribution to the efficient operation and overall ability of the nation's economy to create jobs and advance living standards over time.

As economic prospects changed in 1995 and early 1996, the Federal Reserve found that promoting full employment and price stability required several adjustments in its policy settings. Last February, the economy still seemed to be pressing against its potential, and prices were tending to accelerate. To reduce the risk that inflation might mount, with the attendant threat to continued economic expansion, the Federal Open Market Committee raised the federal funds rate an additional ½ percentage point, to 6 percent. Inflation did, in fact, pick up in the first part of 1995, but data released during the spring indicated that price pressures were receding, and the Committee reduced the federal funds rate ¼ percentage point at its July meeting. Through the remainder of the year, inflation was even more favorable than had been anticipated in July, and inflation expectations decreased. In addition, an apparent slowing of economic activity late in the year further reduced the potential for inflationary pressures going forward. To forestall an undue increase in real interest rates as inflation slowed, and to guard against the possibility of unnecessary slack developing in the economy, the Committee eased reserve conditions in December and again at the end of January 1996, reducing the federal funds rate by a total of ½ percentage point.

Monetary policy easings since mid-1995 contributed to declines in short-term market interest rates, which by mid-February were down 1 to 2 percentage points from the highs reached early last year. Intermediate- and long-term rates also moved sharply lower last year as the risks of rising inflation receded and as prospects for substantial progress in reducing the federal budget deficit seemed to improve. As of mid-February, these rates were 1¾ to 2¾ percentage points below their levels at the beginning of 1995. Helped by lower interest rates and favorable earnings, major equity price indexes rose 30 to 40 percent last year and have moved still higher in early 1996. These financial developments reduced the cost to businesses of financing investment and to households of buying homes and consumer durables; households were also aided by substantial additions to financial wealth from rising bond and equity prices.

The foreign exchange value of the U.S. dollar, measured in terms of the currencies of the other G-10 countries, fell about 5 percent, on net, during 1995. The dollar appreciated substantially from the summer on and has advanced further on balance in 1996 but not enough to offset a sharp decline that took place in the first four months of 1995. Interest rates fell in most other foreign industrial countries, which also were experiencing slower economic growth, but by less than the decline in rates in the United States. Early in 1995, the dollar also was pulled down by the reactions to the crisis in Mexico, but the negative influence on the dollar from this source appeared to lessen as Mexican financial markets stabilized over the balance of the year. Inflation rates in major industrial countries held fairly steady in 1995 at levels somewhat lower than those prevailing in this country; thus, depreciation of the dollar in real terms against other G-10 currencies was less than the depreciation in nominal terms. Against the currencies of a broader group of U.S. trading partners, the dollar's real depreciation in 1995 was even smaller.

Borrowing and spending in the United States was facilitated not only by lower interest rates but also by favorable supply conditions in credit markets. Spreads between interest rates on securities issued by private firms and those issued by the Treasury generally remained narrow, and banks continued to ease terms and qualifying standards on loans to businesses and households through most of the year. Total debt of domestic nonfinancial sectors grew slightly more than 5 percent last year, just above the midpoint of the Committee's 3 percent to 7 percent monitoring range. Rapid growth of business spending on inventories and fixed capital early in the year boosted the credit demands of firms, despite strong corporate profits.

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Borrowing was also lifted by the financing of heavy net retirements of equity shares in connection with mergers and share repurchase programs. Growth of household debt slowed a bit but remained brisk; consumer credit continued to grow quite rapidly. Federal debt growth was relatively modest for a second year, influenced by a lower deficit and constraints on normal seasonal borrowing at year-end owing to the federal debt ceiling. Outstanding state and local government debt ran off more rapidly than in 1994.

Commercial banks and thrift institutions again financed a large portion of the borrowing last year; their share of total outstanding debt of nonfederal sectors edged up in 1994 and 1995 after declining for more than fifteen years. The growth in depository credit was funded primarily with deposits, boosting the expansion of the broad monetary aggregates. M3 grew 6 percent, at the upper end of its 2 percent to 6 percent annual range established by the Committee at midyear. Depositories relied heavily on large-denomination time deposits for funding, but retail deposits also showed gains as declining market interest rates made these deposits more attractive to retail customers. M2 advanced 4¼ percent, putting it in the upper portion of its 1 percent to 5 percent annual range. The expansion of M2 was the largest in six years, and its velocity was unchanged after increasing during the previous three years. Nonetheless, growth of the aggregate was erratic through the year, and the stability of its relationship to nominal spending remains in doubt. M1 declined last year for the first time since the beginning of the official series in 1959. An increasing number of banks introduced retail sweep accounts, which shift money from interest-bearing checkable accounts to savings accounts in order to reduce banks' reserve requirements. Without these shifts, M1 would have risen in 1995, although slowly.

## Economic Projections for 1996

The relatively small amount of information that is available for 1996 indicates that the economy has started off slowly early this year, but fundamental conditions appear to be more encouraging than recent data might seem to suggest. Bad weather in a number of regions and the partial shutdown of the federal government have been disruptive to the economy this winter. These influences seem likely to leave only temporary imprints on spending and production, creating volatility in incoming data over the near term while having little effect on underlying trends.

The economy also has been slowed by production adjustments in some industries in which efforts are being made to bring stocks into better alignment with sales. Inventory accumulation apparently slowed in the fourth quarter, and with financial conditions remaining broadly conducive to growth of private final sales, inventory problems of a degree that might prompt a sustained period of widespread production adjustments do not seem likely. In the household sector, the accumulation of financial wealth brought on by the rise in the stock market has provided the wherewithal for increases in consumption greater than would otherwise have been expected—countering the potential negative influences of more burdensome levels of consumer debt. At the same time, reductions in mortgage interest rates have put the cost of financing a house within reach of a greater number of families and made it possible for a significant number of households to ease their debt-service burdens by refinancing their homes at lower rates. In the business sector, reductions in the cost of financing investment in new capital are providing some offset to the slowing tendencies that normally accompany a cyclical moderation in the growth of aggregate output. In addition, business investment in high-tech equipment likely will continue to be boosted not only by the ready availability of finance but also by technological upgrades and ongoing steep declines in the effective price of real computing power.

In the U.S. external sector, growth of exports strengthened after some sluggishness early in 1995. Expansion of income abroad seems likely to pick up this year, although the prospects still are subject to some downside risk. Imports, meanwhile, have slowed from the very rapid pace seen earlier in the expansion. On net, the underlying trends in exports and imports of goods and services appear to be essentially canceling out in terms of their combined contribution to growth of U.S. real GDP.

Against the backdrop of these developments, members of the Board of Governors and the Reserve Bank Presidents, all of whom participate in the deliberations of the Federal Open Market Committee, anticipate that the U.S. economy will grow moderately, with little change in underlying inflation trends. The central tendency of the participants' forecasts of real GDP growth ranges from 2 percent to 2¼ percent, measured as the cumulative change in output from the final quarter of 1995 to the final quarter of 1996. The rise in activity is expected to be accompanied by further expansion of job opportunities and little change, on net, in the civilian unemployment rate over the four quarters of 1996. The central tendency

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**Economic Projections for 1996**
Percent

| Indicator | Federal Reserve Governors and Reserve Bank Presidents: Range | Federal Reserve Governors and Reserve Bank Presidents: Central Tendency | Administration |
|---|---|---|---|
| *Change, fourth quarter to fourth quarter*[1] | | | |
| Nominal GDP | 4–5 | 4¼–4¾ | 5.1 |
| Real GDP[2] | 1½–2½ | 2–2¼ | 2.2 |
| Consumer price index[3] | 2½–3 | 2¾–3 | 3.1 |
| *Average level, fourth quarter* | | | |
| Civilian unemployment rate | 5½–6 | 5½–5¾ | 5.7[4] |

1. Change from average for fourth quarter of 1995 to average for fourth quarter of 1996.
2. Chain-weighted.
3. All urban consumers.
4. Annual average.

of the unemployment rate forecasts for the fourth quarter of 1996 is a range of 5½ percent to 5¾ percent, compared with an average of 5.6 percent in the final quarter of 1995. The Committee's forecasts of economic growth and unemployment are quite similar to those of the Administration.

The central tendency of the Governors' and Bank Presidents' forecasts of the rise in the consumer price index over the four quarters of 1996 is a range of 2¾ percent to 3 percent, a shade to the high side of the actual outcome of 1995. At this early point in 1996, with grain stocks exceptionally tight, there is some risk that food price increases at retail could be larger than those of recent years, especially if crop production should remain subpar again this year; and, even though recent upward pressures on energy prices should diminish with the return of normal weather, another year of declining prices cannot be taken as a given. Nonetheless, the experience with inflation at high levels of resource utilization was favorable in 1995, and with businesses still tightly focused on cost control and efficiency gain, broad tendencies toward increased rates of price increase are not anticipated. The Administration forecast of inflation is higher than the forecasts of the Federal Reserve officials, but the difference is not significant, given the uncertainties of forecasting.

Price increases like those being forecast for the coming year would leave inflation no higher than it was in the first year or so of the current economic expansion, with the rate of increase holding appreciably below the average rate seen during the expansion of the 1980s. Although the Federal Reserve's long-run goal of restoring price stability has not yet been achieved, the capping of inflation and its diminution over recent business cycles is a clear indication of the substantial progress that has been made to date.

## Money and Debt Ranges for 1996

The Committee's intention to make further progress over time toward price stability formed the basis for the selection of the growth ranges for the monetary aggregates in 1996. In reaffirming the ranges that were adopted on a provisional basis in July, the Committee noted that it viewed them as benchmarks for what would be expected under conditions of reasonable price stability and historical velocity behavior. The Committee set the range for M2 at 1 percent to 5 percent and the range for M3 at 2 percent to 6 percent.

Given its expectations for inflation in 1996, the Committee anticipates that nominal GDP will grow somewhat faster this year than would be the case if the economy already were at price stability. If velocities of the aggregates were to exhibit roughly normal behavior this year and nominal income were to

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**Ranges for Growth of Monetary and Debt Aggregates**
Percent

| Aggregate | 1994 | 1995 | 1996 |
|---|---|---|---|
| M2 | 1–5 | 1–5 | 1–5 |
| M3 | 0–4 | 2–6[1] | 2–6 |
| Debt[2] | 4–8 | 3–7 | 3–7 |

Note. Change from average for fourth quarter of preceding year to average for fourth quarter of year indicated.
1. Revised at July 1995 FOMC meeting.
2. Monitoring range for debt of domestic nonfinancial sectors

expand as anticipated by the Committee, M2 and M3 might grow near the upper ends of their ranges. In assessing the possible outcomes, the Committee noted that considerable uncertainty remains about the usefulness of the monetary aggregates in guiding the pursuit of its macroeconomic objectives. Although the monetary aggregates have been behaving more in line with historical patterns than was the case earlier in the decade, the effects of financial innovation and deregulation over the years have raised questions about the stability of the relationships between the aggregates and nominal GDP that have yet to be resolved.

The Committee also reaffirmed the 3 percent to 7 percent growth range for debt. Although there are indications that lenders may no longer be easing terms and conditions for granting credit to businesses and households, the Committee anticipated that credit supplies would remain ample and that debt would grow at about the same pace as nominal GDP. Such increases would be consistent with containing inflation and promoting sustainable growth.

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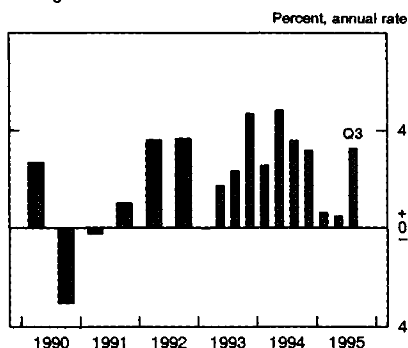
# Section 2: The Performance of the Economy

Measured in terms of the chain-type indexes that are now being emphasized by the Bureau of Economic Analysis, growth of real GDP averaged slightly less than 1½ percent at an annual rate over the first three quarters of 1995 after a gain of 3½ percent in 1994. The rise in aggregate output this past year was accompanied by an increase in payroll employment of 1¾ million, and the unemployment rate, after having fallen sharply in 1994, held fairly steady over the course of 1995, keeping to a range of about 5½ percent to 5¾ percent. Consumer prices, as measured by the CPI for all items, rose 2¾ percent over the four quarters of 1995, an increase that was virtually the same as those of the two previous years.

Growth of output during the past year was slowed in part by the actions of businesses to reduce the pace of inventory accumulation after a burst of stockpiling in 1994. Final sales—a measure of current output that does not end up in inventories—rose at an average rate of 2 percent over the first three quarters of 1995 after an increase of 3 percent over the four quarters of 1994. The slowing of final sales was largely a reflection of a downshifting in growth of the real outlays of households and businesses, from elevated rates of increase in 1994 to rates that were more sustainable. Real government outlays for consumption and investment edged down slightly, on net, during the first three quarters of 1995. Increases in real exports and real imports of goods and services were smaller than those of 1994; their combined contribution to GDP growth in the first three quarters was slightly negative.

Change in Real GDP




## The Household Sector

Real personal consumption expenditures rose at an annual rate of about 2¼ percent over the first three quarters of 1995 after having risen slightly more than 3 percent over the four quarters of 1994. Available data suggest that growth of real outlays slowed further in the fourth quarter. The reduced rate of rise in consumption spending this past year came against the backdrop of moderate gains in employment and income. The financial wealth of households surged, but impetus to spending from this source evidently was countered by other influences, such as increases in debt burdens among some households and an apparent rise, according to survey data, in consumers' concerns about job security.

Real consumer expenditures for durable goods increased at an annual rate of 2¼ percent over the first three quarters of 1995, a slower rate of rise than in other recent years. Consumer expenditures for motor vehicles declined slightly, on net, over the first three quarters after moving up nearly 20 percent over the three previous years; in the fourth quarter, unit sales of cars and light trucks, a key indicator of real outlays for vehicles, were down slightly from their third-quarter pace. Incentive programs that provided price concessions of one sort or another to buyers probably gave some lift to sales in 1995. However, "pent-up" demand, which had helped to boost sales earlier in the expansion, probably was no longer an important factor. Recent sales data do not seem to point to any big shifts in demand for vehicles around the turn of the year: The average rate of sales of cars and light trucks in December and January was a touch above the average for 1995 as a whole.

Real outlays for durable goods other than motor vehicles continued to rise at a brisk pace in 1995, but not so rapidly as in other recent years. Spending for furniture and household equipment hit a temporary lull in the first part of 1995, but picked up again over the next two quarters, lifted in part by a rebound in construction of new houses. Fourth-quarter data on retail sales seem to point to a further sizable increase in outlays for household durables; according to most anecdotal accounts, spending for home computers and other electronic gear, which has been surging in recent years, continued to move up rapidly through the latter part of 1995.

Consumer expenditures for nondurables increased at an annual rate of about 1½ percent, in real terms,

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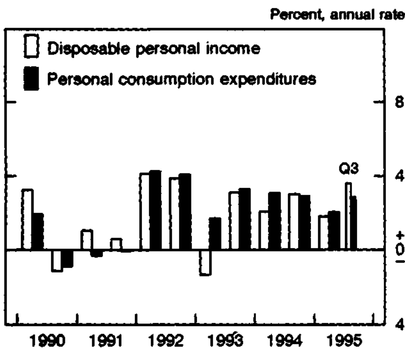
over the first three quarters of 1995, a little less than the average of the previous ten years and considerably less than in 1994. The growth of real expenditures on apparel slowed sharply after three years of sizable advances. In the fourth quarter, real outlays for nondurables appear to have been lackluster.

Real expenditures for services—which account for more than half of total consumer outlays—increased at an annual rate of about 2¾ percent over the first three quarters of 1995, moderately faster than in either 1993 or 1994. After declining in 1994, outlays for energy services increased sharply over the first three quarters of 1995: The unusually mild weather of late 1994 gave way, first, to more normal winter conditions in early 1995 and, later on, to hot summer weather that lifted fuel requirements for cooling. Spending gains for other categories of services proceeded at an annual rate of about 2¼ percent over the first three quarters of 1995, about the same rate of rise as in the two previous years.

Real disposable personal income rose at an average annual rate of about 2½ percent over the first three quarters of 1995, a gain that was about in line with the previous year's increase. Monthly data through November suggest that growth of real income may have picked up a little in the fourth quarter. Nominal personal income appears to have increased slightly faster in 1995 than it did in 1994, and growth of nominal disposable income, which excludes income taxes, apparently held close to its 1994 pace. Inflation continued to take only a moderate bite from increases in nominal receipts: The chain-type price index for personal consumption expenditures rose at an annual rate of 2½ percent over the first three quarters of 1995, matching, almost exactly, the increases in each of the two previous years.

**Change in Real Income and Consumption**




After little change during 1994, the real value of household wealth surged in 1995. The value of assets was boosted substantially by huge increases in the prices of stocks and bonds. Liabilities continued to rise fairly rapidly but at a rate well below the rate of increase in household assets; rapid growth of consumer credit was again the most notable feature on the liability side. Behind these aggregate measures of household assets and liabilities was some wide variation in the circumstances of individual households. Appreciation of share prices and the rally in the bond market provided a substantial boost to the wealth of households holding large amounts of those assets. However, households holding few such assets benefited little from the rally in securities prices, and some of these households began to experience greater financial pressure in 1995. Debts taken on earlier proved to be difficult to repay in some instances, and a rising number of households saw their loans fall into delinquency. Overall, however, the incidence of financial stress among households appears to have been limited, as sustained increases in personal income helped to facilitate timely repayment of obligations.

Consumers maintained relatively upbeat perceptions of current and future economic conditions during 1995. The measure of consumer confidence that is prepared by the Conference Board held fairly steady at a high level. The index of consumer sentiment that is compiled by the University of Michigan Survey Research Center edged down a little, on net, from the end of 1994 to the end of 1995, but its level also remained relatively high. By contrast, some survey questions dealing specifically with perceptions of labor market conditions pointed to increased concerns about job prospects during the year; although employment continued to rise in the aggregate, announcements of job cuts by some major corporations may have rekindled consumers' anxieties about job security. In January of this year, consumer assessments of labor market conditions softened further, and the broader indexes of sentiment also declined. The January levels of the indexes were on the low side of their averages of the past couple of years but were well above levels that were reported through most of the first three years of the expansion.

Consumers tended to save a slightly higher proportion of their income in 1995 than they had in 1994. Large increases in financial wealth usually cause households to spend a greater share of their current income, thereby reducing the share of income that is

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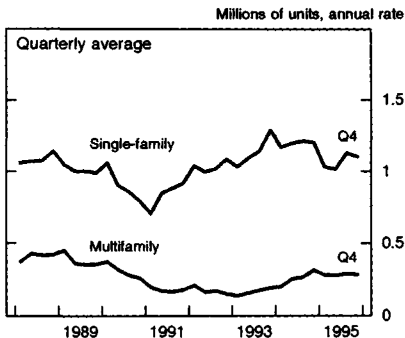
saved. However, rising debt burdens and increased nervousness about job prospects would work in the opposite direction, and these influences may have offset the effect of increases in wealth. Some households also may have started focusing more intently on saving for retirement, especially in light of increased political debate about curbing the growth of entitlements provided under government programs. Nonetheless, the personal saving rate for all of 1995, while moving up a little, remained in a range that was relatively low by historical standards.

Residential investment fell in the first half of 1995 but turned up in the third quarter. Both the downswing in the first half and the subsequent rebound after midyear appear to have been shaped, at least in a rough way, by swings in mortgage interest rates. Although housing activity had been slow to respond to increases in mortgage interest rates through much of 1994, sizable declines in sales of new and existing homes started to show up toward the end of that year, and by early 1995, permits and starts also were dropping. However, the decline in activity proved to be relatively short and mild. By March, mortgage interest rates already were down appreciably from the peaks of late 1994, and midway through the second quarter, most indicators of housing activity were starting to rebound. Sales of new homes surged to especially high levels during the summer, and permits and starts of single-family units rose appreciably. In the autumn, sales retreated from their midyear peaks. Starts also slipped back somewhat during the autumn, but permits held firm.

The intra-year swings in the various housing indicators left the annual totals for these indicators at

Private Housing Starts




Note. Data points for 1995:Q4 are the averages for October and November.

fairly elevated levels. The average pace of sales of existing homes over the first eleven months of 1995 was well above the average for the 1980s, even after adjusting for increases in the stock of houses. Starts and sales of new single-family dwellings in 1995 were about one-tenth higher than their averages for the 1980s. So far in the 1990s, demographic influences have been less supportive of housing activity than in the 1980s, as the rate of household formation has lagged—in part because many young adults have delayed setting up their own domiciles. However, offsetting impetus to demand has come from the improved affordability of housing, brought about in particular by declines in mortgage interest rates.

Construction of multifamily units, after taking a notable step toward recovery in 1994, rose only moderately further in 1995. Over the first eleven months of 1995, starts of multifamily units amounted to 280,000 at an annual rate, compared with about 260,000 the previous year and a low of 162,000 in 1993. Financing for the construction of new multifamily projects appeared to be readily available this past year. However, the national vacancy rate for multifamily rental units, while down from the peaks of a few years ago, remained relatively high, and increases in rents were not of a magnitude to provide much incentive for the construction of new units.

### The Business Sector

Most indicators of business activity remained favorable in 1995, but strength was less widespread than it had been in 1994, and growth overall was less robust. The output of all nonfarm businesses rose at an annual rate of slightly less than 2 percent over the first three quarters of 1995, after a gain of 4 percent in 1994—a pace that could not have been sustained given already high operating levels. Inventory problems cropped up in some lines of manufacturing and trade in 1995 and prompted production adjustments. Scattered structural problems were apparent as well, especially in parts of retail trade in which intense competition for market share caused financial losses and eventual bankruptcy for some enterprises. More generally, however, business profits remained high in 1995, as firms continued to emphasize strategies that have served them well throughout the 1990s—most notably, tight control over costs and rapid adoption of new technologies, achieved by way of heavy investment in high-tech equipment.

In total, real business fixed investment increased at an annual rate of 8 percent over the first three quarters

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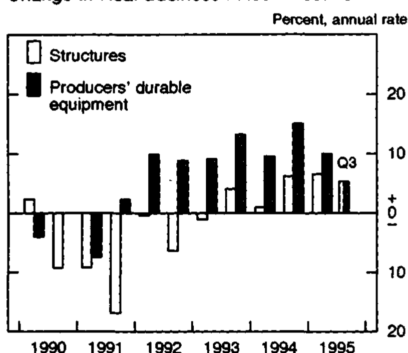
Change in Real Business Fixed Investment

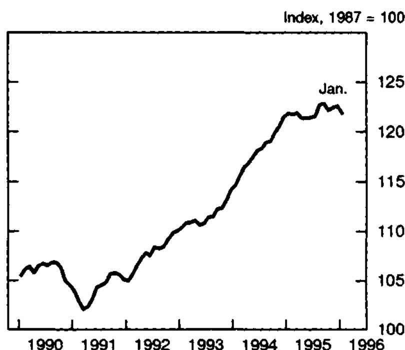



of 1995 after a gain of 10 percent in 1994. Growth in business spending for equipment continued to outpace the growth of investment in structures, even though the latter scored its largest gain of the past several years. On a quarterly basis, investment remained very strong through the first quarter of 1995. After slowing sharply in the spring, it then picked up somewhat in the third quarter. Fragmentary data for the fourth quarter suggest that investment in plant and equipment recorded a gain of at least moderate size in that period.

Businesses continued to invest heavily in computers in 1995. In real terms, these expenditures rose at an annual rate of nearly 30 percent over the first three quarters of the year, an increase that was even more rapid than that of 1994. Excluding computers, real investment outlays increased less rapidly, on balance, than in 1994, and growth after the first quarter was modest, on net. In the equipment category, outlays for information-processing equipment other than computers moved up at an annual rate of about 13 percent in the first half of 1995 but fell back a little in the third quarter. Spending for industrial equipment followed a roughly similar pattern, with a small third-quarter decline coming on the heels of large gains in the first half of the year. Real outlays for transportation equipment declined in the second quarter but rebounded in the third. Real investment in nonresidential structures moved up in each of the first three quarters of 1995, at an annual rate of more than 6 percent, on average, after a gain of 3½ percent during 1994; the most recent year brought increased construction of most types of nonresidential buildings.

In the industrial sector, elevated levels of investment in equipment and structures in 1995 led to a gain of about 4 percent in industrial capacity. However, in a turnabout from the outcome of the previous year, output of the industrial sector rose considerably less rapidly than capacity: A gain of 1½ percent in total industrial production over the four quarters of 1995 was a sharp slowdown from a 1994 rise of more than 6½ percent. Production of consumer goods followed a choppy pattern during 1995 and rose less than ½ percent over the year as a whole, the smallest annual increase of the current expansion. The output of business equipment advanced in each quarter, but a cumulative gain of 4½ percent for this category was smaller than the increases of other recent years. Production of materials faltered temporarily in the second quarter, but production gains resumed thereafter, leading to a rise of about 2¼ percent over the four quarters of the year.

Industrial Production




With capacity expanding rapidly and production growth slowing, the rate of capacity utilization in industry turned down sharply in 1995, backing away from the high operating rates of late 1994. As of this past December, the utilization rate in manufacturing was about ½ percentage point above its long-term average. In January of this year, utilization rates fell noticeably: Vehicle producers reduced assembly rates last month, and winter storms temporarily shut down manufacturing operations more generally.

After rising rapidly during 1994, business inventories continued to build at a substantial pace in the early part of 1995. By the end of the first quarter, real inventories of nonfarm businesses were about 5½ percent above the level of a year earlier. Meanwhile, strength that had been evident in final sales during 1994 gave way to more subdued growth in the

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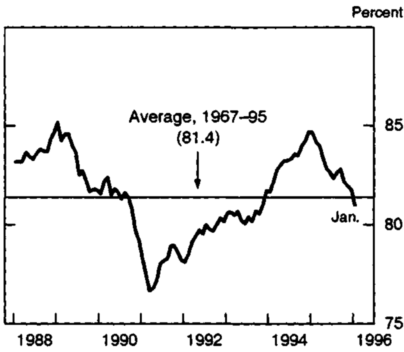
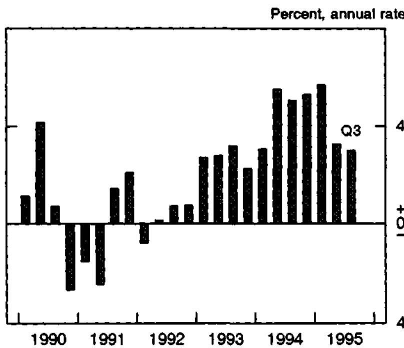
Manufacturing Capacity Utilization Rate



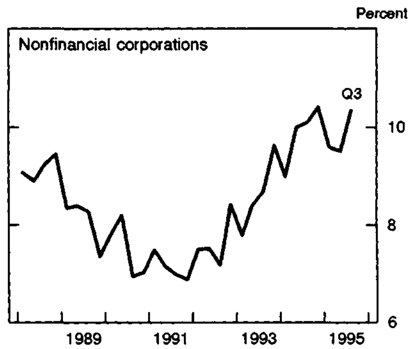

first quarter of 1995, and the ratio of inventories to sales rose. In the second and third quarters, growth of inventories was roughly in line with growth of business final sales; consequently, aggregate inventory–sales ratios held fairly steady during this period. Although data on inventory change in the year's final quarter are not yet complete, the available indicators suggest that significant imbalances probably were present in only a few industries at year-end. Potential for wider inventory problems appears to have been contained through a combination of production restraint late in 1995, caution in ordering merchandise from abroad, and discounting by some retailers during the holiday shopping season. Wholesalers reduced their inventories in the final two months of 1995, and manufacturers' stocks rose only slightly; aggregate inventory–sales ratios moved down in both sectors.

Change in Real Nonfarm Business Inventories




Business profits rose further over the first three quarters of 1995. Economic profits of all U.S. corporations increased at an annual rate of nearly 11 percent, a pace similar to that seen over the four quarters of 1994. The profits of corporations from their operations in the rest of the world moved up sharply, on net, and earnings from domestic operations also continued to advance. The strongest gains in domestic profits came at financial corporations and reflected, in part, an increased volume of lending by financial institutions, reduced premiums on deposit insurance at commercial banks, and rising profits of securities dealers. The economic profits earned by nonfinancial corporations from their domestic operations rose at an annual rate of about 3½ percent over the first three quarters of 1995 after three years in which the annual increases were 15 percent or more. A moderation of output growth at nonfinancial corporations and a flattening of the rise in profits per unit of output both worked to reduce the rate of growth in nominal earnings in 1995. Nonetheless, with unit costs also moving up at a moderate pace, the share of the value of nonfinancial corporate output that ended up as profits changed little, on net, in the first three quarters, holding in a range that was relatively high in comparison to the average profit share over the past couple of decades.

Before-Tax Profit Share of GDP




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

## The Government Sector

At the federal level, combined real outlays for investment and consumption fell at an annual rate of about 4¼ percent over the first three quarters of 1995,

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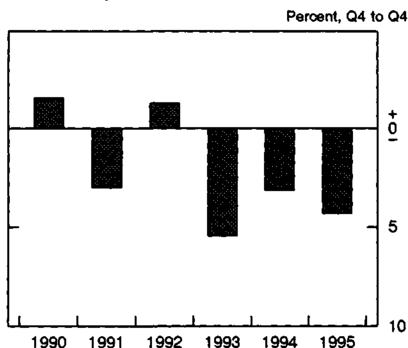
dropping to a level about 13 percent below its annual peak in 1990. Both investment and consumption were cut back over the first three quarters of 1995. Outlays for defense continued to contract, and nondefense expenditures turned down, reversing a moderate increase that took place over the four quarters of 1994.

Federal outlays in the unified budget, which covers items such as transfers and grants, as well as consumption and investment expenditures other than the consumption of fixed capital, rose 3¾ percent in nominal terms in fiscal 1995, matching almost exactly the percentage rise of the previous fiscal year. Nominal outlays for defense declined 3¼ percent in both fiscal 1995 and fiscal 1994. Outlays for social security increased about 5 percent in both years. Spending for Medicare and Medicaid continued to rise at rates appreciably faster than the growth of nominal GDP. Net interest payments jumped in fiscal 1995 after three years of relatively little change, but, working in the other direction, net outlays for deposit insurance were more negative than in 1994 (i.e., the margin between insurance premiums and the payout for losses increased). Proceeds from auctions of spectrum rights also helped to hold down expenditures; like the premiums for deposit insurance, these proceeds enter the budget as a negative outlay. In the first three months of fiscal 1996—i.e., the three-month period ended in December—federal outlays were about 1 percent lower in nominal terms than in the comparable period of fiscal 1995. Nominal outlays for defense have continued to trend down this fiscal year, and the spending restraint embodied in recent continuing budget resolutions has translated into sharp cuts in nondefense outlays.

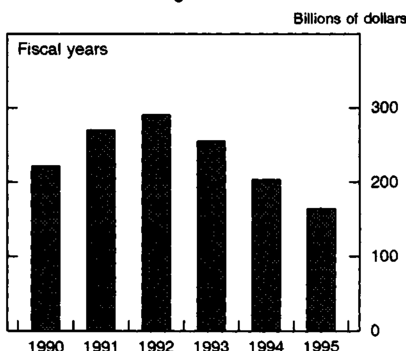
Federal receipts rose 7½ percent in fiscal 1995, after having increased 9 percent in fiscal 1994. In both years, categories of receipts that are most closely related to the state of the economy showed sizable increases. With receipts moving up more rapidly than spending in fiscal 1995, the federal budget deficit fell for a third consecutive year, to $164 billion. Progress in reducing the deficit in recent years has come from cyclical expansion of the economy, tax increases, non-recurring factors such as the sale of spectrum rights, and adherence to the budgetary restraints embodied in the Budget Enforcement Act of 1990 and the Omnibus Budgetary Reconciliation Act of 1993.

**Change in Real Federal Expenditures on Consumption and Investment**




Note. Value for 1995 is measured from 1994:Q4 to 1995:Q3 at an annual rate.

**Federal Unified Budget Deficit**




The economic expansion also has helped to relieve budgetary pressures that many state and local governments were experiencing earlier in the 1990s. Excluding social insurance funds, surpluses in the combined current accounts of state and local governments were equal to about ½ percent of nominal GDP in the first three quarters of 1995; this figure was more than double the average for 1991 and 1992, when budgetary pressures were most severe.

Even so, state and local budgets remain at the center of strongly competing pressures, with the demand for many of the services that typically are provided by these governments continuing to rise at a time when the public also is expressing desire for tax relief. Although states and localities have responded to these pressures in different ways, the aggregate picture is one in which expenditures and revenues have continued to rise faster than nominal GDP—but

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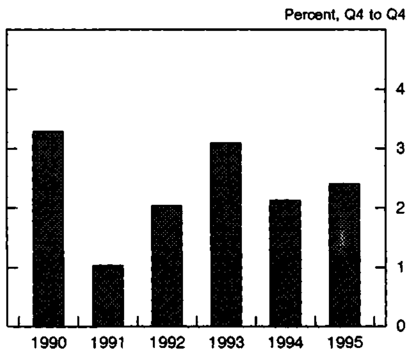
by smaller margins than in the early part of the 1990s. In total, the current expenditures of state and local governments, made up mainly of transfers and consumption expenditures, were equal to about 12½ percent of nominal GDP in the first three quarters of 1995, up slightly from the percentages of the two previous years and about 1¾ percentage points higher than the comparable figure for 1989. Total receipts of state and local governments were equal to about 13¾ percent of nominal GDP in the first three quarters of 1995, up just a touch from the comparable percentages of the two previous years but about 1¼ percentage points higher than the percentage in 1989.

**Change in Real State and Local Expenditures on Consumption and Investment**



Note. Value for 1995 is measured from 1994:Q4 to 1995:Q3 at an annual rate.

State and local outlays that are included in GDP have been rising less rapidly than the current expenditures of these jurisdictions, because GDP excludes transfer payments, which have been growing faster than other outlays. In real terms, combined state and local outlays for consumption and investment increased at an annual rate of about 2½ percent over the first three quarters of 1995. Real investment expenditures, which consist mainly of outlays for construction, moved up at an annual rate of almost 7 percent. By contrast, consumption expenditures, which are about four times the size of investment outlays, rose only modestly in real terms—at an average annual rate of about 1½ percent.

## The External Sector

Growth of real GDP in the major foreign industrial countries other than Japan slowed sharply in 1995 from the robust rates of 1994. In Canada, where economic activity had been particularly vigorous through the end of 1994, the slowdown reflected weaker U.S. growth and macroeconomic policies intended to achieve improved fiscal balance and to prevent the reemergence of inflationary pressures. In Germany and the other European economies, appreciation of their currencies in terms of the dollar during the early months of the year and efforts to reduce public sector deficits contributed to the decline in the rate of real output growth. In contrast, Japan showed some tentative signs of recovery late in 1995 after almost no growth during the previous three years.

With the expansion of real GDP slowing in the foreign G-10 countries at a time when some slack remained, inflation stayed low. The average rate of consumer price inflation in these countries remained about 2 percent last year, essentially the same as in 1994 and somewhat less than in the United States.

Economic growth in the major developing countries slowed on average in 1995 from the strong pace recorded for 1994. The substantial contraction of economic activity in Mexico had important effects on U.S. trade, but real output also slowed in other developing countries, including Argentina. In response to the December 1994 collapse of the Mexican peso, the Mexican government adopted a set of policies intended to tighten monetary conditions, maintain wage restraint, and reduce government spending in order to mitigate the inflationary impact of the peso's devaluation and to achieve significant reduction in the current account deficit in 1995. Through the third quarter, the Mexican current account was approximately balanced; a deficit of about $20 billion had cumulated during the comparable three quarters of 1994. The merchandise trade balance improved to moderate surplus in 1995 from a substantial deficit in 1994. The improved trade performance in part reflected a severe contraction in aggregate demand. Mexican real output fell sharply early in the year but picked up toward the end of the year, for an annual decline of nearly 7 percent.

The newly industrializing economies in Asia—for example, Malaysia, Korea, and Taiwan—continued to grow rapidly during 1995, at about the same rate as in 1994. Although growth in most of these countries was driven by a strong expansion in internal demand, especially in investment, most countries also benefited from very fast export growth. The marked acceleration in exports was attributable at least in part to a real depreciation of their currencies against the yen and key European currencies during the early part of the year.

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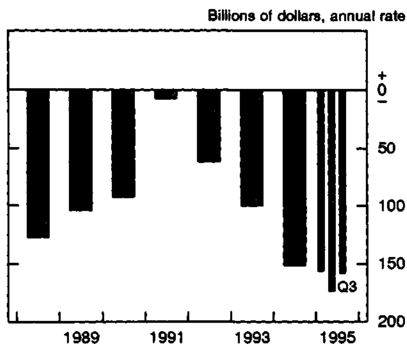
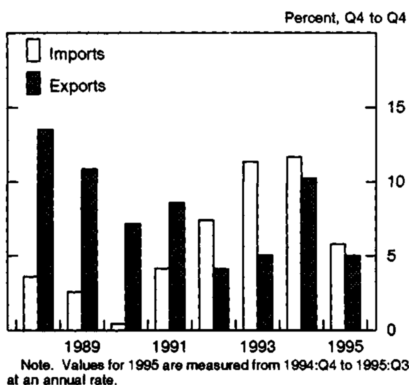
In the first eleven months of 1995 the nominal U.S. trade deficit in goods and services reached about $115 billion at a seasonally adjusted annual rate, a level slightly greater than the $106 billion recorded for 1994. U.S. income growth in 1995 was similar to the average for our trading partners, but, as is typically the case, comparable increases in income seemed to bring forth an increase in U.S. demand for imports that was larger than the average increases in demand for our exports by the foreign countries with which we trade. Effects of the dollar's depreciation during 1994 and early 1995 worked in the opposite direction, tending to boost exports and hold down imports. Overall, the result of these offsetting tendencies was that the dollar value of exports grew somewhat faster than the dollar value of imports through November. Nonetheless, with the level of imports exceeding the level of exports at the start of the year, these growth rates translated into a slightly larger deficit. The current account deficit averaged about $160 billion at an annual rate during the first three quarters of 1995. Both the trade deficit and the deficit on net investment income widened somewhat, resulting in an increase from the $150 billion current account deficit experienced in 1994.

U.S. Current Account




Real exports of goods and services grew at an annual rate of about 5 percent over the first three quarters of 1995. Agricultural exports remained at elevated levels, and the volume of computer exports continued to rise sharply. Other merchandise exports expanded in real terms at a marginally slower rate than did the total; within this broad category, machinery and industrial supplies accounted for the largest increases. Tabulation of the export data by country of

Change in Real Imports and Exports of Goods and Services




Note. Values for 1995 are measured from 1994:Q4 to 1995:Q3 at an annual rate.

destination showed divergent patterns: Exports to Mexico dropped in response to the economic crisis in that country, but shipments to developing countries in Asia rose sharply. Exports to Western Europe, Canada, and Japan increased as well.

Imports of goods and services increased at an annual rate of about 6 percent in real terms during the first three quarters, a slower rate of advance than during 1994. Imports of computers and semiconductors rose sharply, but imports of other machinery, consumer goods and industrial supplies slowed. Import prices increased about 2½ percent in the twelve months ending in December 1995. An end to the very rapid rise in world non-oil commodity prices and low inflation abroad helped to restrain the rise in import prices.

In the first three quarters of 1995, recorded net capital inflows into the United States were substantial and nearly balanced the deficit in the U.S. current account. Sharp increases were reported in both foreign assets in the United States and U.S. assets abroad.

Foreign official asset holdings in the United States increased almost $100 billion through September. These increases reflected both intervention by certain industrial countries to support the foreign exchange value of the dollar and very substantial accumulation of reserves by several developing countries in Asia and Latin America. Private foreign assets in the United States also rose rapidly. Net purchases of U.S. Treasury securities by private foreigners totaled $97 billion, an amount far exceeding previous

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records. Net purchases of U.S. government agency bonds and corporate bonds were also very large.

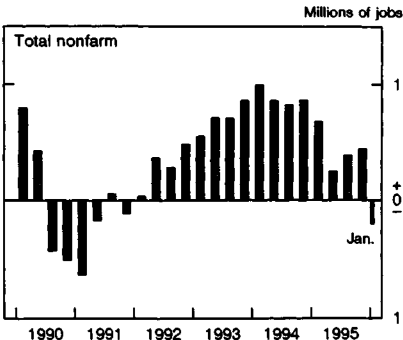
Direct investment inflows reached almost $50 billion in the first three quarters of 1995; this total was about equal to the inflow during all of 1994 and almost matched the record pace of 1989. Mergers and acquisitions added substantially to the inflow of funds from foreign direct investors in the United States. U.S. direct investment abroad was even larger than foreign direct investment in the United States and also approached previous peak rates. U.S. net purchases of foreign stocks and bonds were up from 1994, but below the 1993 peak rate. The bulk of the net U.S. purchases of foreign securities were from the industrial countries; net purchases from emerging markets played a relatively small role.

## Labor Markets

The number of jobs on nonfarm payrolls increased 1¾ million over the twelve months ended in December 1995. After a sharp rise during 1994, gains in employment slowed in the first part of 1995, and the second quarter brought only a small increase. Thereafter, increases picked up somewhat. Nearly 450,000 jobs were added in the final three months of the year, a gain of about 1½ percent at an annual rate. In January of this year, with the weather keeping many workers at home during the reference week for the monthly survey of establishments, payroll employment fell sharply.

As in 1994, increases in payroll employment in 1995 came mainly in the private sector of the economy, but gains there were more mixed than those of 1994. In manufacturing, employment fell about 160,000 over the twelve months ended in December, reversing almost half of the previous year's gain. Losses were concentrated in industries that produce nondurables. A decline this past year in the number of jobs at apparel manufacturers was one of the largest ever in that industry. Sizable reductions in employment also were reported by manufacturers of textiles, tobacco, leather products, and petroleum and coal. In many of these industries, cyclical deceleration of the economy in 1995 compounded the effects of adjustments stemming from longer-run structural changes. In contrast to the widespread contraction in employment among producers of nondurables, employment at the manufacturers of durable goods increased slightly during 1995. Hiring continued to expand briskly at firms that produce business equipment. Metal fabricators also sustained growth in employment but at a slower pace than in 1994. The number of jobs in transportion equipment declined, on net.

### Net Change in Payroll Employment




In most other sectors of the economy, employment rose moderately last year. The number of jobs in construction increased 140,000 over the twelve months ended in December, a rise of more than 3 percent. In the private service-producing sector, which now accounts for about three-fourths of all jobs in the private sector, employment increased 1.7 million in 1995 after having advanced 2.6 million in 1994. Establishments that are involved in wholesale trade continued to boost payrolls at a relatively brisk pace in 1995. Retailers also added to employment but at a considerably slower rate than in 1994; within retail trade, employment at apparel outlets fell substantially last year, and payrolls at stores selling general merchandise dropped moderately after a large increase in 1994. Providers of health services added slightly more jobs than in other recent years. At firms that supply services to other businesses, employment growth was sizable again in 1995 but less rapid than in either of the two previous years; in this category, providers of computer services expanded their job counts at an accelerated pace in 1995, but suppliers of personnel—a category that includes temporary help agencies—added jobs at a much slower rate than in other recent years.

Results from the monthly survey of households showed the civilian unemployment rate holding in a narrow range throughout 1995, and the rate reported in December—5.6 percent of the labor force—was near the midpoint of that narrow range. In January of this year, the unemployment rate ticked up to 5.8 percent.

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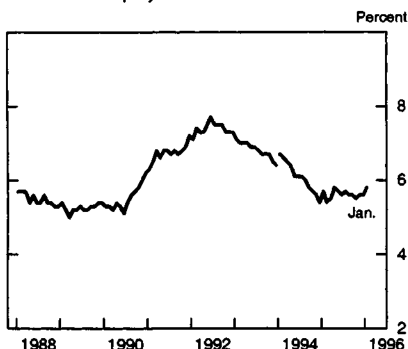
Civilian Unemployment Rate

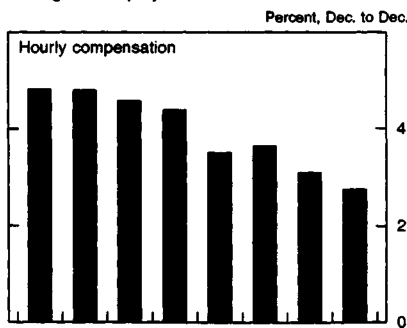



Note. The break in data at January 1994 marks the introduction of a redesigned survey; data from that point on are not directly comparable with the data of earlier periods.

The proportion of working-age persons choosing to participate in the labor force edged down slightly, on net, over the course of 1995. It has changed little, on balance, since the start of the 1990s. By contrast, the two previous decades brought substantial net increases in labor force participation, although longer-term trends during the two decades were interrupted at times by spells of cyclical sluggishness in the economy. Two or three years ago, cyclical influences also seemed to be a plausible explanation for the sluggishness of labor force participation in the current business expansion. But, with the participation rate remaining sluggish as job opportunities have continued to expand, the evidence is pointing increasingly toward a slower rate of rise in the trend of participation. Slower growth of participation will tend to limit the growth of potential output, unless an offsetting rise is forthcoming in the trend of productivity growth. So far in the current expansion, measured increases in productivity seem to have followed a fairly typical cyclical pattern, with larger increases early in the expansion and smaller gains, on average, in subsequent years. Overall, however, this pattern has not yielded evidence of a significant pickup in the longer-term trend of productivity growth.

The average unemployment rate for all of 1995 was about ½ percentage point below the average for 1994, and it was only a little above the levels to which the unemployment rate fell in the latter stages of the long business expansion of the 1980s. The low unemployment rates reached back then proved to be unsustainable, as they eventually were accompanied by a significant step-up in the rate of inflation, brought on in part by faster rates of rise in hourly compensation and unit labor costs. The current expansion, in contrast, has remained relatively free of increased inflation pressures working through the labor markets. The employment cost index for hourly compensation of workers in private nonfarm industries rose only 2.8 percent over the twelve months ended in December, the smallest annual increase on record in a series that goes back to the start of the 1980s. Hourly wages increased 2.8 percent during the past year, the same relatively low rate of increase as in 1994. The cost of fringe benefits, prorated to an hourly basis, rose only 2.7 percent last year, the smallest annual rise on record. With many firms still undergoing restructurings and reorganizations, many of which have involved permanent job losses, workers probably have been more reluctant to press for wage increases than they normally would have been during a period of tight labor markets. Also, firms have been making unprecedented efforts to gain better control over the rate of rise in the cost of benefits provided to employees, especially those related to health care. Although some of these efforts may have only a one-time effect on the level of benefit costs, groundwork also seems to have been laid for slower growth of benefits over time than would otherwise have prevailed.

Change in Employment Cost Index




Note. Private industry, excluding farm and household workers.

## Prices

Early in 1995, inflation pressures that had started building in 1994 seemed to be gaining in intensity. Indexes of spot commodity prices continued to surge in the early part of last year, and in the producer price index, materials prices recorded some of the largest

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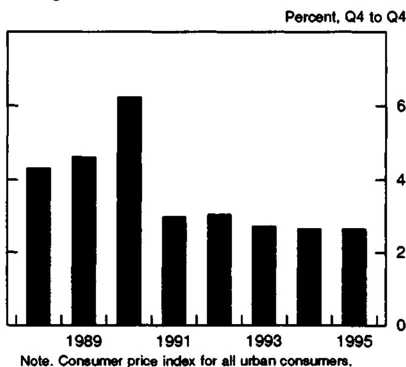
monthly increases of the past decade and a half. Consumer prices also began to exhibit some upward pressure, with the index for items other than food and energy moving up fairly rapidly over the first four months of the year.

The surge in inflation proved to be relatively short-lived, however. The spot prices of industrial commodities turned down in the spring of the year and fell further, on net, after midyear. Price increases for intermediate materials slowed in the second and third quarters of 1995, and by the final quarter of the year these prices also were declining. Monthly increases in the core CPI slowed in May; thereafter, increases generally were small over the remainder of the year. The slowing of the economy after the start of the year appears to have cut short the buildup of inflationary pressures before they could have much effect on the underlying processes of wage and price determination. In the end, the rise in the CPI excluding food and energy from the final quarter of 1994 to the final quarter of 1995 amounted to 3 percent, an increase that differed little from those of the two previous years. The increase in the total CPI in 1995 came in at 2¾ percent, the fifth consecutive year in which it has been in a range of 3 percent or less.

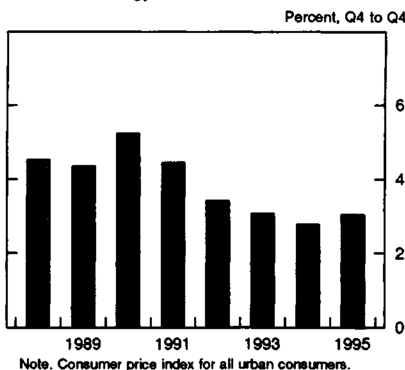
Change in Consumer Prices



Note. Consumer price index for all urban consumers.

In the aggregate, rates of price increase held fairly steady for both goods and services this past year. The CPI for commodities other than food and energy rose 1¾ percent over the four quarters of 1995 after increases of 1½ percent in both 1993 and 1994. The last three-year period in which prices of these goods rose by such small amounts came in the middle part of the 1960s. Apparel prices continued to decline last

Change in Consumer Prices Excluding Food and Energy



Note. Consumer price index for all urban consumers.

year but not so rapidly as in the previous year. Price increases for vehicles moderated. The 1995 rise in the CPI for services other than energy was 3¾ percent; although this increase exceeded the 1994 rise by a slight amount, the results for both years were among the smallest increases for this category in the last three decades.

Trends in food prices and energy prices remained favorable to consumers in 1995. The rise in food prices from the final quarter of 1994 to the final quarter of 1995 was slightly more than 2½ percent, almost exactly the same as the increases of the two previous years. The last yearly increase in food prices in excess of 3 percent came five years ago, in 1990. In the intervening years, production adjustments by farmers and weather problems of one sort or another have caused temporary surges in the prices of some farm commodities, but these surges have not resulted in widespread pressures on food prices at the retail level. Moderate rates of increase in the costs of non-farm inputs that contribute heavily to value added have been an important anchor in the setting of food prices at the consumer level. Also, if only by chance, years of poor crops—like that of 1995, when grain and oilseed production plummeted—have tended to be interspersed with years of good crops, a pattern that has prevented sustained upward pressures on farm and food prices. In the energy area, prices at the consumer level fell 1¾ percent, on net, over the four quarters of 1995, more than reversing a moderate 1994 increase. Gasoline prices dropped nearly 5 percent, on net, over the four quarters of the year, and consumer prices of natural gas also declined appre-

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ciably. However, some upward pressures developed late in 1995 and early this year, largely in response to unexpectedly cold temperatures that boosted fuel requirements for winter heating.

All told, the price developments of 1995 appear to have left a favorable imprint on expectations of future rates of inflation, if results from various surveys of consumers and forecasters are an accurate reflection of the views held by the broader public. Monthly responses to the surveys tend to bounce around somewhat, but over 1995 as a whole, average readings of anticipated price increases one year into the future were slightly lower than those of 1994, and survey responses about inflation prospects over the longer term came down more substantially. Although the responses regarding expected inflation still tended, on balance, to run to the high side of actual rates of price increase, the easing of inflation expectations this past year provided another encouraging sign that inflation processes that helped to undermine other recent business expansions are still in check in the current expansion.

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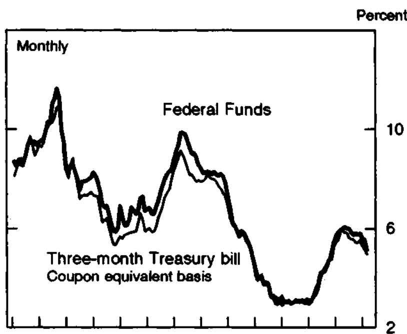
## Section 3: Financial, Credit, and Monetary Developments

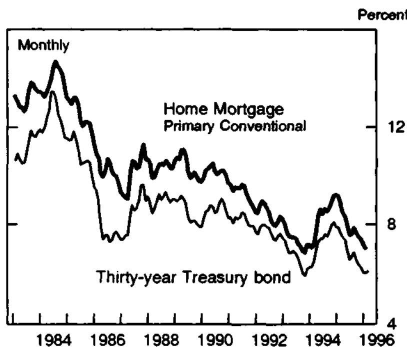
In 1995 and early 1996, the Federal Reserve had to adjust its policy stance several times to promote credit market conditions supportive of sustained growth with low inflation. At the beginning of 1995, some risk remained that inflation might rise. To provide additional insurance against that development, the Federal Open Market Committee (FOMC) tightened reserve conditions, raising the intended federal funds rate ½ percentage point, to 6 percent, thereby extending the episode of policy firming that had begun one year earlier. As time passed, it became clear that these policy tightenings had been successful in containing inflationary pressures, and the System initiated ¼ point reductions in the federal funds rate in July and December of 1995 and January of 1996.

Domestic Interest Rates

Short-Term




Long-Term




Most market interest rates had peaked before the policy tightening last February. During the spring, interest rates declined appreciably, as market participants increasingly came to believe that no additional policy restraint would be forthcoming, and, indeed, that easing might be in the cards. Mounting evidence that the growth of spending had downshifted and price pressures were muted, along with greater hopes that substantial progress would be made toward reducing the federal budget deficit, contributed to the change in attitudes and to the drop in interest rates, especially longer-term rates. On balance during 1995, interest rates dropped 1 to 2½ percentage points, with the largest declines registered on intermediate- and long-term securities. This year, short- and intermediate-term interest rates have fallen somewhat further, while long-term rates are unchanged to a little higher.

During the first part of last year, expectations of lower U.S. interest rates relative to other G-10 countries and other factors such as the crisis in Mexico contributed to a 10 percent depreciation of the trade-weighted exchange value of the dollar. By year-end, though, the dollar had retraced about half of these losses, and it has appreciated further on balance in 1996.

The course of interest rates during the year influenced overall credit flows and their composition. The expansion of the total debt of domestic nonfinancial sectors was relatively strong during the first half of the year but moderated later in 1995. For the year, debt grew 5¼ percent, a bit above the midpoint of its annual growth range. Initially, household and nonfinancial business credit demands were concentrated in floating-rate or short-term debt instruments. As the yield curve flattened, credit demands shifted to fixed-rate, long-term debt instruments.

Because depository institutions are important sources of short-term and floating-rate credit to households and businesses, depository assets grew rapidly early on and then backed off. The need to fund the increase in assets, along with declines in market interest rates relative to yields on retail deposits, led to the fastest growth in M2 and M3 since the late 1980s; M2 ended the year in the upper part of its annual range, and M3 was at the upper end of its range. In contrast, M1 declined for the first time since the beginning of the official series in 1959, as many banks introduced retail sweep accounts that shifted deposits from

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interest-bearing checking accounts to savings-type accounts in order to reduce reserve requirements.

## The Course of Policy and Interest Rates

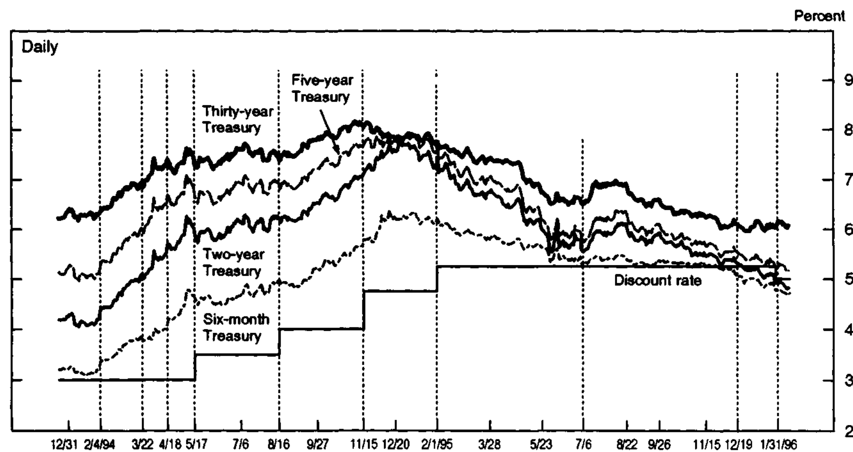
The Federal Reserve entered 1995 having tightened policy appreciably during the previous year. Short-term interest rates had risen more than 2½ percentage points from the end of 1993, and long-term rates were up 2 percentage points. Policy tightening had been necessitated by the threat of rising inflation posed by unusually low real short-term interest rates earlier in the 1990s. Rates had been kept low to counter the effects of impediments to credit flows and economic growth. But as these impediments were reduced, the economy expanded at an unsustainable pace and margins of underutilized labor and capital began to erode. Ultimately, absent a firmer policy, excessive demands on productive resources and resulting higher inflation would have produced strains, threatening economic expansion.

In early February the policy actions taken in 1994 did not appear to be sufficient to head off inflationary pressures. The growth of economic activity had not shown convincing signs of slowing to a more sustainable pace, and available information, including a marked rise in materials prices during the last half of 1994, seemed indicative of emerging resource constraints and building inflationary pressures. In these circumstances, the FOMC agreed on a ½ percentage point increase in the federal funds rate, and the Board of Governors approved an equal increase in the discount rate.

During the remainder of the winter and through the spring, incoming data signaled that economic growth was finally moderating. At first, it was unclear if the slowdown was temporary or if it was a lasting shift toward a sustainable rate of economic expansion in the neighborhood of the economy's potential. Adding to the uncertainty was a pickup of consumer price inflation and a pronounced weakening in the foreign exchange value of the dollar. At the March meeting, the FOMC determined that it would be prudent to await further information before taking any additional policy actions, but it alerted the Manager of the System Open Market Account that, if intermeeting action were to be required, the step would more likely be to firm than to ease.

By the May meeting, substantial evidence had accumulated that the threat of rising inflation had lessened. Economic growth had slowed; although the

The Discount Rate and Selected Market Interest Rates




Note. Dotted vertical lines indicate days on which the Committee announced a monetary policy action. Asterisks indicate days on which the FOMC held scheduled meetings.

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adjustment to inventory imbalances that had developed earlier in the year was contributing to the slowdown, the underlying trajectory of final sales was still uncertain. The FOMC determined that the existing stance of policy was appropriate and expressed no presumption as to the direction of potential policy action over the intermeeting period, issuing a symmetric directive to the Account Manager.

Intermediate- and long-term interest rates had fallen throughout the winter and spring, as evidence accumulated that the expansion of economic activity was slowing and that inflationary pressures were ebbing. Furthermore, budget discussions in the Congress seemed to foreshadow significant fiscal restraint over the balance of the decade, putting additional downward pressure on these rates. Short-term rates had declined less, but in late spring, financial market participants had begun to anticipate an easing of monetary policy. By midyear, the three-month Treasury bill rate had declined about ¼ percentage point from its level at the beginning of the year, while rates on securities with maturities greater than one year had dropped as much as 2 percentage points.

Employment data released shortly after the May FOMC meeting were surprisingly weak, and by the July meeting it appeared that growth of aggregate output had sagged markedly during the second quarter as businesses sought to keep inventories from rising to undesirable levels. This deceleration of output growth was accompanied by a softening of industrial prices and a marked reduction in the pace at which materials prices were rising. With the economy growing more slowly than had been anticipated and potential inflationary pressures receding, the FOMC voted to ease reserve pressures slightly with a ¼ percentage point decline in the intended federal funds rate.

Although financial market participants had anticipated a decline in the federal funds rate at some point, bond and equity markets rallied strongly immediately after the change in policy was announced. However, a pickup in economic growth during the summer made further reductions in the funds rate appear less likely, and interest rates backed up for a time.

The Committee did keep rates unchanged at the August and September meetings. Although inflation had improved, the slowdown had been anticipated to a considerable extent. Moreover, uncertainties about federal budget policies and their effects on the economy remained substantial.

At the November meeting, the economic signals were mixed. Anecdotal information tended to suggest a softening in spending after the third quarter, but the extent of any slowing of spending and inflation was unclear. Although short-term rates remained above long-term averages on a real, inflation-adjusted basis, substantial rallies in bond and stock markets were thought likely to buoy spending. Against this backdrop, the FOMC voted to maintain the existing stance of monetary policy.

The generally positive news about inflation and hopes for a budget agreement had helped propel the bond market higher throughout the fall. By the December meeting, intermediate- and long-term interest rates were 1¾ to 2½ percentage points below their levels at the beginning of the year. The bond market rally, along with strong earnings reports, pushed equity prices higher during the year, and by mid-December, equity price indexes were up about 35 percent from levels at the beginning of the year. Since the last easing in July, inflation had been somewhat more favorable than anticipated, and the expansion of economic activity had moderated substantially after posting a strong third quarter. With both inflation and inflation expectations more subdued than expected, and with the slowing in economic growth suggesting that price pressures would continue to be contained, the FOMC decided to reduce the intended federal funds rate an additional ¼ percentage point, bringing it to 5½ percent.

The data available at the time of the FOMC meeting in late January gave stronger evidence of slowing economic expansion. This development reduced potential inflationary pressures going forward and raised questions about whether monetary policy might unduly restrain the pace of expansion. The Committee believed that a further slight easing in monetary policy was consistent with keeping inflation contained and fostering sustainable growth, given that price and cost trends were already subdued. In these circumstances, the Committee lowered the intended federal funds rate ¼ percentage point, to 5¼ percent, and the Board approved an equivalent reduction in the discount rate, to 5 percent.

Partly as a consequence of the System actions in December and January, short- and intermediate-term interest rates have fallen ¼ to ½ percentage point since mid-December. However, on balance, longer-term rates are unchanged to a little higher. The absence of a firm agreement to reduce the federal budget deficit, and some tentative signs most recently that the economy might not be so sluggish as some market participants had feared, have held up longer-term rates.

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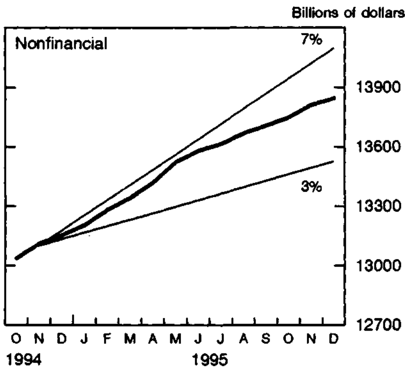
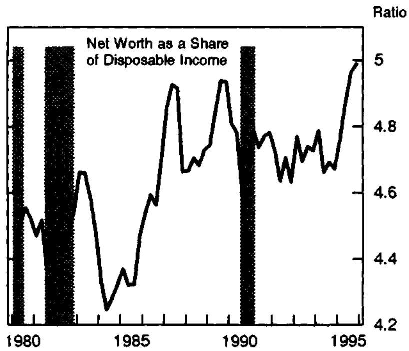
Debt: Annual Range and Actual Level




Household Financial Condition




## Credit and Money Flows

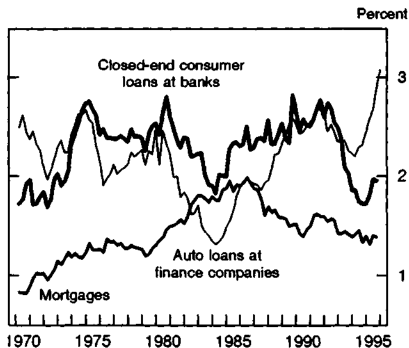
On balance in 1995, the debt of the domestic nonfinancial sectors grew at about the same pace as in the previous year, although within the year, debt growth was much stronger in the first half than in the second. Credit supplies remained plentiful: Banks continued to be willing lenders, and in securities markets most interest-rate spreads remained quite narrow. Debt burdens for households increased, but except for a few types of consumer credit obligations, delinquency rates remained at low levels. Rising equity prices bolstered the overall financial condition of households.

Federal debt rose 3¾ percent in 1995, slightly less than in 1994. The federal government's demands for credit fell largely because the budget deficit shrank about 20 percent for the calendar year. Federal debt growth also slowed toward year-end as the Treasury drew down its cash balance to keep borrowing within the $4.9 trillion debt ceiling.

State and local government debt fell 5½ percent—more than in 1994. A few years earlier, municipalities had taken advantage of low long-term rates to prerefund a substantial volume of issues, many of which were eligible to be called in 1995. As those securities were called, and with gross issuance light, the stock of municipal securities contracted for a second consecutive year. Despite the overall reduction in debt outstanding, the ratios of tax-exempt to taxable yields jumped in the first half of the year and, for long-term debt, held at an elevated level during the remainder of the year. This increase was associated with concerns about the effect on demands for tax-free municipal debt of proposals for changes in federal taxation that would sharply reduce the tax advantages of holding municipal bonds.

Household borrowing remained robust in 1995, moderating only a bit from 1994, and the ratio of household debt to disposable personal income rose further. Even so, the financial condition of this sector remained good on balance, although there were signs of deterioration. The rally in the domestic equity markets supported household balance sheets by boosting net worth sharply. In addition, delinquency rates on home mortgages and closed-end consumer loans at banks, while rising, remained at low levels. Other indicators, however, provided evidence that some households were likely beginning to experience increased financial pressures. For instance, delinquency rates on credit card debt held by banks and on

Delinquency Rates on Household Loans

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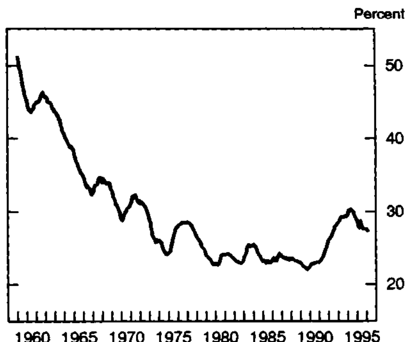
auto loans booked at captive finance companies rose sharply. Furthermore, the average household debt service burden—calculated as the share of disposable income needed to meet required payments on mortgage and consumer debt—continued to rise last year. This measure of debt burden has now reversed about one-half of the decline it posted earlier in the decade.

The average debt service burden of nonfinancial corporations—the ratio of net interest payments to cash flow—also rose last year, but it remained well beneath the most recent peak reached in 1990. The increase in debt burden was in part associated with the relatively strong growth of the debt of nonfinancial businesses. This sector's debt growth was especially robust early in the year, when business fixed investment picked up further and inventory accumulation was rapid. Debt issuance was also boosted by the rising wave of mergers, although a good number involved stock swaps. Financing needs fell back later on as investment growth slowed and profits increased. Funding patterns also shifted as bond yields fell, and firms relied more heavily on longer-term debt. Despite the increase in credit demands, interest rate spreads of investment-grade private securities over comparable Treasuries widened only slightly and remained narrow by historical standards, suggesting that lenders continued to view balance sheets of nonfinancial corporations as remaining healthy on the whole. Spreads on below-investment-grade debt rose more sharply but stayed well beneath levels reached early in the decade.

**Securities as a Percent of Bank Credit**




Commercial banks met a significant portion of the increase in business credit demands last year, which, in turn, contributed to the rapid expansion of bank balance sheets. Banks funded a portion of the loan increase by reducing their securities holdings, although higher market prices of securities and off-balance sheet contracts left reported securities holdings slightly higher for the year. In fact, bank security holdings relative to the size of their balance sheets remained elevated and, together with banks' strong capital positions, indicated that late in the year banks were well positioned to continue accommodating the credit demands of households and businesses. Although qualitative information suggested that banks were no longer reducing the standards businesses needed to meet to qualify for loans, some easing of credit terms continued, with interest-rate spreads on business loans narrowing further. Growth of real estate loans held by banks slowed over the year as the share of fixed-rate mortgages in total originations rose with the decline in long-term rates. Banks tend to securitize fixed-rate mortgages more than adjustable-rate loans. Consumer loans on the books of banks began the year growing at very high rates; this growth decelerated throughout 1995 as the volume of securitization increased. In response to rising delinquency rates, some banks tightened terms and standards for consumer loans toward the end of 1995 and early 1996.

**Distribution of Bank Assets by Capital Status**
Percent of industry assets

| | 1990:Q4 | 1995:Q3 |
|---|---|---|
| Under Capitalized | 31.3 | .5 |
| Adequately Capitalized | 38.6 | 2.9 |
| Well Capitalized | 30.1 | 96.6 |

Note. Adjusted for examiner ratings.

Total assets of thrift institutions are estimated to have risen slightly last year. Growth at healthy thrifts more than offset a substantial transfer of thrift assets to commercial banks through mergers. The revival of growth in thrift assets, along with the strong showing of bank credit, helped to nudge up depository credit as a share of domestic nonfinancial debt for the second straight year after fifteen years of declines. Banks and thrifts still account for more than one-third of all credit to nonfinancial sectors.

Banks and thrifts funded a large share of their asset growth with deposits, and M3 grew 6 percent. The non-M2 portion of M3 was especially strong, in part

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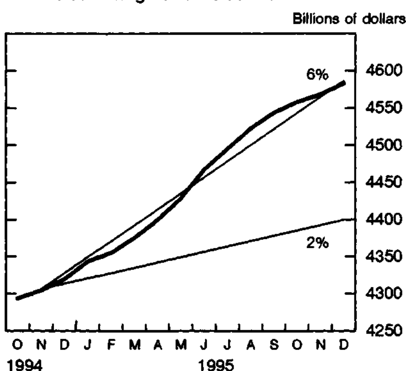
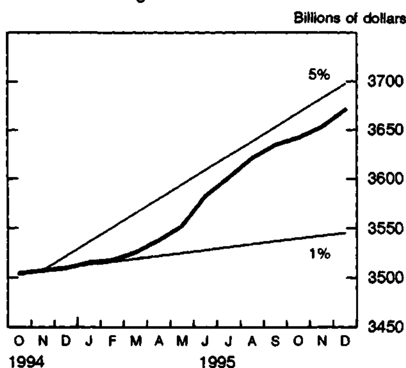
M3: Actual Range and Actual Level




as depository institutions substituted large time deposits for nondeposit sources of funds. The sharp reduction in deposit insurance premiums, which made large time deposits a more attractive source of funds, probably contributed to this shift. Late in the year, branches and agencies of Japanese banks, facing some resistance in U.S. funding markets, ran off time deposits while continuing to increase their funding from overseas offices.

M2 rose as lower market interest rates and a flatter yield curve increased the relative attractiveness of retail deposits. As is typical, deposit interest rates, and to a lesser extent returns on money market mutual funds, adjusted slowly to declines in market rates last year. Falling interest rates for comparable maturity

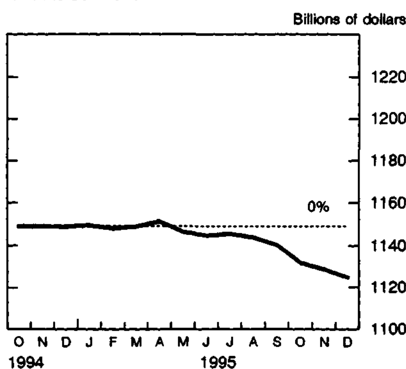
M2: Actual Range and Actual Level




market instruments were not the whole story for the growth of M2, however. As the yield curve flattened, the relative gains from holding longer-term assets with less certain price behavior fell and probably strengthened household demand for components of M2. Even so, M2 velocity was about unchanged after having increased for four years.

M1 fell almost 2 percent in 1995, the first annual decline since the beginning of the Board's official series in 1959. Sweeps of deposits from reservable checking accounts, a component of M1, to nonreservable money market deposit accounts were a major influence. Without these sweeps, M1 would have risen 1 percent. By the end of last year, sweeps had spread to thirty-two bank holding companies, and the initial amounts swept by these programs totaled $54 billion. The corresponding decline of more than $5 billion in required reserves largely showed through

M1: Actual Level




to reserve balances maintained at Federal Reserve Banks. As banks continue to introduce retail sweep programs in the future, the aggregate level of required reserve balances will tend to fall further. Although it has not happened yet, one possible consequence of the declining required reserve balances is greater instability in the aggregate demand for reserves and in overnight interest rates. In 1991, following the cut in reserve requirements at the end of 1990, unusually low levels of required reserve balances were associated with greater variability in the federal funds rate, as banks' volatile clearing needs began to dominate the demand for reserves, making daily reserve demand more difficult to estimate.

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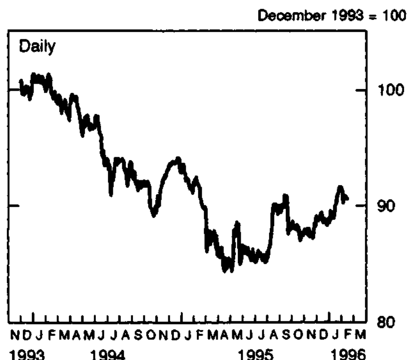
The runoff in reserve balances held down the growth of the monetary base to 4 percent in 1995. In addition, currency growth slowed, primarily owing to reduced shipments abroad. Foreign demand moderated with the stabilization of financial conditions in some countries where dollars circulate widely. Indeed, reduced demands from abroad contributed to a rare decline in the currency component of M1 this past summer, the first decrease since the early 1960s. The demand for existing Federal Reserve notes also slackened in anticipation of the introduction of a newly designed $100 bill that will be harder to counterfeit.

## Foreign Exchange Developments

The weighted-average foreign exchange value of the dollar in terms of the other G-10 currencies declined about 5 percent on balance last year. The dollar fell sharply through April and reached a low almost 10 percent below its value at the end of 1994. The downward pressure against the dollar was sparked by indications of some slowing of the pace of U.S. real output growth, which contributed to expectations that further increases in U.S. interest rates were unlikely, and by the acrimony surrounding the ongoing trade dispute between the United States and Japan. The crisis in Mexico also weighed on the dollar. On several occasions in March and early April the Trading Desk at the New York Federal Reserve Bank, joined by some other central banks, intervened to buy dollars on behalf of the Treasury and the Federal Reserve System in an effort to counter the pressure for dollar depreciation.

The release by the G-7 officials of the communique from their meeting in late April supporting an orderly reversal of the dollar's decline and the signing of a trade agreement between the United States and Japan at the end of June helped to stabilize the dollar, which fluctuated narrowly until early August. The dollar then rebounded somewhat and remained within a narrow range through the end of the year. The recovery of the dollar stemmed, in part, from perceptions that its earlier decline, particularly in terms of the yen, had been excessive in light of the underlying fundamentals. Moreover, weakness in the economies of some other major industrial countries began to emerge, reducing prospective returns available

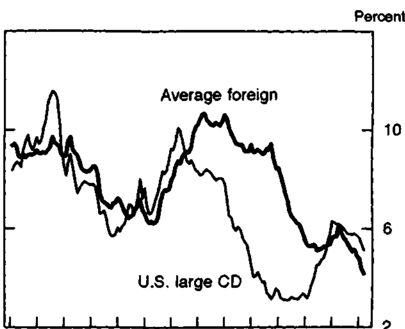
Weighted Average Foreign Exchange Value of the U.S. Dollar



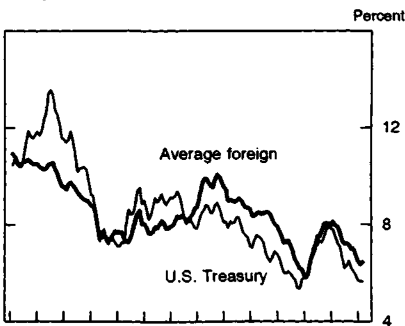

Note. Index of weighted average foreign exchange value of U.S. dollar in terms of currencies of the other G-10 countries. Weights are based on 1972–76 global trade of each of the foreign countries.

U.S. and Foreign Interest Rates

Three-month




Ten-year




Note. Average foreign rates are the trade-weighted average, for the other G-10 countries, of yields on instruments comparable to U.S. instruments shown. The data are monthly.

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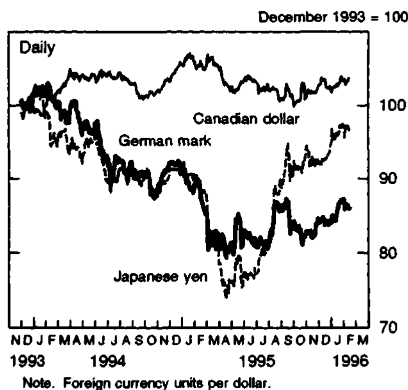
abroad. At times from May through August, the Trading Desk again entered the market in conjunction with other central banks to intervene in support of the dollar, reinforcing the view that U.S. authorities were committed to a strong dollar.

In all of the major foreign industrial countries, long-term interest rates declined during 1995, nearly reversing the increases that had occurred during the previous year. On average, rates on foreign government issues with maturities of ten years fell about 150 basis points in the twelve months to December, somewhat less than the decline that occurred in the comparable U.S. rate. In Canada, where economic activity slowed sharply, the drop in long-term rates nearly matched that in the United States, while in Italy, where political uncertainty remained a concern throughout the year, rates fell only 100 basis points. During the first few weeks of this year, long-term rates abroad generally moved down somewhat more, but then most recently returned to their December average levels. An important exception is Japan, where rates have risen from their late-December levels, apparently reflecting market perceptions that the stage is set for a Japanese economic recovery. Short-term market rates in the major foreign industrial countries were mixed, but on average rates moved down.

On balance, the dollar depreciated about 8 percent in terms of the German mark during 1995 and by similar amounts in terms of most other currencies participating in the Exchange Rate Mechanism of the European Union. After substantial depreciation against the mark early in the year, the dollar stabilized

**Foreign Exchange Value of the Dollar in Terms of Selected Currencies**




Note. Foreign currency units per dollar.

and then partly recovered as economic indicators revealed significant softening in economic activity in Germany. Easing by the Bundesbank during the second half of the year reinforced the view that mark interest rates were not likely to rise and might fall further. The dollar depreciated slightly, on balance, in terms of the Canadian dollar, despite periods of selling pressure on the Canadian dollar during the year related to Canada's fiscal situation and possible secession by Quebec.

Although the dollar did fall to a record low, below 80 yen to the dollar in mid-April, by year-end the dollar had appreciated slightly in terms of the yen from its level at the end of 1994. So far this year, the dollar has appreciated somewhat further against the yen. Resolution of the trade dispute and repeated episodes of exchange market intervention by the Bank of Japan, sometimes in conjunction with U.S. and foreign monetary authorities, contributed to the appreciation of the dollar in terms of the yen during the second half of the year. However, the fundamental cause of the yen's decline during that period probably was the easing of monetary policy by the Bank of Japan that pushed short-term market interest rates to extremely low levels.

In terms of the Mexican peso, the dollar appreciated sharply from the onset of the crisis in late December 1994 to March. The dollar subsequently retraced some of those gains, and the peso–dollar rate fluctuated narrowly through the middle of the year. Uncertainty about the prospects for Mexican economic performance and macroeconomic policy sparked renewed appreciation of the dollar in terms of the peso in November. Since November, data indicating that the decline in Mexican real economic activity may have ended, some intervention by the Bank of Mexico in support of the peso, and a perception that the decline in the peso may have gone too far given the underlying fundamentals have contributed to some rebound of the peso. During the year, the Mexican authorities drew \$3 billion on short-term swap lines with the Federal Reserve and Exchange Stabilization Fund (ESF) of the U.S. Treasury and \$10.5 billion on a medium-term swap facility provided by the ESF. By the end of January 1996, the short-term drawings had been entirely repaid.

Adjusted for relative consumer price inflation, the dollar was little changed, on balance, against a multilateral-trade-weighted average of the currencies of eight developing countries that are important U.S. trading partners. The dollar's 30 percent real appreciation against the Mexican peso was about offset by real depreciations against the other seven currencies.

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**Growth of Money and Debt**
Percent

| Period | M1 | M2 | M3 | Domestic Nonfinancial Debt |
|---|---|---|---|---|
| *Year*[1] | | | | |
| 1980 | 7.5 | 8.7 | 9.6 | 9.5 |
| 1981 | 5.4 (2.5)[2] | 9.0 | 12.4 | 10.2 |
| 1982 | 8.8 | 8.8 | 9.7 | 9.8 |
| 1983 | 10.3 | 11.8 | 9.5 | 11.9 |
| 1984 | 5.4 | 8.1 | 10.8 | 14.6 |
| 1985 | 12.0 | 8.6 | 7.7 | 14.3 |
| 1986 | 15.5 | 9.2 | 9.0 | 13.3 |
| 1987 | 6.3 | 4.2 | 5.9 | 9.9 |
| 1988 | 4.3 | 5.7 | 6.3 | 9.0 |
| 1989 | .5 | 5.2 | 4.0 | 7.8 |
| 1990 | 4.2 | 4.1 | 1.8 | 6.8 |
| 1991 | 7.9 | 3.1 | 1.2 | 4.6 |
| 1992 | 14.3 | 1.8 | .6 | 4.7 |
| 1993 | 10.5 | 1.4 | 1.0 | 5.2 |
| 1994 | 2.4 | .6 | 1.6 | 5.2 |
| 1995 | −1.8 | 4.2 | 6.1 | 5.3 |
| *Quarter (annual rate)*[3] | | | | |
| 1995:Q1 | −.1 | 1.4 | 4.8 | 5.3 |
| Q2 | −.5 | 4.3 | 6.7 | 7.0 |
| Q3 | −1.5 | 7.0 | 8.0 | 4.6 |
| Q4 | −5.1 | 4.0 | 4.4 | 3.9 |

1. From average for fourth quarter of preceding year to average for fourth quarter of year indicated.
2. Adjusted for shifts to NOW accounts in 1981.
3. From average for preceding quarter to average for quarter indicated.

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