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 FIFTH CONGRESS

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CONTENTS

Page

Hearing held on:
July 22, 1997 1
Appendix:
July 22, 1997 61

WITNESS

TUESDAY, JULY 22, 1997

Greenspan, Hon. Alan, Chairman, Board of Governors, Federal Reserve System 18

APPENDIX

Prepared statements:
Castle, Hon. Michael N. 62
Flake, Hon. Floyd H. 98
Jackson, Hon. Jesse L. Jr. 99
Roukema, Hon. Marge 101
Sanders, Hon. Bernard 102
Greenspan, Hon. Alan 130

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

Castle, Hon. Michael N.:
CRS Background Materials, July 18, 1997 64
CRS Report entitled "Current Economic Conditions and Selected Forecasts," July 16, 1997 83
Maloney, Hon. Carolyn B:
Comment of the Staff of the Bureau of Economics of the Federal Trade Commission, March 19, 1991 112
Letter to Mr. Bill McDonough from Messrs. Thom Hunt and Tom McFarland, November 8, 1995 108
Greenspan, Hon. Alan:
Monetary Policy Report to the Congress from the Board of Governors of the Federal Reserve System, July 22, 1997 150

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CONDUCT OF MONETARY POLICY

TUESDAY, JULY 22, 1997

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

The subcommittee met, pursuant to notice, at 2:07 p.m., in room 2128, Rayburn House Office Building, Hon. Michael N. Castle, [chairman of the subcommittee], presiding.

Present: Chairman Castle; Representatives Leach, Roukema, Bereuter, Bachus, Lucas, Metcalf, Paul, Weldon, Cook, Foley, LaFalce, Frank, Kanjorski, Kennedy, Flake, C. Maloney of New York, Watt, Bentsen, Jackson, Kilpatrick and Sanders.

Chairman CASTLE. The hearing will come to order.

We welcome the Chairman. We have a guest with us today, Christa Randzio-Plath, the President of the Monetary Affairs Subcommittee of European Parliament, if she would rise and be acknowledged, please.

We are pleased to have you here today.

[Applause.]

Chairman CASTLE. We don't know if we are learning from you, or you'll learn from us, but we are delighted to have you here today.

The subcommittee meets today to 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.

Chairman Greenspan, welcome back to the House Committee on Banking and Financial Services Subcommittee on Domestic and International Monetary Policy.

I wish that I could promise that no one will utter the words "irrational" or "exuberance" in any combination, but I am afraid that is not possible.

I guess a better question is, is this permanent exuberance?

Mr. Chairman, I know that you are a student of the classics as well as business cycles, and thus are familiar with the Roman imperial practice of awarding triumphs to conquering leaders. They were driven through cheering crowds in a gilded chariot with a laurel wreath held above their heads. However, the guy holding the laurel wreath was required to repeat in the conqueror's ear, "Remember, you are only human." Today, you may get a well-

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deserved triumphal tour of the subcommittee, but you will also receive whispers or shouts in your ear about what the Fed should or should not be doing.

Most of the mandates in the Humphrey-Hawkins Act have been ignored over the years. Now with the United States economy nearing its 80th month of sustained growth, and with the inflation rate still declining, this might be an occasion to revisit some of these goals. The Act established interim numerical goals of 4 percent unemployment and 3 percent inflation by 1983, and zero inflation by 1988. While these goals were to apply primarily to the Administration of the day, the Fed was required to report on how the pursuit of its long-term goals of promoting maximum employment, stable prices and moderate long-term interest rates would affect the achievement of the Federal Government's broader goals. Customary wisdom among economists has been that full employment equalled an unemployment rate considerably in excess of the 4 percent dictated in the 1978 legislation. Now that level seems to be an achievable goal. We will look to you today, and to your colleagues and critics tomorrow, to explain to us if fundamental assumptions about the U.S. economy have been altered. Are we in a new economy that can sustain continued growth without reigniting inflation? Should the Federal Reserve worry less about inflation and focus more on allowing more growth to create additional jobs for Americans? Those are some questions I hope you will address in your testimony.

I believe that this Congress acted responsibly in seeking a balanced budget; and that responsible fiscal policy must go hand-in-hand with monetary policy to support long-term economic growth. The marketplace first had to believe that the Federal Government was serious about balancing the budget before it could accept the possibility of arriving at this outcome as a factor in future planning. Now, the health of the economy has so increased revenues that a balanced budget is beginning to be taken for granted. I think this is unwise, and would like your comments on it.

As long as the economy continues to be healthy with inflation in check, Federal Reserve Policies will receive support and your stature will continue to grow. We briefly considered simply giving you a standing ovation and adjourning the hearing, but instead we have scheduled a second day of hearings here tomorrow in the full committee. There we will hear from supporters of current monetary policy, as well as critics who believe that the Federal Reserve should concentrate more on other aspects of economic growth and less on worrying about signs of inflation.

The relative value of the dollar seems to reflect the leading position of our economy with regard to both Europe and the Far East. As integration of economies continues in the direction of a unitary world marketplace, the leverage exerted by the Federal Reserve System grows accordingly. I am concerned that the Board of Governors will continue to have access to the tools necessary to exert adequate influence for the successful conduct of monetary policy.

This subcommittee is still planning to hold oversight hearings following the August recess, to review the role of the central bank as a competitor with the private sector for certain banking support services. We also plan to review Fed preparation for the transition

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to electronic forms of money. We look forward to hearing how the Fed is planning for the way new technology will affect systemic security, safety, soundness, consumer privacy, as well as the future conduct of monetary policy. In this future hearing, or series of hearings, we can examine the various ways that the approaching digital revolution in money will affect the operations of the Federal Reserve System. I am increasingly persuaded that dramatic change in how we define and employ money may soon be upon us. This in turn, must affect the payment system and institutions charged with its stewardship. Thus, we have continued our series of hearings into the future of money with our recent inquiry into electronic authentication.

In the meantime, since the economy seems to have been running ahead of what would be indicated by traditional models, we would welcome any comments that you could make about adjustments being incorporated into your model.

As always, we are delighted to have you with us, and look forward to a lively discussion.

[The prepared statement of Hon. Michael N. Castle can be found on page 62 in the appendix.]

Today we will have 5 minute opening statements by the Members present. In addition, some Members of the full committee may sit with us today and participate in the questioning.

As usual, any prepared remarks presented by a Member will be accepted for the record, and with that I will turn to our Ranking Member, Mr. Flake.

Mr. FLAKE. Thank you very much, Mr. Chairman. Good afternoon, Mr. Greenspan, and we are happy to welcome you again to the Humphrey-Hawkins Act subcommittee hearings on the state of the Nation's economy. This hearing is perhaps one of the subcommittee's most important and useful duties, to the extent that it gives Congress and the American people an in-depth glance at the economic health of the United States. I look forward to your testimony today, and will only make a few comments so that we may move directly to it.

My main concern, in both the political and economic sense, is how we as a Nation will move into the 21st century. Will we move in a direction where all sectors of society will reap economic benefits? Will we have an economy that is inclusive to the extent that parents have the ability to provide good homes and educational opportunities for their children? Will the turn of the century stand as a benchmark for a new era of expansion? Will the United States still lead the world in an ever-expanding global economy?

Toward that end, I would like to hear your testimony and thoughts on whether or not we should be changing the way we approach economic analysis and what Congress' reaction should be with respect to the changing characteristics of the job-place. And I note that the changes are both demographic and qualitative, in the sense that the manufacturing models are becoming obsolete. Obsolete in that the technological revolution we function in should present the Fed with different economic data to track, and puts politicians in a quandary as we represent various interests which stand to benefit or lose, both profits and good-paying jobs. We all recognize that technology-driven industries are growing, that small

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business represents the bulk of our new employment opportunities, and that the once-standard hourly wage job at the "factory" is indeed disappearing.

Add to that the global economic employment base, and the question thus becomes does the Fed look beyond traditional data? Do you have a means to gauge the real job prospects of unemployed people who are the victims of corporate downsizing based on technology? Do you, as an example, have the means to track increasing electronic commerce and its effects on the economy?

The United States has had a continuing policy of Government putting to use all practicable means to coordinate its plans, functions, and resources in a manner that is calculated to foster free enterprise and employment opportunities for all those willing to work. It has also been our policy to promote maximum employment, production and purchasing power. Mr. Greenspan, recognizing our national policy in this light, I for one, would like to hear your thoughts about our future. Not necessarily on whether you or members of the FMOC will recommend interest rate hikes at the next meeting, but really our long-term future. Long-term in the sense that what kinds of data the Fed should be looking at 10 years from now, where will job creation take place, particularly in the light of welfare-to-work, and more importantly, what can we do now to assure that we will have the brightest possible future?

With that, I yield and I thank you, Mr. Greenspan, and look forward to your testimony.

[The prepared statement of Hon. Floyd H. Flake can be found on page 98 in the appendix.]

Chairman CASTLE. Thank you very much, Mr. Flake.

Mr. Lucas.

Mr. LUCAS. No opening statement, thank you.

Chairman CASTLE. Mr. Metcalf.

Mr. METCALF. Thank you, Mr. Chairman.

First of all, I want to thank you for your responsiveness and the responsiveness of your staff on many issues I have been working on.

One is the continuing work on the issue of payments on sterile reserves and the work being done to eliminate Regulation D, which prohibits banks paying interest on corporate checking accounts, and I thank you for your cooperation on those.

I have some concerns about recent actions, especially the Fed's raising interest rates in the first quarter of this year. Specifically, some other questions that may arise are regarding Federal Reserve policy on courier services for transporting uncleared checks.

I look forward to comments tomorrow on these issues and other monetary policy questions and I appreciate the opportunity on this when Vice Chairman Rivlin comes before the committee tomorrow.

Today I have some very specific questions dealing with mergers and unemployment, specifically to the aerospace merger between Boeing and McDonnell Douglas relating to Fed policy, and I also have a question dealing with capital requirements of holding companies that we were discussing in the financial modernization bill passed out of this committee a few weeks ago.

Thank you again for being here and I look forward to your comments and the question period later. Thank you.

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Chairman CASTLE. Thank you, Mr. Metcalf.

Mr. Frank.

Mr. FRANK. Thank you, Mr. Chairman, and I first want to express my deep appreciation to Chairman Leach, who has joined us for the hearing that he has scheduled for tomorrow. There haven't been many like that since I have been here and I think it is extraordinarily important and I appreciate his willingness to present this forum so that we can have a broader discussion.

That is important procedurally as well as substantively. One of the things that has plagued us I think is this self-imposed reticence on the part of the press toward discussing monetary policy. The last real taboo in American politics appears to be monetary policy.

I notice, Mr. Greenspan, that you are never disagreed with. You are occasionally bashed and sometimes sniped at. These aren't your words. This is the press. People who voice differences with Federal Reserve policy 98 percent of the time have either bashed or sniped.

In fact, as you have always acknowledged, what we are dealing here with are very important questions of public policy and the notion that there is somehow any impropriety in their being widely debated I think is an odd one.

One example, for instance, we know more about differences among Supreme Court Justices and members of every regulatory commission than we do about differences within the Federal Reserve, and indeed it is to the credit of a former Chairman of this Committee, Henry Gonzalez, that we now know much more than we used to, and I think it ought to be put into the record that there were strong criticisms voiced historically when Mr. Gonzalez pushed for, for instance, simply having the FOMC announce on the day that it did something that it did something.

I cannot imagine another agency with which that would have a comparable argument about whether or not we should know what it did the day it did it, and in fact we now have those announcements and I think they have been very helpful.

We have much more openness and I think we have all benefited and I congratulate you for implementing these in a very, very useful way.

What I want to talk about substantively is of enormous importance to the social health of this country. We have a serious problem in that substantial elements in the financial establishment have come I think to regard unemployment as the dependent variable in all this. My math terms might be off, but it is the expendable variable. To many people in this country, a low inflation rate has become an end in itself, and the tradeoff between inflation and unemployment is one in which unemployment plays a very small role.

We see this today in Mr. Passell's article on the front page of the *New York Times*. Basically what we are told is there may well be too much employment in this country. In fact I think it is fair to note that the financial establishment in general including the people who have been dominating the Federal Reserve were wrong on what the tolerable level of unemployment was before we began to have inflation. I think if we had surveyed most of those who write about it, most of the people on Wall Street, most of the people at the Federal Reserve, 18 months ago, we would have been told that

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it would be impossible to have as low an unemployment rate as we have had and still have virtually no signs of inflation—and I would strike "virtually."

The problem is, I begin to fall into this myself, because I talk about a 5-percent unemployment rate as too low, and here is the dilemma we have. If the skeptics are right, those who are skeptical that inflation can continue to stay virtually out of sight at this level of unemployment, if they are right that that cannot last long, and that pretty soon inflation is going to kick back in and we will have to again slow down growth, then this country is in serious trouble, because we cannot sustain the degree of social inequality that is inherent in that formulation. We cannot—well, let us put it this way—if we are to accept that we are now not only doing as well as we can, but better than we can expect to do over any long term, from the employment standpoint, then this country is in serious social trouble, because, and Mr. Krugman today is quoted in Mr. Passell's article, jokingly in ways, and I do not mean to say that this is his value, but he summarizes what is current sort of establishment thinking: "Being nice to the rich has not made much difference to the American economy, but being beastly to the poor does seem to increase efficiency."

Mr. Krugman has put it in his colorful way, and I do not blame him for that formulation. In fact, I welcome his summing up what we are being told. Namely, that we need some unemployment, we need people to be insecure, we need wages to stay low, we cannot have an increasing closing of the gap, that very high profits and lagging wages are the precondition for keeping employment down. If that is the case, we are in for serious trouble. Some of us find that, and I would just conclude in 30 seconds, Mr. Chairman, some of us find that morally troubling. There are people who do not. Let me say to them the following: Those who want to see an America which continues to engage with the world in terms of trade, those who want to see America continue to take an important role in international economics, should understand that is not sustainable if the average American working person sees this unfairness.

John Kennedy, when he launched the Alliance for Progress, referring back to Franklin Roosevelt's Good Neighbor policy, said he could be a good neighbor abroad because he was a good neighbor at home. If in fact the skeptics that the current situation can hold are right and we will not be able to keep unemployment at this low a level and will have to deliberately retard growth, thus increasing unemployment, if we are to keep inflation down, and that is to be our number one goal, then your ability to get the national consensus people are looking for for international economic cooperation is going to dissolve pretty quickly.

Chairman CASTLE. Thank you, Mr. Frank.

Dr. Paul.

Dr. PAUL. Thank you, Mr. Chairman. Welcome, Mr. Greenspan.

I would like to start off by saying that I have a slightly different approach to inflation and monetary policy, and I will make a few statements now so that my questions later on might make a little more sense. But it has already been referred to here and commonly so in all the media is that as soon as the CPI goes up and there is price inflation, price rising, then we have inflation. And I look

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at this slightly differently because there are many of us who believe that inflation is first and foremost a monetary policy. The inflation starts with the increase in the supply of money and credit and then we subsequently have different things happen.

One of those things possibly can be rising prices in consumer and in producer prices. But more importantly and what I want to concentrate on is that the other things that can occur with monetary inflation is that we get malinvestment, we get the encouragement of excessive debt, and we get speculative markets. And the reassurance that we hear continuously day in and day out in the media or here in the Congress that there is no inflation is not that reassuring to me, and I will pursue that later on, because if we are missing this and there are speculative markets out there and excessive debt and malinvestment, what we really need to be concerned about is the correction that inevitably comes after a period of inflation.

We were reassured in the 1920's do not worry about anything, there was no inflation, because they looked only at prices. Japan did the same thing in the 1980's. Do not worry, we have no inflation. Yet Japan has been suffering a bit since 1989. So the reassurance does not come across too strong as far as I am concerned.

I am not totally reassured that we have no inflation. Quite possibly the rules have changed in measuring money supply. Of course we know that M1 means nothing anymore. It is actually going down, so we do not call that deflation. In the past 10 years a significant point in monetary history we have found out that the Fed has increased total Federal Reserve credit two times, but during this same period of time, something new has crept in, and that is the "monetization" of our debt by foreign central banks. They have increased their holdings by more than four times. During these past 10 years we have increased M3 by $1.5 trillion. So the question is, "How has this been discounted?"

We say there is no problem because there are no price increases, but we have also had the advantage of technology. That keeps prices down. We have cheap imports. That keeps prices down. We have world labor markets now. That keeps prices down and takes the pressure off wages. We have the privilege of being the reserve currency of the world. Foreigners are still willing to take our dollars. So we inflate. Not only do they take our dollars in the form of credit and buy our Treasury bills, but they are quite willing to hold two-thirds of our cash overseas, which again leads us to believe that there is no monetary inflation.

We also know that the measurement of price inflation comes from the Government measuring the CPI, and we do know that the calculation of the CPI is ongoing, as reported in the last minutes of FFOMC, and therefore the CPI is reflecting something lower. Now, a lot of people in this country generally do not trust what the Government tells them, and when I talk to the people in my district, they just sort of roll their eyes and laugh if they are told that there is no inflation and that prices are rising at 1 or 2 percent. And yet, if you look at a private organization that measures the cost-of-living index, Al Sindlinger of Sindlinger & Co., from Wallingford, Pennsylvania, he claims that consumer prices are rising by 5.8 percent.

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So, I think that I am going to emphasize in my questioning the importance of looking at the right targets, and not being deceived and saying that "there is no inflation, there is no concern." Maybe we should have some concern about some exuberance someplace in the economy. And I thank you.

Chairman CASTLE. Thank you, Dr. Paul.

Mr. Kennedy.

Mr. KENNEDY. Thank you, Mr. Chairman.

Welcome, Mr. Chairman. You know, I once again want to welcome you here to the Congress and thank you for taking the time to listen to all of our concerns about the way the economy is moving. It seems to me generally speaking people feel that the economy is moving very much in the right direction, and as I said in the last time you were up here, I think people give you a great deal of credit for that. But there are also, as you said in your last time up before this subcommittee, that there are concerns that you have had, and both Mr. Frank and I think Mr. Sanders voice those concerns pertaining to the unemployment rate as being foremost on the minds of many people in the sense that if in fact the unemployment rate dropped to a certain rate, that there might be a number at which you felt compelled to then raise interest rates.

My concern today is not just over unemployment but is really over what these hearings are legislated to be about. The Humphrey-Hawkins report calls for—and let me just quote to you—"to promote maximum employment, production, and purchasing power." I think that you would be the first to admit that wages have simply not kept up certainly with the stock market but with other economic indicators over the course of the last 10 years or 20 years. And the concern would be that you read these reports in the paper today, everybody is jiggling about whether or not in the next hour or two, whenever you actually get around to talking, you might mention the fact that the inflation rate—excuse me, the interest rates might go up.

I think I have a fundamental concern that one of the reasons for that will be in fact any notion that somehow the wages of the American worker might actually start to go up. And I wonder whether or not, and I hope in your comments you will talk about what has happened to the ordinary worker's wages in this country, and whether or not in fact there is room to allow wage increases for ordinary families that can take place, people that are earning $20,000 or $30,000 or $40,000 a year, whether or not they can actually hope to see their incomes and purchasing power rise without a call for an increase in interest rates on your part.

Is there in fact any room other than for the stock market to rise, for wages to actually rise, because obviously if wages rise, then you are going to say prices have risen because prices have risen, inflation has gone up, and so the ordinary worker is stuck in almost a hamster-like stance where they cannot ever hope to make any progress because of the very box that the economists have designed to put you and the Fed in this extraordinary condition that says anytime there is a wage increase across the board where ordinary people actually receive some of the benefits that have certainly accrued to people that can invest in the stock market and other kinds of businesses in this country, that they automatically will then suf-

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fer as a result of a higher unemployment rate because we are going to bang up the inflation rate.

And I would very much appreciate it, Mr. Chairman, whatever you say about the interest rates, if you could talk to us a little bit about the wage problem that so many families are facing.

I yield back the balance of my time.

Chairman CASTLE. Thank you Mr. Kennedy.

Dr. Weldon.

Dr. WELDON. I thank the Chairman, and I want to thank you, Mr. Chairman, for calling this hearing, and I want to thank Federal Reserve Chairman for coming. The area of interest for me that I hope you will be commenting on, I haven't had time to review as of yet your testimony, as we all know we are in a somewhat unprecedented circumstance for the last third of the 20th century where we have strong economic growth and low inflation. My own personal opinion that one of the primary drivers behind that is the resolve on the part of the Congress to balance the budget and not be in the marketplace borrowing money in huge amounts, and I'm hoping in your comments or in the question-and-answer period we will be able to get at that issue, because I personally believe that is one of the biggest fundamental reasons why the economy is doing well right now and inflation rates are low.

I yield back the balance of my time, Chairman Castle.

Chairman CASTLE. Thank you very much, Dr. Weldon.

Mr. Sanders.

Mr. SANDERS. Thank you, Mr. Chairman, and I want to welcome Mr. Greenspan to the hearings this afternoon, and also as Barney Frank did, thank Mr. Leach for the hearings that we are going to have tomorrow as well. These issues that we are discussing are of enormous consequence to the American people, and it is important that we have some good debate about them.

Before I begin let me say one thing. As an independent, my views are a little bit different than my colleagues', and also I will say some things about Mr. Greenspan that may sound a little bit harsh, but they are not meant to be disrespectful. I think that anyone who is willing to venture into the public arena, no matter what their point of view, deserves our respect. You defend your point of view, and I happen to appreciate that.

It is my personal opinion that Mr. Greenspan throughout his political career, and today, has functioned to represent the wealthiest people of this country consistently, and his policies reflect that today.

It is also my view that many of his policies are very adverse and hurt the working families of our country. Mr. Greenspan sometimes poses as kind of an economist, a mainstream economist, but in fact his background is that he is an extremely conservative individual, worked on the committee to elect Ronald Reagan, contributed to Jesse Helms' contribution to the campaign, wrote letters in support, lobbied on behalf of Charles Keating in the Lincoln Savings and Loan Company, which subsequently collapsed at a cost of $2.6 billion. But that is not what is important. What is most important, I think, is the policies that he advocates, and the impact they have on middle-class and working families.

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My understanding is that in the midst of the debate last year over raising the minimum wage—which at $4.25 had reached the lowest point in 40 years—Mr. Greenspan's wisdom indicated that the Congress should not raise the minimum wage. Fortunately Congress did that. We did raise the minimum wage. We have a long way to go.

My understanding is that last January he testified before the Senate Budget Committee and said, quote, "The appropriate capital gains tax is zero." My understanding is that if Congress enacted that policy it would cost the Treasury roughly $50 billion a year in revenues, with 70 percent of those tax cuts going to households over $100,000 a year. And, with the $50 billion not coming in, no doubt, necessitate more cuts in Medicare and Medicaid and programs benefiting ordinary Americans.

In 1983, as Chairman of the Social Security Commission, you led the effort to raise the highly-regressive payroll taxes by about $200 billion, while at exactly the same time, you advocated successfully for significant tax breaks for the richest people in America and for the largest corporations.

You now advocate lowering the CPI, which in my State, means senior citizens trying to survive on $8- or $9,000 a year will actually get less in their Social Security benefits.

You have been consistent. And I think the policies that you advocate—I give you credit for your consistency. But let me now shift to what is going on in the economy. I notice that on page one of your report you say, "The recent performance of the economy characterized by strong growth and low inflation has been exceptional"—"exceptional." Well, I am going to welcome you in my question and answer period to come to the State of Vermont where people are working 50-, 60-, 70-hours a week, trying to pay the bills to keep their families alive; where they are working longer hours for low wages. And I want you to come to my State, and you tell the people of the State of Vermont, all the people, working families of America, how "exceptional" the economy is doing.

I think there is a bit of a confusion here. And that is that the economy is, in fact, performing exceptionally for the rich and the powerful. In fact, I will agree with you. For those people, the economy has never been better. But, for the middle class and working families of this country, the economy continues to decline.

Let us talk about what is really going on in the economy. And, if the media wants to know what is going on in the economy, you do not have to listen to Mr. Greenspan, go to Vermont, go to big cities, talk to working people all over America. That is how you learn what is going on in the economy.

Now, last year the CEOs of large corporations, according to *Business Week*—not exactly a socialist publication—*Business Week* indicated that the CEOs of large corporations earned a 54 percent increase in their compensation. They now make 200 times what their workers earn. Now, that is pretty good. I guess for them the economy is booming. Corporate profits are soaring. The stock market is going off the wall.

In the last 20 years, the wealthiest one percent of American families saw their after-tax incomes more than double. The richest one percent of the American people now own 40 percent of the wealth

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in this country, more than the bottom 90 percent, and the gap between the rich and poor in this country is now wider than any other industrialized nation on Earth. So, yes, the economy is exceptional for the people who are rich. But, for the middle class and working class of this country, things are not so good, and your policies have not helped them.

Twenty years ago, American workers led the world in terms of the wages and compensation they received. Today, they are in 13th place. Adjusted for inflation, the average pay for 80 percent of American workers plummeted by 16 percent——

I would ask for one more minute, please.

——Plummeted by 16 percent between 1973 and 1993. While unemployment is relatively low, most of the new jobs that are being created are low-wage, part-time and temporary. Americans at the bottom end of the wage scale have become the lowest paid workers in the industrialized world. Eighteen percent of those with full-time jobs are paid so little that they are not living above poverty.

Now, if that sounds like an exceptional economy, clearly some of us may have been hanging out at the country clubs and not talking to ordinary people. So, I would argue that the policies that we are advocating—and that you are advocating, Mr. Greenspan—represent the wealthy and the powerful. But, they are not doing justice to the middle income people, or the working families of this country. I look forward to the question and answer period.

[The prepared statement of Hon. Bernard Sanders can be found on page 102 in the appendix.]

Chairman CASTLE. Thank you, Mr. Sanders.

Mrs. Roukema.

Mrs. ROUKEMA. Thank you, Mr. Chairman. And Chairman Greenspan, I certainly welcome you here. And with reference to my colleague Barney Frank's earlier statement, I am not a basher or a sniper, Mr. Chairman. And I hope that today we can have a rational inquiry here, not irrational, but a rational inquiry here. And I want to say, and perhaps a little different from what has been said previously, I am most respectful of the fine job that you are doing at the Fed.

I am going to really condense everything that I had intended to say, because I think it is most important that we hear from you, Mr. Chairman. I am not going to go into the global competition and the driving down of wages and the technologies, or whatever downsizing has been going on. We could all go on about that, but I want to hear it from you.

However, I would respectfully request if you would give some time in your statement to advice that you might give the Congress with respect to our responsibility here in terms of maintaining the fiscal restraint, how we balance that fiscal restraint with what is genuine deficit reduction, not only short term, but longer term. Particularly, I would appreciate any comments you would want to make about an investment-oriented tax policy. I think all three of these issues are extremely relevant to the work that you are doing and to our overall question as to, not only employment rates, but the rate of inflation in the economy.

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So respectfully, I would look forward to your testimony and ask that the full text of my opening statement be included in the record. Thank you for being here.

[The prepared statement of Hon. Marge Roukema can be found on page 101 in the appendix.]

Chairman CASTLE. Thank you, Ms. Roukema, and without objection, of course, the full text of your statement or the statements of any Members who wish to submit them for the record will be accepted.

Mr. Kanjorski.

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

Mr. Chairman, certainly we welcome the Chairman. We look forward to your testimony. Everybody cannot get too settled, because we are going to rush out and call our brokers as soon as the hearing is over.

But, in that tradition, Mr. Chairman, I am particularly disturbed in reading your comments and looking at the economy today, that you do not discuss capacity. I see us near maximum capacity in the economy, particularly with regard to the utilization of capital assets. And as I look at the unemployment rate hovering nationwide around 5 percent, I see the utilization of labor at near capacity. Not a great deal of flexibility in there. And I am particularly interested in your evaluation of what is now the policies of the Administration and Majority in Congress in anticipating a consumptive tax reduction, and whether or not that anticipated reduction can be met with increased capacity, or increased labor to provide that capacity, or whether we are, in fact, laying the groundwork for an inflationary cycle that will be stimulated by the additional consumptive money put in the economy by the tax reduction that is anticipated to pass on, because it is supported both by the Administration and the Majority in Congress.

I am really asking you for an in-depth economic lesson, because everything I learned in economics in college is contrary to what we tend to be doing. It seems to me that as we move down this road toward a balanced budget and tax reform, that tax reform should be concentrated and directed toward saving and investment, and not toward consumption. And that the short relief of the consumptive tax credit could be the poison pill of the future a year or two down the road, in terms of its effect on the economy.

So, I look forward to your comments in that area, very similar to my friend, Ms. Roukema on the other side of the aisle. I hope you will address that. It is not contained in your prepared statement, but I hope you will take the time to answer those particular questions.

Thank you very much, Mr. Chairman.

Chairman CASTLE. Thank you, Mr. Kanjorski.

Mr. Bereuter.

Mr. BEREUTER. Mr. Chairman, I want to welcome Chairman Greenspan, look forward to his testimony and his responses to questions. And I yield my time to another colleague on this side of the aisle.

Chairman CASTLE. Mr. Cook, would you like to make an opening statement?

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Mr. COOK. Thank you, Mr. Chairman. And to Chairman Greenspan, again very delighted that you are meeting with us today as a businessman for two decades in the manufacturing sector. I just want to express my appreciation of the business climate, the stable prices, the stable financial environment that we have enjoyed in the last few years, and I compare that to the early years that I had in the explosives business, where the misery index—the index of inflation plus unemployment—was hovering around 20 and sometimes I think even over 20 percent. We certainly had double-digit inflation in those days in the 1970's when we could not rely on raw material, supply contracts at all. They went out the window and there was just really a lot of unease and unrest in the mining industry generally because if those things.

So, I just want to say as someone who has admired your tenure over these three terms at the Federal Reserve, that probably more than anyone else, I think you have represented the essence of the stability of the financial markets and the whole environment and the protection of our currency and our money. And I, for one, am very grateful.

I wish I could totally share in the enthusiasm of Dr. Weldon that Congress has created all of this. And I think Congress is definitely in the right direction in the last few years in moving toward a balanced budget. But, I think it's very lucky for American businessmen generally that we have the stability that we have in prices today, even without balanced budgets. I think it is a testament to some of the work you have done in the Federal Reserve in your decision.

I have been at times, if not a very vocal critic of interest rate hikes, still wondering at times. But, I have to say that I think this country may be well-served by looking at the track record of your decisions in terms of changes in the discount rates, changes in the interest rates that we can understand that the long-term stability of prices is what we are really after. And that is what this subcommittee, I think, should be most focused on.

So, again, I want to thank you for the service and have to say this in a final statement. I felt that the best decision the President of the United States has made in his entire service has been your reappointment to the third term.

Chairman CASTLE. Thank you, Mr. Cook.

Mrs. Maloney.

Mr. MALONEY. Thank you, Mr. Chairman.

Welcome, Mr. Greenspan. I always look forward to your testimony. You have played a major role in developing a monetary policy that has been consistent with lower overall unemployment, virtually no inflation in 1997, and a stock market at a near all-time high. This is a superb record and I congratulate you.

We have had 6 years of economic growth, and with the right interest rate policy I think that we can keep this growth going.

Most people would be surprised to learn that only 1,600 of the 25,000 Federal Reserve employees are working in monetary policy. The rest are involved in unrelated services, such as the transportation of paper checks. As you know from the signed statements sent to your office and to the committee in 1995, 1996, and 1997 from employees who manage the Fed's fleet of 47 airplanes, the

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Federal Reserve is heavily subsidizing the transportation of paper checks.

I am going to ask you today to join with me in supporting a bipartisan bill, along with Congressmen Metcalf and Ney, the Efficient Check Clearing Act of 1997, which would end that practice.

The Government should not be in the business of driving private competitors from the market. Competition will produce innovation and efficiency. No Government bureaucracy should be trying to block these changes by subsidizing a service such as the transportation of paper checks.

I hope you will support this bipartisan effort to end this subsidy. Let us promote competition on a level playing field and bring banking services into the 21st century with a modern payment system in which private enterprise provides competition and innovation to promote a full range of choices for the Nation's consumers.

I look forward to your testimony.

Chairman CASTLE. Thank you, Ms. Maloney.

Mr. Bentsen.

Mr. BENSTEN. Thank you, Mr. Chairman.

Chairman Greenspan, during the opening statements I have had the opportunity to read through your testimony and it would appear like Congress you have—the Fed has more questions than answers. And that it also would appear that the Fed has now found that it is less precise in being able to predict the economy than it has been in recent years, and I would agree with that.

I also want to state just for the record, while I opposed or disagreed with the Open Market Committee's decision to raise the Fed funds rate back in March, I think in retrospect now we look at it as potentially some form of a regulator that the markets—or a choke—that the markets perceive, and as a result we are probably better off.

I do not know if that is how you planned it. At this point you might go ahead and say that was your intent at the time. But I think that it ended up being a good guess on your part, and otherwise I have a number of questions and look forward to your testimony.

Chairman CASTLE. Thank you very much, Mr. Bentsen.

Mr. Jackson.

Mr. JACKSON. Thank you, Mr. Chairman. I appreciate the opportunity to welcome the Chairman of the Federal Reserve, the Honorable Alan Greenspan, in his second address to the 105th Congress.

Chairman Greenspan, it is with great pleasure and admiration that I welcome you today to apprise us of the status of the American economy and your judgments as to the activities of the Federal Reserve system in fulfilling its duties, among others, of conducting national monetary policy in pursuit of the objectives of price stability and full employment. Welcome Chairman Greenspan.

Chairman Greenspan, I also want to commend you for your leadership in resisting the forces which encouraged unnecessarily raising interest rates during the Federal Reserve's Open Market Committee meetings in May.

I also would like to thank you for your insights related to the, quote, "New economic age" that we have clearly entered. Global market expansion and increased spending on new technology have

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produced big productivity gains. I concurred with your assessment that there is no need for an interest rate hike under the current economic conditions.

However, I must register my dissent with those who would claim that we may be entering a period where the economy may overheat. And for this reason, slowing the economy and reducing job creation is a necessary course of action for the Fed. While conventional wisdom speaks to expansion and growth—the stock market has reached record levels, indicators reflect rapid growth, falling unemployment, rising incomes for some sectors of the population, with a concurrent decline in inflation—the least well-off and the least-educated amongst us, however, continue to experience stagnant wages.

Assessing the economy depends upon one's vantage point. You see one thing if you are on the top looking down, and you see quite another if you are a worker or you are poor, or economically insecure, and you are looking up.

If you are one of the 15-to-20 million Americans who are unemployed, underemployed, never had a job, or gave up looking for one, or you have been the victim of corporate downsizing, then the exuberant economic indicators do not reflect your individual circumstances.

Chairman Greenspan, I believe this is a more accurate picture of the economic conditions of communities like those in my district on the South Side of Chicago, or the south suburbs, and explains the widespread levels of economic anxiety currently plaguing the American people.

In light of the foregoing, Chairman Greenspan, I will be listening intently to your testimony, and particularly with respect to your view on how the Fed can encourage and guide the economy toward attaining true levels of full employment.

Once again, Chairman, thank you for joining us today and I look forward to hearing your testimony.

Thank you, Chairman Castle.

[The prepared statement of Hon. Jesse L. Jackson, Jr. can be found on page 99 in the appendix.]

Chairman CASTLE. Thank you, Mr. Jackson.

Mr. Foley.

Mr. FOLEY. Thank you, Mr. Chairman.

I would like you, if you could, at the end of your comments, maybe talk just briefly about the banking situation with commerce, lending, baskets. It was probably one of the tougher decisions that I have had to reach on this subcommittee. I am new to the subcommittee and I have served on a bank board before—and a savings and loan board before—and I am quite concerned as they attempt to find this new level of equal playing field, what the impacts will be. And I would also like you to maybe comment on the front cover of *Money Magazine* this month that puts the pronouncement, "sell everything." And what plans we may have in the event that there are some panics to the market, what impact that would have on our monetary policy, what impacts that would have to the savings of America, and what we may initiate in order to forestall those types of hysterical headlines that *Money Magazine* published this month that I think threaten the stability of the marketplace,

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certainly threaten the economy, and the progress that has been made.

Chairman CASTLE. Thank you, Mr. Foley.

There are a number of individuals from the Banking Committee, Mr. Chairman, who have joined us, as they are want to do when you are here to testify. And I would like unanimous consent to allow them to make, hopefully very brief, if they will, opening statements if they want to, and perhaps to ask questions as follow up. If there is no objection, let me ask the Chairman of the Banking Committee, Mr. Leach, if he would like to make a statement.

Mr. LEACH. I do not have an opening statement, Mr. Chairman. I do want to welcome the Chairman. And sitting here, I feel obligated to make the comment how proud I am that I think this is one of the best-led subcommittees of the United States Congress. You and Mr. Flake do a wonderful job.

Thank you.

Chairman CASTLE. Well, that is high praise indeed. We appreciate it. I would have called on you a long time ago if I had known you were going to say that.

[Laughter.]

Chairman CASTLE. I hope the television cameras pick that up.

[Laughter.]

Chairman CASTLE. Thank you, Mr. Chairman.

Ms. Kilpatrick.

Ms. KILPATRICK. I pass, Mr. Chairman.

Chairman CASTLE. Mr. Watt.

Mr. WATT. Pass.

Chairman CASTLE. Mr. LaFalce.

Mr. LAFALCE. I pass, Mr. Chairman.

Chairman CASTLE. Mr. Bachus.

Mr. BACHUS. Thank you.

Mr. Greenspan, you have been asked to comment about working Americans and the working families of America, and I was just noting from the other side, and the working class, I heard that word. If you are going to comment about working Americans, I would like to be interested in what your definition of "working Americans" is, so I will know who you are talking about.

I know if you adopt Richard Gephardt's definition of "working Americans" you have to accept the premise that you have to make—the household—has to make $35,000 or less. He defines "working Americans" as those people in households making $35,000 or less a year. I guess I would be interested in knowing whether you think people that make over $35,000 a year, if they should be defined as working Americans, too?

You have also talked about "working class." You have talked about people trapped in America today without opportunities. You, in your opening statement mention that there are remarkable increases in work opportunities for Americans. I would like to know whether you think it is fair for us to compare working Americans today, or the working class, with 19th century England, where there was a class system and people were trapped in a working

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class. Whether you think that—you know, you were asked what you would do about people that were trapped.

I would like your comments on what you think is trapping people, if there are a large segment of Americans that are trapped in some working class. Before World War II, we did talk about during the Depression, people trapped, high unemployment. But, with such high employment today, I would like your thoughts on what is trapping these people? You know, is it maybe, on occasion, their own behavior, or their dropping out of school? Or maybe they do not have the right education. Or whether alcohol, drug addiction—what is the reason for that unemployment?

But, I would like your—I want to know whether you think it is fair to keep using these words "working class" and without—if you said the word—Bernie has described the working class——

Mr. SANDERS. Would the gentleman yield?

Mr. BACHUS.——As anyone that——

Mr. SANDERS. Would the gentleman yield?

Mr. BACHUS.——Makes under $30,000 a year, and that would mean that most of my district does not work.

Mr. SANDERS. Would the gentleman yield?

Mr. BACHUS. Sure, I will.

Mr. SANDERS. Would the gentleman yield?

Mr. BACHUS. I will yield.

Mr. SANDERS. Thank you.

When the CEOs of large corporations make 207 times what their workers make and most of the gains——

Mr. BACHUS. I am not talking about that.

Mr. SANDERS. Answer my question and then you answer me.

Mr. BACHUS. You are talking about——

Mr. SANDERS. You have one percent of the population——

Chairman CASTLE. Is this a parliamentary inquiry?

Mr. FRANK. Mr. Chairman, a parliamentary inquiry.

Mr. SANDERS. Well, one minute.

Mr. FRANK. Parliamentary inquiry.

Chairman CASTLE. Well, one minute. Parliamentary inquiry is in order.

Mr. FRANK. Can you rescind unanimous consent retroactively?

[Laughter.]

Chairman CASTLE. I was wondering about yielding on opening statements. Gentlemen, let us try to wrap this up.

Mr. BACHUS. I will reclaim my time.

Mr. SANDERS. Thank you for yielding.

Mr. BACHUS. I would be interested in whether you think there is—if a working class of—say, people that make $50,000 a year. Are they working families?

Chairman CASTLE. Thank you, Mr. Bachus. We appreciate your statement. And, I think with that, everybody here has had an opportunity to speak.

Mr. WATT. Mr. Chairman.

Chairman CASTLE. Sorry, Mr. Watt.

Mr. WATT. I do not seem to be able to find a copy of Mr. Greenspan's statement.

Chairman CASTLE. We will get you one.

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Mr. WATT. Other Members of the subcommittee might want one, too.

Chairman CASTLE. I think the other Members have it. It is perhaps because you came a little bit later, but we will get you one immediately.

Well, I am certain that our visitor from the European Parliament will go back and report that this is a very diverse group of Members who make up the subcommittee——

[Laughter.]

Chairman CASTLE.——As we have heard from the various positions which have been taken here. And we would depend upon you, Mr. Chairman, to unite us all in some way or another, in some central point amongst the views we have here. This, after all, is the real reason that we are all gathered. I do not think anyone had a great deal of overwhelming interest in what we had to say, but we know that the world follows carefully what you are about to say, or what you have printed earlier and already has been distributed.

And we are sorry this takes so long, but I think it is very important frankly, that we as the elected Members of Congress give our opinions and statements concerning where we think things are, and subsequently we will have the opportunity to ask questions, in at least one round of 5-minute questions, and perhaps longer. But this is your moment and we turn to you. Thank you for being here.

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

Mr. GREENSPAN. Well, thank you very much, Mr. Chairman. Speaking as a private citizen, I must say that this is called "democracy," and it is something that we ought to be proud of. We should not to be concerned about the level of decibels, but recognize that this is the way laws are made in this country. I think we all ought to be proud of that.

I am, as always, pleased to appear before this subcommittee to present the Federal Reserve's Report on the economic situation and monetary policy.

Mr. Chairman, my prepared remarks are rather extended, and I request that, even though I will excerpt them this afternoon, I would appreciate the full text being included for the record.

Chairman CASTLE. Certainly. Without objection the full text will be included in the record.

Mr. GREENSPAN. The recent performance of the American economy, characterized by strong growth and low inflation, has been exceptional—and better than most anticipated. During the first quarter of 1997, real gross domestic product expanded at nearly a 6 percent annual rate, after posting a 3 percent increase over 1996. Activity apparently continued to expand in the second quarter, albeit at a more modest pace. The economy is now in the seventh consecutive year of expansion, making it the third longest post-World War II cyclical upswing to date.

Moreover, our Federal Reserve Banks indicate that economic activity is on the rise, and at a relatively high level, in virtually every geographical region and community of the Nation.

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This strong expansion has produced a remarkable increase in work opportunities for Americans. A net of more than 13 million jobs has been created since the current period of growth began in the spring of 1991. As a consequence, the unemployment rate has fallen to 5 percent—its lowest level in almost a quarter century. The expansion has enabled many in the working-age population, a large number of whom would have otherwise remained out of the labor force or among the longer-term unemployed, to acquire work experience and improved skills. Our whole economy will benefit from their greater productivity. To be sure, not all segments of our population are fully sharing in the economic improvement. Some Americans still have trouble finding jobs, and for part of our work force real wage stagnation persists.

In contrast to the typical postwar business cycle, measured price inflation is lower now than when the expansion began and has shown little tendency to rebound of late, despite high rates of resource utilization. The consumer price index rose at less than a 2 percent annual rate over the first half of the year, down from a little over 3 percent in 1996.

With the economy performing so well for so long, financial markets have been buoyant, as memories of past business and financial cycles fade with time. Soaring prices in the stock market have been fueled by moderate long-term interest rates and expectations of investors that profit margins and earnings growth will hold steady, or even increase further, in a relatively stable, low-inflation environment.

The key question facing financial markets and policymakers is what is behind the good performance of the economy, and will it persist? Without question, the exceptional economic situation reflects some temporary factors that have been restraining inflation rates. In addition, however, important pieces of information, while just suggestive at this point, could be read as indicating basic improvements in the longer-term efficiency of our economy. The Federal Reserve has been aware of this possibility in our monetary policy deliberations and, as always, has operated with a view to supplying adequate liquidity to allow the economy to reach its highest potential on a sustainable basis.

Nonetheless, we also recognize that the capacity of our economy to produce goods and services is not without limit. If demand were to outrun supply, inflationary imbalances would eventually develop that would tend to undermine the current expansion and inhibit the long-run growth potential of the economy. Because monetary policy works with a significant lag, policy actions are directed at a future that may not be clearly evident in current experience.

In making monetary policy judgments, we need to analyze carefully the various forces that may be affecting the balance of supply and demand in the economy, including those that may be responsible for its exceptional recent behavior. The remainder of my testimony will address the various possibilities.

Many observers, including us, have been puzzled about how an economy, operating at high levels and drawing into employment increasingly less-experienced workers, can still produce subdued and, by some measures even falling, inflation rates. It will, doubtless, be several years before we know with any conviction the full story of

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the surprisingly benign combination of output and prices that has marked the business expansion of the last 6 years.

Certainly, public policy has played an important role. Administration and congressional actions to curtail budget deficits have enabled long-term interest rates to move lower. Deregulation in a number of industries has fostered competition and held down prices. Finally, the preemptive actions of the Federal Reserve in 1994 contained a potentially destabilizing surge in demand. But the fuller explanation of the recent extraordinary performance may well lie deeper.

In February 1996, I raised before this subcommittee the hypothesis tying together technological change and cost pressures that could explain what was, even then, a puzzling quiescence of inflation. The new information received in the last 18 months remains consistent with those earlier notions; indeed, some additional pieces of the puzzle appear to be falling into place.

A surge in capital investment in high tech equipment that began in early 1993 has since strengthened. Presumably companies have come to perceive a significant increase in profit opportunities from exploiting the improved productivity of new technologies.

It is premature to judge definitively whether these business perceptions are the harbinger of a more general and persistent improvement in productivity. Although the anecdotal evidence is ample and manufacturing productivity has clearly picked up, a change in the underlying trend is not yet reflected in our conventional data for the whole economy.

But, even if the perceived quicker pace of application of our newer technologies turns out to be mere wheel-spinning, rather than true productivity advance, it has brought with it a heightened sense of job insecurity, and as a consequence, subdued wage gains. As I pointed out here last February, polls indicated that despite the significant fall in the unemployment rate, the proportion of workers in larger establishments fearful of being laid off rose from 25 percent in 1991 to 46 percent in 1996.

To be sure, since last year, surveys have indicated that the proportion of workers fearful of layoff has stabilized, and the number of voluntary job leavers has edged up. But, the increases in the Employment Cost Index still trail behind what previous relationships to tight labor markets would have suggested, and a lingering sense of fear or uncertainty seems still to pervade the job market.

The combination in recent years of subdued compensation per hour and solid productivity advances has meant that unit labor costs of non-financial corporations have barely moved. A significant part of the measured price increase over that period was attributable to a rise in profit margins, unusual well into a business expansion. Rising margins are further evidence suggesting that productivity gains have been unexpectedly strong.

While accelerated technological change may well be an important element in unraveling the current economic puzzle, there have been other influences at play as well in restraining price increases at high levels of resource utilization, including the strong dollar, increasing globalization, deregulation, and changes in the health care industry.

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Many of these forces are limited or temporary, and their effects can be expected to diminish, at which time cost and price pressures would tend to re-emerge. The effects of an increased rate of technological change, however, might be more persistent.

When I discuss greater technological change, I am not referring primarily to a particular new invention. Instead, I have in mind the increasingly successful and pervasive application of recent technological advances. Many of these technologies have been around for some time. Why might they be having a more pronounced effect now?

What we may be observing in the current environment is a number of key technologies, some even mature, finally interacting to create significant new opportunities for value creation. For example, the applications for the laser were modest until the later development of fiber optics engendered a revolution in telecommunications. Broad advances in software have enabled us to capitalize on the prodigious gains in hardware capacity. The interaction of both of these has created the Internet.

The accelerated synergies of the various technologies may be what have been creating the apparent significant new profit opportunities that presumably lie at the root of the recent boom in high-tech investment.

We do not know, nor do I suspect can anyone know, whether current developments are part of a once-or-twice-in-a-century phenomenon that will carry productivity trends nationally and globally to a new higher track, or whether we are merely observing some unusual variations within the context of an otherwise generally conventional business cycle expansion.

But, whatever the trend in productivity and, by extension, overall sustainable growth, from the Federal Reserve's point of view, the faster the better. We see our job as fostering the degree of liquidity that will best support the most effective platform for growth to flourish. We believe a noninflationary environment is such a platform.

The Federal Reserve's policy problem is not with growth, but with maintaining an effective platform. To do so, we endeavor to prevent strains from developing in our economic system which, long experience tells us, produce bottlenecks, shortages, and inefficiencies.

In gauging the potential for oncoming strains, it is the effective capacity of the economy to produce that is important to us.

Capacity is a complex concept, which requires a separate evaluation of its two components, capital and labor. It appears that capital can adapt and expand more expeditiously than in the past to meet demands. Hence, capital capacity is now a considerably less rigid constraint than it once was.

In recent years, technology has engendered a significant compression of lead times between order and delivery for production facilities. This has enabled output to respond increasingly faster to an upsurge in demand, thereby decreasing the incidence of strains on capital capacity and shortages so evident in earlier business expansions.

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Increased flexibility is particularly evident in the high-tech industries, but the shortening of lags has been pervasive even in more mature industries.

At the extreme, if all capital goods could be produced at constant cost and on demand, the size of our Nation's capital stock would never pose a restraint on production. We are obviously very far from that nirvana, but it is important to note that we are also far from the situation a half-century ago when our production processes were dominated by equipment such as open hearth steel furnaces, which had very exacting limits on how much they could produce in a fixed time frame, and which required huge lead times to expand their capacity.

Even so, today's economy as a whole still can face capacity constraints from its facilities. Indeed, just 3 years ago, bottlenecks in industrial production were putting significant upward pressure on prices at earlier stages of production. More recently, vendor performance has deteriorated somewhat, indicating that flexibility to meet demands still has limits. Although further strides toward greater facilities flexibility have occurred since 1994, this is clearly an evolutionary, not a revolutionary, process.

Moreover, technology and management changes have had only a limited effect on the ability of labor supply to respond to changes in demand. To be sure, individual firms have acquired additional flexibility, for example, by increased use of outsourcing and temporary workers. While these techniques put the right workers at the right spots to reduce bottlenecks, they do not increase the aggregate supply of labor. Labor capacity for an individual country is constrained by the size of the working-age population, which, except for immigration, is basically determined several decades in the past.

Of course, capital facilities and labor are not fully separate markets. Within limits, labor and capital are substitutes.

Yet, despite significant increases in capital equipment in recent years, new additions to labor supply have been inadequate to meet the demand for labor. As a consequence, the recent period has been one of significant reduction in labor market slack.

The key point is that continuously digging ever deeper into the available work-age population is not a sustainable trajectory for job creation. The rise in the average workweek since early 1996 suggests employers are having increasingly greater difficulty fitting the millions who want a job into available job slots. If the pace of job creation continues, the pressures on wages and other costs of hiring increasing numbers of such individuals could escalate more rapidly.

Thus, there would seem to be emerging constraints on potential labor input. Even before we reach the ultimate limit of sustainable labor supply growth, the economy's ability to expand employment at the recent rate should rapidly diminish. Simply adding new facilities will not increase production unless output per worker improves. At the cutting edge of technology, where America finds itself, major improvements cannot be produced on demand. New ideas that matter are hard won.

As I noted, Mr. Chairman, the recent performance of the labor markets suggests that the economy is on an unsustainable track.

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Unless aggregate demand increases more slowly than it has in recent years—more in line with trends in the supply of labor and productivity—imbalances will emerge.

Fortunately, the very rapid growth of demand over the winter has eased recently. In view of the various factors affecting the outlook, monetary policymakers forecast a continuation of less rapid growth in coming quarters.

For 1997 as a whole, the central tendency of their forecasts has real Gross Domestic Product growing 3 to 3¼ percent, and 2 to 2½ percent in 1998. This pace of expansion is expected to keep the unemployment rate close to its current low level.

We anticipate that consumer prices will rise only 2¼ to 2½ percent this year. The central tendency of the projections is that the CPI will be 2½ to 3 percent in 1998—a little above the expectation for this year. However, much of this increase is presumed to result from the absence of temporary factors that are holding down inflation this year.

I have no doubt that the current stance of policy—characterized by a nominal Federal funds rate around 5½ percent—will need to be changed at some point to foster sustainable growth and low inflation. Adjustments in the policy instrument in response to new information are a necessary, and I should like to emphasize, routine aspect of responsible policymaking. For the present, as I indicated, demand growth does appear to have moderated, but whether that moderation will be sufficient to avoid putting additional pressures on resources is an open question. With considerable momentum behind the expansion and labor market utilization rates unusually high, the Federal Reserve must be alert to the possibility that additional action might be called for to forestall excessive credit creation.

The Federal Reserve is intent on gearing its policy to facilitate the maximum sustainable growth of the economy, but it is not, as some commentators have suggested, involved in an experiment that deliberately prods the economy to see how far and fast it can grow. The costs of a failed experiment would be much too burdensome for too many of our citizens.

Clearly, in considering issues of monetary policy we need to distinguish carefully between sustainable economic growth and unsustainable accelerations of activity.

The key question is how monetary policy can best foster the highest rate of sustainable growth and avoid amplifying swings in output, employment, and prices. The historical evidence is unambiguous that excessive creation of credit and liquidity contributes nothing to the long-run growth of our productive potential and much to costly shorter-term fluctuations.

Our objective has never been to contain inflation as an end in itself, but rather as a precondition for the highest possible long-run growth of output and income—the ultimate goal of macroeconomic policy.

The Federal Reserve recognizes, of course, that monetary policy does not determine the economy's potential. All that it can do is help establish sound money and a stable financial environment in which the inherent vitality of a market economy can flourish, and

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promote the capital investment that, in the long run, is the basis for vigorous economic growth.

Similarly, other Government policies also have a major role to play in contributing to economic growth. A continued emphasis on market mechanisms through deregulation will help sharpen incentives to work, save, invest, and innovate.

Similarly, a fiscal policy oriented toward limited growth in Government expenditures, producing smaller budget deficits and even budget surpluses, would tend to lower real interest rates even further, also promoting capital investment. The recent experience provides striking evidence of the potential for the continuation and the extension of monetary, fiscal, and structural policies to enhance our economy's performance in the period ahead.

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

[The prepared statement of Hon. Alan Greenspan can be found on page 130 in the appendix.]

Chairman CASTLE. Well, thank you, Mr. Chairman, and we will have, I'm sure, a series of questions here.

Mr. Chairman, the performance of the economy has obviously, by anybody's standards, moved the stock market and increased Government revenue. And in my judgment, most Americans—I do not know how that is measured—but, most Americans seem to be benefiting from the good economy.

I would like to know your views on what else could be done to ensure that all boats are lifted. Actually, sort of encapsulating some of the positions which were taken up here, and all Americans being able to benefit from this period of high economic growth. And I realize you may disagree with the premise of this question, you may feel that there is individual behavior on the part of some Americans that may cause this. And there were some figures on pages 12 and 13 of your testimony that you didn't read here, that sort of interested me, too. But, I would be interested in your views on that particular area.

Mr. GREENSPAN. As I have testified before this subcommittee in the past, we have a problem in this country of increasing dispersions of income—increasing inequality—that has created a fairly pronounced degree of concern amongst policymakers generally. To be sure, the evidence does suggest, as the Council of Economic Advisors pointed out earlier this year, that the degree of inequality has apparently stabilized in the last two or three years, and that there is no evidence of moving backward.

In my judgment, the main cause of the increase that has occurred since the late 1970's, is the fairly dramatic increase in technology, which in turn has enhanced the degree of education to the point where the income of those who are college graduates has widened significantly over those who are high school graduates. Also, the income of those who are high school graduates has increased significantly over those who are not high school graduates.

It's also the case that this evident value of education has induced increased enrollments in our schools, that is, the economic forces are obviously working here. The only thing that I can see which will significantly impact on returning to the type of income distribution which we had say 15 or 20 years ago is increased education, increased on-the-job training, and the bringing up of the

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skill levels of all Americans. And the reason, as I indicated in the prepared remarks that I have just delivered, is that this current period really is exceptional for this country—it is creating a platform for many individuals who would not otherwise have been able to increase their skills, to get the best type of training that there is—a job.

Chairman CASTLE. Thank you, Mr. Chairman.

Let me change subjects for a moment. With some pundit saying that the Federal budget is on its way to being balanced on its own, without us doing anything, can we forget about fiscal responsibility in spending restraint, or do we have to continue to work to limit Government spending?

Mr. GREENSPAN. Mr. Chairman, any of us who look at projections of our budgetary accounts recognize that there are errors inevitably in all of these forecasts. With trillion-dollar-plus receipts and expenditures, we cannot come in close to estimates when we remember that our deficit is the difference between these two very large amounts.

Nonetheless, if you project out the implications of some of the particular programs which exist in our budget accounts, it is hard to imagine how we are going to maintain what is either very low budget deficits—which we, in fact, have today—or balance, which I hope we will have very shortly. We are unlikely to keep that into the 21st century as the inexorable demographics emerge and create very large increases in the costs of programs for our elderly who will be retiring in the year 2009 and the years immediately thereafter.

If you look at the program charts, what you find, as I am sure you have seen, Mr. Chairman, is a fairly dramatic rise in budgetary commitments. The presumption that we have somehow come to a point where we have resolved the budget deficit problem by the year 2002, and that that is the end of the job, and the budget will thereafter automatically balance itself, is a clearly mistaken view. The really tough budget work, I regret, is in front of the Congress, not behind.

Chairman CASTLE. Thank you.

Mr. Flake.

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

Mr. Greenspan, I would like to just call your attention again to the labor segment of your speech, and realizing, as you have just correctly stated, if you are going to impact in any significant way the labor force that is under-utilized in many communities, there is a necessary educational process to bring skill levels up and to develop the necessary training.

To that end, as a former educator in higher education, and realizing that many of the young people that you get at that level have already been put at a major disadvantage by virtue of the fact that they have not gotten the educational training necessary at the earliest stages of their educational venue, I would raise a question of you in terms of how you feel that, as a Nation, we might involve ourselves—engage ourselves—in a process where we are actually producing so many dysfunctional persons who do not have the skills to take to the marketplace? By the time we talk about skills and training, they are already at such a disadvantage that it is al-

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most impossible to train them, because technology is running so far ahead of them that the possibility of getting them trained becomes an almost impossible task. So, we wind up with a potential labor force that either is so under-trained and unskilled and uneducated that it winds up being a part of the fabric of those who represent social misbehavior, wind up in jail or whatever.

Would you offer any suggestions as it relates to what we might do, given that our primary educator is a public system that, quite frankly, in my opinion, does not produce the kind of product that is competitive in the marketplace in which we function, to develop the kind of labor pool that I think industry is looking for today?

Mr. GREENSPAN. Mr. Flake, as we have discussed before, this is one of the most difficult issues confronting this country. I wish I knew more about it. I am not an expert in this particular field, but like any citizen, I recognize the size of the problem which, as far as I can judge, has gotten worse, not better, in the last decade or so.

At a minimum, the question of jobs is crucial, because, from what I have observed, having been an employer in the private sector over the years, is that a lot of people come in to work for their first jobs feeling terribly insecure about whether they can actually do the job, and it requires a considerable amount of increased self-esteem for them to actually be willing to learn the techniques that they need to know. So, even if you get somebody with really basic intelligence and who is really, down deep, pretty smart, if their motivation is somehow uninspired, it is very difficult to teach them, because they don't want to learn.

What we have got to do is find ways of getting people on the first rung of the employment ladder, so to speak, and when they have gotten to a point where they say, "I can do this," then you have opened up the door to somebody. But, unless and until you open up that door, I think all of the professional, sophisticated schooling techniques that educators talk about do not work.

There is a new problem that is confronting this Nation, but I don't think we have looked at it in this way before. We have got to find a wedge that will make it work. I am chagrined that we have every sort of program out there on which the Congress spends money and, to a very substantial extent, most of them do not work.

We have a lot of congressionally-authorized training programs on the books, and I would be hard-pressed to find really concrete evidence to suggest that we are doing the right thing there. Something is wrong with what we are doing. All I can say to you is that we just have got to keep pushing until we find the right answers. I wish I knew more of the answers. I don't.

Mr. FLAKE. I would hope that somehow from the platform on which you stand, you can be effective at least as a voice in pushing for necessary changes in the educational process, so that perhaps from the pre-K level through high school, at least, we begin to make an investment that ultimately gives us a return of better young people, more capable of functioning, and with the tools necessary. So that once they get their minds finely tuned enough, we know that their skills can be transferable. And as we move from welfare to work, particularly looking at a population of people who have not worked, in many instances, in the past, there is a whole

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new arena where we are going to have to try to educate people. As you say, their self-esteem and so forth may be so low.

I don't think that when we talk about economic policy we can exclude the ultimate possibilities of depression that will be caused if we don't attack that segment of the marketplace.

And, with that, I will yield back, Mr. Chairman.

Chairman CASTLE. Thank you, Mr. Flake.

Mr. Lucas.

Mr. LUCAS. Thank you, Mr. Chairman, and thank you for coming, Chairman Greenspan, today.

Being by nature a farmer—I guess, actually, I should say by trade—my focus on commodity prices generally is more in the direction of wheat or beef cattle or corn, whatever. But in the context of this subcommittee and the hearings that we hold, naturally, it has a broader definition. I guess my question is, what price pressures, if any, are you seeing in the commodity markets, Mr. Chairman?

Mr. GREENSPAN. We are certainly not seeing any pressures in the wheat market at this particular moment. Soybeans have come off a good deal. They were showing some increase, as was coffee. That is on its way down. Corn is lower.

There is, therefore, very little in the agricultural area which shows any really significant price pressures. There is also very little, as I can see, in the industrial area as well. The steel scrap price went up for a few weeks, and then it has come back down in the last week or so.

We have as close to stable prices that I have seen, certainly since the early 1960's.

Mr. LUCAS. I think you may well have answered the next part of my question. Thinking in particular about how the price of gold in recent weeks has trended as low as under the $320 mark, and how I read that some foreign central banks have sold portions of—or substantial portions of—their gold stock and bought U.S. Treasury instruments again in their place. I guess my next question would be, how do these commodity prices generally signal inflationary pressures? I think you have answered that.

Mr. GREENSPAN. They become early signals of the inflation process when you begin to see shortages emerge, and you begin to see people starting to trade on those shortages, and it becomes a self-fulfilling process which, if fueled by excess credit, engenders inflation. And the extraordinary decline in the price of gold, which incidentally, probably is only in small part the result of sales by central banks, is the obverse, namely, the increasing sense of the purchasing power of money, of currency, which, for want of a better term, is "fiat" money, and the implication of that is that inflation expectations generally are falling.

In the various surveys which have shown very exceptional increases in consumer confidence in the last year or two, we are now beginning also to see a fairly marked decline in long-term inflation expectations. And you see some evidence in, for example, the new indexed Treasury security which has some aspects of measuring inflation expectations. It is very crude, but nonetheless, it is showing some evidence which is not inconsistent with: one, the decline in the price of gold as a measure of inflation expectations; and, two,

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a number of these surveys which are suggesting that the people in general are becoming increasingly less fearful of inflation reigniting.

Mr. LUCAS. Thank you, Mr. Chairman and thank you, Mr. Chairman.

Chairman CASTLE. Thank you, Mr. Lucas.

Mr. Frank.

Mr. FRANK. Mr. Chairman, as I read your statement I'm troubled. And it seems clear to me a number of people were wrong on the pessimistic side. The economy has clearly behaved better than a lot of people expected. But that includes, obviously, people at the Federal Reserve. I believe, for instance, reading your testimony, that it is clear that the March increase was unnecessary. You acknowledge that monetary policy operates with a lag and you acknowledge that, in fact, inflationary pressures you feared in February turned out not to materialize in the second and subsequent quarters, obviously not because of the March increase. Even more profound, I know, from having been on this subcommittee, that if it had been suggested to the people at the Federal Reserve, or other people in the financial community, that unemployment could get this low with no sign of inflation, with producer prices, in fact, dropping, that we would have been told that was hopelessly optimistic.

My problem is that after having been wrong in the past, a lot of people—and I don't mean to include you, but I think it includes many of your colleagues—are determined to be wrong again and they want to repeat that error. And I sometimes get the sense, as I read your statement, it is a kind of—you are resisting the good news. What you are saying is, "There is no evidence of inflation, we have done better than we thought, there is this good trend and that good trend. But let's still act as if it can't really be happening."

I think sometimes that the Open Market Committee, it's kind of like Pirandello. Instead of "Six Characters in Search of an Author," you are "12 Pessimists in Search of Some Gloom." I mean, the absence of good news seems to be the biggest problem confronting you.

What bothers me is this, we have the negative social consequences that I think get understated. I am in agreement with many of the criticisms implicitly you made about some of the job training programs in response to Mr. Flake. I think the big problem there is an absence of aggregate demand, that you can't train people for jobs that don't exist.

In fact, we have just begun to reach a level of job expansion. We have just begun to get the good news out. And I want to say again, I am terribly concerned that respectable financial opinion seems to be taking the position now that, "Yeah, while we were wrong and it turns out unemployment could go lower than we were sure it could go, and not have inflationary effects, we are going to resist drawing that conclusion and we are still going to act as if this is sort of an aberration," and the whole tone of your statement, and of other similar statements is "Don't get your hopes up."

Well, I would hope you could at least approach this neutrally. I mean, the whole tone of this, the whole tone of your approach is one of rebuttal. We have had good news, solid good news, and it

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is not just results, not just less inflation at a given level of unemployment but, as you point out, real reasons for thinking that. Some reasons I regret, like the erosion of labor unions beginning with conscious Federal policy in the 1980's, internationalization, technological change, a whole range of things. We have just begun to reach out to people in the welfare population to expand jobs.

The social peace of this country, I believe, is at risk if we are not able to project the current trends forward. That is really what is at issue here. You are talking, and you acknowledge, and you deserve credit for helping describe the trends we are talking about, the difference between people who are educated and uneducated, the problems with job training programs.

If what we have had over the last couple of years is only temporary and aberrant good news, then we are in terrible trouble. Now, we can't wish ourselves into a better social atmosphere. But, what bothers me is the mind-set you appear to have is, "Let's find reasons to explain away what happened."

You talk here about, "Well, we might have to put on the brakes." Isn't it possible that we might have to try to be stimulative? Why is the policy goal of more growth not one that is before us?

And so, I guess I really need you to address how do you reassure us. Because, I assume you disagree with me, that you and your colleagues are not—by temperament, by the situation in which you work, by the concerns you have with the financial markets, and by our own past experience—cultural lag is probably the greatest enemy of all of us. How do we get reassured that you are not going to repeat the errors, and that there is not almost a vested intellectual interest in the notions that were wrong, and thus a resistance to good news that may deprive us of some benefit?

Mr. GREENSPAN. Let me say first of all, that if we sound cautious about believing in all of the elements that are coming in "over the transom," so to speak, the reason is that we see the extraordinary improvement in the benefits to this society generally from keeping this expansion going.

Mr. FRANK. Let me just break in one last time, because, and here is the point. When you say "over the transom," if they were just coming in "over the transom," I would understand that, but you give explanations for them. They are not over the transom. They have walked in the front door.

Mr. GREENSPAN. I am talking about the facts, which we interpret. If it were not for a very important fact that we know with a high degree of probability that when we take an action, it takes a year or more to impact the real economy. It means that the type of economy in which policy is directed is essentially the economy which is in place the summer of 1998 and beyond. We are putting very substantial resources into evaluating what is going on in this country and indeed, what is going on in the world. To be sure, when we see significant dramatic changes apparently occurring, we are skeptical, as indeed we should be skeptical, until the evidence emerges that it is clear that what we are looking at is something that is fundamentally changed.

Mr. FRANK. Why are you not neutral, rather than skeptical? Because the impression we get is that you are skeptical, because you have got to be on the side of focusing on inflation.

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Mr. GREENSPAN. No.

Mr. FRANK. Why should you not be neutral?

Mr. GREENSPAN. Congressman, let me put it to you this way. I have lots of views on lots of different subjects. The one thing I can say to you with respect to what the Federal Reserve does, is it tries in an objective manner, to bring together all of the facts we can marshal and the most sophisticated insights to explain those facts. We are not starting off with the proposition that inflation is a big bogey and that we will construct all sorts of arguments to endeavor to thwart growth in some manner or another. That is not our purpose.

Our purpose, as I have stated many times in the past, is to maintain maximum sustainable economic growth. That is a goal which I think everyone should support. That leaves open the question: What is the best way of doing that? And I submit to you that we are looking at that in as objective and nonbiased way as I know, and you are just mistaken with respect to your view as to what a bunch of old fogeys you think we are.

Mr. FRANK. Open is not skeptical. I am glad you are open, but not skeptical. I did not say you were an "old fogey."

Mr. GREENSPAN. Skepticism has very significant roots in philosophy, and these are good roots. You look for real evidence to determine whether something is true or false.

Mr. FRANK. I just want to say with regard to "old fogey," far from calling you an "old fogey," when you talked about people retiring in 2009 and 2010, indeed I thought you were talking about yourself.

Chairman CASTLE. Thank you, Mr. Frank.

Dr. Paul.

Dr. PAUL. Thank you, Mr. Chairman.

I think the Banking Committee must be making progress, because even others now bring up the subject of gold, so I guess conditions are changing. But I might just suggest that the price of gold between 1945 and 1971 being held at $35 an ounce was not much reassurance to many that the future did not bode poorly for inflation. So the price of gold being $325 or $350, ten times what it was a few years back, should not necessarily be reassurance about what the future holds. Unlike my colleague from the other side accusing you of searching for gloom, I might wonder whether or not we might be hiding from some of it? So I thought that the last thing I would suggest is that we lack monetary stimulus and all we need is a little more monetary stimulus, and all of a sudden we are going to take care of the problems. And by the way, the problems that are described are the problems that I am very much concerned about, but I come up with a different conclusion on why we are having those problems.

Earlier, I made the case in my opening statement that quite possibly we are using the wrong definitions and we are looking at the wrong things, and we continue to concentrate and to reassure ourselves that the Consumer Price Index is held in check, and therefore things are OK and there is no inflation. Real interest rates and the long bond remain rather high, so there is a little bit of inflationary expectation still built into the long-term bond. But the consumer prices might be inaccurate, as Sindlinger points out, and

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they may become less important right now because of the various technical things going on.

And also I made the suggestion that the money-supply calculations that we use today might not be as appropriate as they were in the past, because I do not think there is any doubt that we have all the reserves and all the credit and all the liquidity we need. I mean, it is out there. It might not be doing what we want it to do, but there is evidence that it is there. The marginal debt today was reported at $113 billion, just on our stocks. So there is no problem with getting the liquidity. My argument is that what if we looked at the prices of stocks as your indicator as you would look at the CRB? I mean, we would have a rapidly rising CRB—or any commodity index. It would be going up quite rapidly. For instance, in the past 3 months, we had a stock price rise of 25 percent. If it continued at that rate, we would increase the stock prices 100 percent in one year. If that was occurring in the commodities or Consumer Price Index, I know you would be doing something.

My question and suggestion is maybe we ought to be doing something now, because there is a lot of credit out there doing something else, causing malinvestment, causing deficits and debt to build up, and that there will be a correction. We have not repealed the business cycle. So we have to expect something from this.

I think there are some interesting figures about what has happened to the stock market. In 1989, Japan's stock market had a greater value than our stock market does. Our market now is three times more valuable in terms of dollars than Japan. We have 48 percent of the value of all the stocks in the world, and we put out 27 percent of the output. So, there is a tremendous amount of marking up of prices, a tremendous amount of credit. So, instead of being lacking any credit, I think we have maybe an excess amount. I would like to know if you can reassure us that we have no concerns about this malinvestment, that we do not have excess credit and that these stock prices are not an indicator that might be similar to a Consumer Price Index?

Mr. KENNEDY. What?

Mr. GREENSPAN. Let me first say, Dr. Paul, it is certainly the case that if you look at the structure of long-term nominal Government interest rates, there is still a significant inflation premium left. In the 1950's and the 1960's, we had much lower nominal rates, and the reason was that the inflation premium was clearly quite significantly less. I think we will eventually get back there if we can maintain a stable noninflationary environment. I do not think we can remove the inflation premium immediately, because it takes a number of years for people to have confidence that they are dealing with a monetary policy which is not periodically inflationary.

To follow on the conversation I was having with Congressman Frank, the type of conversation we have at the Federal Open Market Committee is indeed the type of conversation that is coming from both of you. In other words, we are trying to look at all of these various forces and recognize where the stable relationships are and those which tell us about what is very likely to occur in the months, the quarters, and hopefully, in the years ahead.

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It is a very intensive evaluation process, especially during a period when there seem to be changes in the longer-term structure which we do not yet know are significant or overwhelming. But we are experiencing changes which lead us to spend a considerable amount of time trying to evaluate what is going on. But we would be foolish to assume that all of history has somehow been wiped from the slate and that all of the old relationships, all of the problems that we have had in the past, have somehow in a period of a relatively few years, disappeared. The truth of the matter is that we suspect that there are things that are going on. We do not know yet how important they are. But we are keeping a very close evaluation of the types of events that are occurring, so that we can create what we believe to be the most appropriate monetary policy to keep this economic expansion going in a noninflationary way, because that is what is required to keep growth going.

Dr. PAUL. So, you are saying the stock price index is of a lot less value than the commodity price index or the Consumer Price Index?

Mr. GREENSPAN. I would say our fundamental purpose is to keep inflation, meaning basically the underlying general price index, stable, because that is the most likely factor which will create financial stability overall. As I have said in previous commentary and discussions before this subcommittee, we of necessity look at the whole financial system, but it has always been our conclusion that the central focus is on the stability of product prices as the crucial determinant in the system, which if you solve that one, you are likely to solve the others as well.

Chairman CASTLE. Thank you, Dr. Paul.

Mr. Kennedy.

Mr. KENNEDY. Thank you, Mr. Chairman.

I want to pick up on what you have just said, Chairman Greenspan. I think in answer to some of Mr. Frank's questions, you indicated that rather than an inflation-based policy, you were really pursuing a maximum-sustainable-growth policy. Yet in answer to the doctor's questions just a minute or so ago, you were suggesting that, in fact, in order to achieve the maximum-sustainable-growth policy, you, in fact, have to enforce the low-inflation policy. Now, I mean, the truth is that when people compliment you, I think what they are really complimenting is the fact that, you know, in the last eight years the stock market has tripled in value from just over 2,660 to over 7,900. I understand since you have started your testimony today it has gone up over 65 points.

Yet, over the same 8-year period, not only have workers not realized any of these rewards in terms of—they have obviously gotten higher productivity—but their wages have, in fact, gone down. And we can get into who we are talking about. I am talking about the average wage-earner in America. The average male workers have seen their hourly wage decrease by 7 percent in real terms over the same 8-year period.

Now the reason I bring this up, Mr. Chairman, as I look at your testimony today, you say, on page 13: "Even before we reach the ultimate limit of sustainable labor supply growth, the economy's ability to expand employment at the recent rate should rapidly diminish." And on page 14, you say, "As I noted, the recent perform-

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ance of the labor market suggests that the economy was on an unsustainable track." You go on about "an aggregate demand increases more slowly than in recent years, more in line with trends in the supply of labor, and productivity imbalances will emerge."

The point is that if you go back to your testimony just a few months ago, you said, let me just quote to you, you said, "The rate of pay increases is still markedly less than historical relationships. The typical restraint on compensation increases has been evidenced for a few years now, and appears to be mainly the consequence of greater worker insecurity. Thus the willingness of workers in recent years to trade off smaller increases in wages for greater job security seems to be reasonably well documented."

Again you say, "The FOMC has recognized the need to remain vigilant for the signs of potentially inflationary imbalances that might, if not corrected promptly, undermine our economic expansion. We cannot rule out a situation in which a preemptive policy tightening may become appropriate before any sign of higher inflation becomes evident."

It just sounds like you have made a box. You have made a box that suggests that the only way to really determine whether or not the economy is moving strongly, is whether or not we have low inflation, which as long as we can have a stock market that is skyrocketing, as Mr. Sanders will point out, effectively the incomes of the wealthiest Americans has skyrocketed, as I am sure you would yourself admit. It creates a situation where working families', ordinary wage-earners', incomes have stagnated, if not gone down. And, if in fact, their wages go up, they immediately are put into the inflationary spin, which means that you have to then walk in and jack up interest rates, which means that they lose their jobs, or certainly they do not get increased wages.

So, I wonder if you could just explain to us why you have not, in fact, inadvertently, I am sure, pursued really a stagnant wage policy? I am considering today introducing a sense of the Congress resolution in which we would suggest that the Fed should not pursue a stagnant wage policy of raising interest rates as a means to prevent wages from keeping pace with inflation and productivity gains. And I wondered if you might have a comment?

Mr. GREENSPAN. I would, indeed. Our long-term purpose is maximum sustainable economic growth. With maximum sustainable economic growth, you automatically get the most rapid increase in real wages that is possible.

Mr. KENNEDY. How long have you been Chairman?

Mr. GREENSPAN. Ten years.

Mr. KENNEDY. Have you seen any wage increases for ordinary working families in those 10 years?

Mr. GREENSPAN. The average real wage, if you use the correct price index and the correct set of data——

Mr. KENNEDY. Bureau of Labor Statistics? Is that appropriate?

Mr. GREENSPAN. I know the statistics you are referring to. One, it is certainly the case that there has been a dispersion of income, that is, an increase in the degree of inequality in the income distribution, and that arithmetically necessitates that the lower end of the income scale will be growing more slowly, or declining rel-

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ative to the median or the upper. That is what dispersion means. It is the arithmetic——

Mr. KENNEDY. It means the rich got richer and the poor got poorer.

Mr. GREENSPAN. It is the arithmetic equivalent. The true real wage increase has been going up recently on average.

Mr. KENNEDY. Oh, Mr. Chairman, you are talking at cross-purposes.

Mr. GREENSPAN. No, I am——

Mr. KENNEDY. You are trying to suggest that because the wealthy have gotten a lot wealthier——

Mr. GREENSPAN. No, I am——

Mr. KENNEDY.——That ordinary people have gotten wealthy when, in fact, these statistics will point to you that ordinary families'—ordinary as defined by median—incomes have declined.

Mr. GREENSPAN. Let me suggest to you that there is a statistical problem here, which if you want me to discuss with you in some great detail, I will be glad to do it. But let me complete my answer.

First of all, the question really is, what is the reason for wanting financial and price stability? The reason is they do not serve ends in themselves, but history tells us that they are necessary conditions for maximum sustainable economic growth.

Now you tell me, are you denying that?

Mr. KENNEDY. No, I am just saying that you have to have wages to be able to purchase those goods.

Mr. GREENSPAN. But wait a second. Let's leave aside the income distribution and I will get to that in a minute.

Mr. KENNEDY. OK.

Mr. GREENSPAN. The fact of the matter is that aggregate real wages move up with overall economic activity, that the share in the national income of compensation of employees has not gone down. It has been maintained—you shake your head. These are the data. I mean, we publish them——

Mr. KENNEDY. Mr. Chairman, I am just reading our own Government's data. I mean, you want to argue with your Government?

Mr. GREENSPAN. I am arguing with the way you are interpreting those data to mean something that they don't.

All I am suggesting to you is that, consistent with those data on the national accounts, is that there is a real income increase in general.

Mr. KENNEDY. Sure.

Mr. GREENSPAN. If you are going to tell me——

Mr. KENNEDY. Absolutely.

Mr. GREENSPAN. If you are going to tell me that there are segments of our society whose incomes are falling, I will say read page one or two of my testimony. I acknowledge that.

Mr. KENNEDY. I am reading your testimony. I was quoting you——

Chairman CASTLE. Mr. Kennedy. Mr. Kennedy——

Mr. KENNEDY. May I have consent for an additional minute?

Chairman CASTLE. No. Let's let him finish his answer and we will come back to you on a second round so you can continue the discussion, if you will, because it is only fair to the other Members to give them their opportunity.

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Mr. GREENSPAN. Congressman, monetary policy has one tool. All we have got is the Federal funds rate. With that we can affect the financial system and we can affect long-term economic growth. What we cannot do is affect the distribution of income.

That requires other public policies, which I grant you, are things that we ought to do. But, if you are focusing on monetary policy and stipulating that somehow, or in some manner, that there are things that can be done with credit creation or the like from the central bank that are going to resolve the issue that you relate to, I say to you, "I don't know how to do that," and I am sure that you don't either.

Mr. KENNEDY. That might well be true, but if you go to credit creation on——

Chairman CASTLE. Thank you, Mr. Kennedy.

Mr. KENNEDY.——On page 16 of your own testimony, you say you want to forestall excessive credit creation. The fact of the matter is——

Chairman CASTLE. Thank you, Mr. Kennedy.

Mr. KENNEDY.——That if you, in fact, had policies in place that were looking out after the interests of working families——

Chairman CASTLE. Mr. Kennedy, please——

Mr. KENNEDY.——Instead of just the inflation rate——

Chairman CASTLE. We really do have other Members to go to.

Mr. KENNEDY.——Then I think you could have——

Chairman CASTLE. Dr. Weldon.

Dr. WELDON. I really thank the Chairman.

[Laughter.]

Dr. WELDON. Mr. Greenspan, I enjoyed your testimony and I would take issue, though it was very interesting, your rather lengthy comments about some confluence of technical and technological changes as playing a role.

I am personally of the opinion that one of the—I shouldn't say one of—the biggest reason the situation exists today where we have strong economic growth and low inflation is because of the policies pursued by this Majority in this House. Because interest rates have gone down, and when I get to my question, if you want to try to comment on this, I would be happy to hear your comments. But, a 1 percent reduction in interest rates has a dramatic impact on the ability of companies to attain capital and make the investment they need. But, probably more importantly, just the simple fact that the Federal Government—which is, as I understand our economy, is the 500-pound gorilla out there borrowing money every year—if they are no longer out there borrowing money. Money, like any other issue, is a commodity, and without the Federal Government borrowing as much, interest rates are going to stay down.

We are going to argue about this a lot over the next year-and-a-half, I know. Whether it was our policies, or the Administration's policies, and some people are arguing that it is neither of our policies.

I think one of the things, perhaps, that we maybe wouldn't argue about though, is that there is an element within our society who are being left out and Mr. Flake was alluding to this earlier. I

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think it is a group of people that we all share a lot of concern about.

I was very interested in your comments about education and the impact that that has in terms of being able to allow people to move up into higher economic strata and perhaps experience those real wage increases that Mr. Kennedy is concerned about.

As a student yourself of markets, one of the things that I know I have been very concerned about in coming here, is that we have in the United States, the second most productive economy in the world, after Hong Kong, I believe, and the most efficient. We rely on markets, and we have free markets everywhere except in our educational system, and in particular in the kindergarten through 12 educational system.

Now, I realize that there are millions of Americans who are not yoked to that system and they are, by and large, the affluent. But, the people that you and I are concerned about—and that many of us here are concerned about—cannot get out of the public education system, which is not a market system at all. It is not a system that can be accessed, or refused, based on merit for many people in the middle and lower income strata. Do we as a Nation need to seriously consider reassessing how we do education, particularly kindergarten through 12? If we are going to be able, as we head into the next century, to really address these issues.

Mr. GREENSPAN. Congressman, it's pretty obvious that the United States has the preeminent graduate schools in the world. Everyone comes here. We have an extraordinarily effective college education system for many parts of the country and for many segments of our population.

But no matter how you measure it, when you look at grades kindergarten to 12, we don't look terribly good. The way we find out is that we get people going into jobs, or going into higher levels of education, whose basic capabilities are clearly far deficient from what they were 30 or more years ago.

There is a great debate within the society. As I said previously, I am not an expert on this, and I don't pretend to be. I am only aware of the consequences, which have a very important impact on economic growth and on the economy generally.

It's hard for me to envisage the level of technology, which is invariably going to be at the base of our economic system in the 21st century, being effectively worked with by some of the people who are produced by some of our schools.

We have got to improve, and I think if we are going to eliminate some of the problems which Congressman Frank and Congressman Flake raised, with which I agree, we really have to focus on finding a way to significantly enhance our educational abilities below the college level, because fortunately, above that we're OK.

Dr. WELDON. But, can we do that in the absence of a market system within the educational system itself, where there is not consumer choice?

Mr. GREENSPAN. That is the reason why I say I am not sufficiently knowledgeable about how that system works. My obvious inclinations are to seek market solutions, because I think free people working together in a free market produce the maximum potential wealth in a society. But, there are structural issues which I

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think are important to understand in any policy issue, and I regret that I don't know enough about what the structure is that is causing the problem to know that the specific market solutions that would be involved, and there are many different types which would work.

I would certainly like to see them tried, because what we have today is not producing a level of education which is going to be required for most of our younger people as they move into the work force in the beginning of the 21st century.

Dr. WELDON. Thank you, Mr. Chairman.

Chairman CASTLE. Thank you, Dr. Weldon.

Mr. Sanders.

Mr. SANDERS. Thank you, Mr. Chairman.

Mr. Greenspan, what I would like to do is ask you four questions. I will try to be as brief as I can in asking them. I would appreciate your being brief in trying to answer them.

According to the Government statistics that I have seen, the real wages that American workers are earning today are significantly less than they were 25 years ago. People are working longer hours for lower wages.

In 1995, worker pay fell by 1 percent, according to the April 1, 1997 *Business Week*, while the average compensation for corporate CEOs increased last year by 54 percent. Factory workers saw a 3 percent increase in their income. White collar workers saw a 3.2 percent increase, which means that on average there were tens of millions of American workers who are continuing to see a decline in their standard of living.

Many women are being forced to work who would rather stay home with the kids.

Given that reality, can you briefly tell the American people how, as you indicate in your report today, the recent performance of the economy has been, quote, "exceptional"? Can you tell tens of millions of workers, who are seeing a decline in their standard of living, how the economy has been "exceptional"?

Mr. GREENSPAN. It's been exceptional in the sense that, when one compares it to what it has been in the past, we are now looking at relationships which are far more benign and beneficial to the American economy and people generally than, say, 7 or 8 years ago. There is no doubt that the economy is doing much better.

What is exceptional is that we have not experienced a situation that exists today in a very long period of time. Meaning one characterized by what is a quite tight labor market and a period in which the inflation rate is low. Those are facts.

Mr. SANDERS. OK, thank you. Thank you. Let me ask you my second question.

As it happens, I am the Chairman—the Ranking Member unfortunately—of the committee which has oversight over the Federal Reserve Board for Government Reform.

Some people have criticized you, and I would agree with their criticism, that you live in a world very separate from ordinary working people who are trying to survive on $7 or $8 an hour. You haven't a clue what is going on in their lives.

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Now, I would like to hold hearings around the country with the Chairman of the committee so that ordinary people can come to you and tell you what is going on in their lives.

Would you be willing to join us in those field hearings?

Mr. GREENSPAN. I would certainly be willing to do it where I have time.

Let me say to you, Mr. Sanders, I was brought up in a low middle income family. I have been through a long period of my life when I was part of the group to which you are referring. I know what people go through and you are assuming that somehow we are a group of elite central bankers who don't know what is going on in the world.

I very strongly disagree with you on that. We are citizens of this country——

Mr. SANDERS. But we will give you the opportunity, Mr. Greenspan, and I have to ask you to be brief, but I apologize. I don't have a whole lot of time, sir, but we will give you the opportunity.

Some people think you hang out at country clubs and hang out with the rich, so we will give you the opportunity to come out to talk to working people and you can explain to them how "exceptionally" the economy is doing.

Third, we managed last year to raise the minimum wage. But, given the fact the minimum wage is 25 percent lower today than it was in 1970, and American workers remain at the bottom end of the wage scale in terms of low wage workers throughout the world. Would you join me in supporting legislation that I have introduced to raise the minimum wage to $6.50 an hour?

Mr. GREENSPAN. I would not, and the reason I would not is precisely the reason I discussed with Congressman Flake before.

It is terribly important that we allow people, at whatever levels they are, to earn to get into the workforce and move themselves up.

In my judgment, the prohibition on allowing people to have a lower wage when that is the only one that they will get, eliminates them from the capability of moving up the ladder. I personally, as a citizen, oppose it.

As a central banker——

Mr. SANDERS. You and Mr. Gingrich and Mr. Armey are in agreement on that issue. That is your position. Thankfully, the Members of the Congress did not agree with you.

My last question is that, in the last 20 years—and I think even you acknowledge this—there has been an enormous shift of wealth that has gone from the working class, the middle class, to upper income people.

Yet, as I understand it, while you on one hand tell us you want to move this country toward a balanced budget, and have been a major advocate of such programs of lowering the CPI for senior citizens on Social Security, you have also advocated, as I understand it, repealing the entire capital gains tax, which would largely, overwhelmingly benefit upper income people.

So, you are telling us today you oppose raising the minimum wage for low-income workers, you support eliminating the capital gains tax which largely benefits the rich. Then you want us to move toward a balanced budget, and if we do those things, it will

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require major cuts in Medicare, Medicaid—education, I suspect—Social Security, which benefit working people.

How can you tell us you want to move toward a balanced budget and then continue to give huge tax breaks to the rich?

Mr. GREENSPAN. First of all, let's remember what you are talking about are issues which have got nothing to do with the Federal Reserve. It's got nothing to do with monetary policy. You are asking my personal views——

Mr. SANDERS. I am asking your personal views.

Mr. GREENSPAN.——On these various things.

The reason why I have been opposed to the capital gains tax is, as I have said on numerous occasions, I think it is a means of raising revenue which, more than any tax I know, curbs economic growth and rising standards of living.

I view that as an issue of how does one maximize economic growth in this country. If any tax inhibits growth, the question is which means of raising revenue inhibits it the most, and I would suggest to you that is the capital gains tax.

Mr. SANDERS. Under your leadership over the last 20 years we have significantly lowered taxes for the rich and large corporations. The rich have gotten richer and real wages have declined.

It doesn't seem to me that you are making a lot of sense.

Mr. GREENSPAN. Under my leadership?

Mr. SANDERS. Well, you are one of the major economic leaders of this country. You have advocated tax breaks for the rich. You have opposed raising the minimum wage. The reality is, the rich have gotten richer.

Chairman CASTLE. Mr. Sanders, you have asked a question. Let's let the Chairman answer that and then we'll have plenty of time for additional questions when the other Members have had a chance to ask questions.

Mr. GREENSPAN. I don't advocate tax rates for the rich. I advocate a tax structure which expands growth at the maximum means possible to help all Americans.

Mr. SANDERS. Thank you.

Chairman CASTLE. Thank you, Mr. Sanders.

Mr. Cook.

Mr. COOK. Yes. Mr. Chairman, I would like to go right to maximum sustainable growth, the objective and the appreciation I believe many Americans feel toward the vigilance on the inflation front in achieving that. But, I did want to ask you about areas outside the purview of the Federal Reserve and how you think those would affect maximum sustainable growth?

I take it from the answer to Mr. Sanders' question that, certainly, capital gains tax cuts would be a part of that formula that could help us achieve maximum sustainable growth and provide better jobs, higher wages and salaries.

What about the reduction of marginal tax rates, continuing deregulation of the private sector and generally, keeping on the path of lowering the relative size of Government, as against the entire economy?

How would those things affect growth and faster growth?

Mr. GREENSPAN. Congressman, as I indicated in my prepared remarks, the degree of deregulation that has taken place over the

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last 15-, 20-years, has been quite instrumental in getting us where we are. Indeed, I was mentioning to Congressman Lucas before, that wheat prices are not moving anywhere. The reason, of course, is that we have effectively eliminated all sorts of means to prop up the market price of wheat. Wheat farmers can now plant pretty much as they choose, as the economy—at least, as they see it—will enable them to do it. So, we are getting very large crops and that's good, not bad. That is part of economic growth. The gross agriculture product is part of the gross domestic product.

We have seen significant changes. For example, in the transportation area, there has been quite extraordinary improvements in the efficiency of the system by enabling people to compete. Truck deregulation was quite important, and has contributed quite importantly to transportations efficiencies as, indeed, the significant decline in regulation of our railroads has done.

All of these things are helpful as they expand the economy. A lot of people criticize the notion that President Kennedy had, of "A rising tide raises all boats." But, it's true, and it's important, and it is something that we ought to endeavor to achieve to whatever extent we can.

Mr. COOK. And I take it that lowering marginal tax rates plays into that?

Mr. GREENSPAN. Yes. I have always advocated a tax structure which would maximize economic growth, and capital gains tax and marginal tax rates are clearly elements in such a package.

Mr. COOK. Then I would like to clarify, at least in my mind, what you are saying about the trend over the last decade—or two decades—of wages for the average American. I know you have been a real critic of the current measuring devices of the CPI. In fact, I think you believe that the CPI has been overstated even more than the Commission has just reported.

Mr. GREENSPAN. I don't. I think if we adjusted the CPI correctly, the average median real wage would show a much more positive path than the one we publish today, which is deflated by an index which overestimates the cost of living.

There is a complex problem here, which I don't want to get into, because I will just fall into deep "Fedspeak." But, it has got to do with the fact that our productivity data are deflated by the product prices of what people produce. The wage figures are deflated by the prices that people pay at retail. Those two prices have diverged really quite significantly, and it has created a distortion in what is happening to standards of living in this country, which I wish were easy to explain without getting into the detail.

But, the reason why I was having this extended conversation on statistics, is there is a statistical problem here which, in part, is creating an illusion, which I fear, is making the problem, which I think is a bad problem. Namely, increased inequality in the distribution of income appears to be, in fact, a little bit worse than it actually is.

Mr. COOK. OK, and if I could just very quickly, just to make sure I am hearing what I think I am hearing. You reject, I take it—partly because inflation has been overstated—the statements made here today that the working wage is lower today than it was 20 or 25 years ago? I can't remember exactly the citation.

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Mr. GREENSPAN. The figures, if you take the average hourly earnings which are published by the Bureau of Labor Statistics, and you deflate that by the Consumer Price Index, you will get an estimated real wage that has been declining for a very significant period of time. The problem is; one, in the price deflator and; two, in the average hourly wage data that the Bureau of Labor Statistics publishes.

It is a partly statistical problem. But, I don't wish to obscure in any way what I said previously. Namely, that we do have a significant problem in a growing inequality of income distribution in the country. That is a fact, that has problems. That creates a level of real wages in the lower segments of our income distribution which are, indeed, going down. But, they are not going down as much as those data imply. That is the issue which, I think, is important to underline.

Mr. COOK. Thank you.

Chairman CASTLE. Thank you very much, Mr. Cook.

Mr. Kanjorski.

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

Mr. Greenspan, I appreciate the fact that you exercise control over monetary policy, and that is very restrictive as to what you can actually do in the economy. But, your voice is well-regarded by policymakers in the fiscal policy side of Government, and we are about to enter into a major public policy decision that will affect fiscal policy. Specifically, the targeted child credit for income tax.

And, I haven't heard your voice—maybe I've missed it—but, I am going to give you an opportunity to tell me. First of all, do you favor the proposal submitted by the House of Representatives that would limit that credit to an income level that is called the "middle class," from approximately $100,000-a-year, down to about $35,000-a-year, and that any children that are raised by income earners above the $100,000 level, or below the $35,000 level per family, would not partake in that tax credit?

Mr. GREENSPAN. Congressman, I am aware that there is a fairly substantial dispute going on between the Senate, the House and the Administration which continuously changes. I have not been able to follow it and I'm not sure even if I came to a conclusion that I would feel comfortable voicing it.

Mr. KANJORSKI. I appreciate that.

Well, let me ask you this. Forgetting what the policy is or where it may come out, certainly, as an economist, you recognize that we are talking about savings and investment and consumption. The tax reductions included in all the proposed plans—the Administration plan, the Senate plan, the House plan—put about two-thirds of the tax reduction into pure consumption.

In light of your testimony that we are pushing the outer edges of capacity, both on capital and labor, is that a wise thing as a matter of public policy?

Mr. GREENSPAN. I have argued in previous testimony that if the purpose of reducing taxes is economic growth, then it is marginal tax rates that the focus should be directed at. I would therefore, as most economists would, find it hard to envisage the type of tax credits that are being recommended as being in that area.

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Now, there are other reasons why one wants to lower taxes. And, I would say, I would never argue that "if it doesn't affect economic growth, that therefore you shouldn't do it."

Mr. KANJORSKI. I agree. But, isn't that exactly what some of my colleagues here have been arguing? That that portion of the employed element of our society, the lower two-fifths of our economy, have had the least appreciation of economic distribution of income?

Mr. GREENSPAN. That's true. That's a fact.

Mr. KANJORSKI. Is it not logical then to give them the benefit of a tax credit to raise their children? Because, if we are going to be humane about it, and we are going to subsidize children to get a better start in life, a better education, a better opportunity, isn't there something foolish about limiting that contribution of the general tax public and deny that benefit to people under $35,000 a year income?

Mr. GREENSPAN. There are certain things I will not get involved in and you have, I think, focused on one. We started off this discussion, at least I did, by saying what we are observing here with all of this debate about policy, is that we are seeing how democracy functions. It is important for the Congress to debate and conclude on this. As a private citizen in this regard, I've got the luxury to sit back and watch.

Mr. KANJORSKI. Well, you have a right to take a pass on that, Mr. Greenspan. But we have a great deal of respect for your opinion, so I thought you could help me decide an issue.

Mr. GREENSPAN. Frankly, in all seriousness, I don't really know enough about it to give you an opinion.

Mr. KANJORSKI. Have you modeled it at all?

Mr. GREENSPAN. I'm sorry?

Mr. KANJORSKI. Have you modeled the potential tax ramifications?

Mr. GREENSPAN. I think we generally model what we expect the Congress to come out with regarding the tax structure in our forecast models. But, I don't think we have endeavored to do the type of evaluation, for example, which CBO does in trying to——

Mr. KANJORSKI. Mr. Chairman, I appreciate your indulgence.

I just happen to be a person that is very leery. I am opposed to any taxes, the Administration, the Senate or the House. I think we have a fairly strong economy and I am very much worried that the consumptive tax that we are putting out there can only exacerbate inflation. And, maybe you could help me by telling me I'm wrong and I shouldn't lose sleep about it.

Mr. GREENSPAN. There are a number of economists—reputable economists—who agree with you. There are others who would like to see taxes cut, but don't like the combination that is currently being discussed. So, I think on this particular issue there are views all over the place.

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

Chairman CASTLE. Thank you very much.

Some of those economists are right and some are wrong, clearly, in that category.

Mr. Metcalf.

Mr. METCALF. Thank you, Mr. Chairman.

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Chairman Greenspan, last February when you were before this body, I spoke about mergers and job displacement due to corporate mergers. Today, I want to get your perspective on a specific merger. Boeing and McDonnell Douglas have already been granted approval by the FTC for a merger. In fact, without the merger, McDonnell Douglas says that 14,000 American workers would be displaced. Now the European Community has weighed in, saying that they may disapprove the merger at a meeting tomorrow in Brussels.

My question is, do you think the EC should have any authority to determine the outcome of a U.S. domestic market decision that significantly affects employment? And, do you have concerns about the ability of the EC to intercept electronic wire transfers between U.S. and European companies if the merger goes through and if they disprove it? Is the Federal Reserve concerned about any of these potential actions?

Mr. GREENSPAN. Congressman, I happen to be quite familiar with the whole set of circumstances which you relate. This is an issue which is a profoundly important one, and a profoundly difficult one, because the European Community and the United States are a set of merger powers, in the sense that our 50 States are almost as large as the whole European Community, and these are the two big bastions of the world economy, excluding, obviously, Japan and the Asian countries. And to be involved at this level of dispute I find very disturbing.

I certainly trust that the presumption that a lot of commentators have put forward, that we are on our way toward some sort of trade war as a consequence of this dispute, I must say, I trust that they are mistaken and that some resolution can be found rather quickly.

Mr. METCALF. Thank you.

And Boeing does intend to make a final offer today before their meeting tomorrow.

On a different subject, when you testified before the Commerce Committee, you brought up the issue of capital requirements. In your testimony to the Commerce Committee you stated, "The bill continues to allow the Federal Reserve Board to establish capital adequacy guidelines at the holding company level, however, the bill sets important limits on these holding company guidelines. Some argue that the restrictions placed on holding companies are an unnecessary burden and this action does not contribute to an increase of safety and soundness. Others, of course, state the opposite."

Do you see any changes that need to occur in this provision as the bill makes its way through the Commerce Committee?

Mr. GREENSPAN. No. In fact, the particular provision to which you refer is a reasonably sensible one. The technology which I have been discussing at length here, relative to the economy, has had a particularly profound effect on finance and it is altering the structure of our financial institutions and, of necessity, altering the way in which they should or should not be regulated. And, my concern is that we make certain that we recognize two principles.

One, that as the technology increases and we get increasingly complex markets, that we allow the private sector to regulate itself as, indeed, it does most of the time. The primary base of regulation

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is the investment bank which is very conscious of what its counterparty's risks are and is very cautious in making investments or loans until it knows what is going on. That is the most important root, the base of all regulation. It is private regulation.

But, second, what we do need over the structure of these multinational and multistate holding companies, is a form of supervision which we call "Fed light." This means that we are aware what those organizations do, to essentially manage the risk of the total holding company, and that to the extent that that is what occurs, you need a regulatory oversight at a very modest level which completes the structure of regulation that, in my judgment, is required, because we have a Federal safety net which creates and distributes subsidies to the system.

So, the specific provision that now exists in this committee's writeup, we think, comes reasonably close to that requirement.

Mr. METCALF. Thank you.

And thank you, Mr. Chairman.

Chairman CASTLE. Thank you, Mr. Metcalf.

Mrs. Maloney.

Mrs. MALONEY. Thank you, Mr. Chairman.

Chairman Greenspan, I know that you will agree that our country needs an efficient system that fully utilizes modern technology in clearing bank checks and paper checks. I believe you will also agree today that the Federal Reserve should not be freezing out private competition and inhibiting the modernization of bank services by subsidizing the transportation of paper checks. The money that the Federal Reserve uses could be returned to the U.S. Treasury to reduce the deficit.

In 1980, the Monetary Control Act passed through this committee with the clear intention that the Federal Reserve would open its check clearing services to all depository institutions, that it would sell each of these services at prices that fully recovered costs and that those costs would include an adjustment for taxes that would have been paid and the return on capital that would have been provided had the services been furnished by a private business firm. I am quoting, really, from the language of the 1980 Monetary Control Act.

We now know that the Fed's interdistrict transportation system is heavily subsidized by the Federal Reserve. The Fed is recovering only a percentage of their costs of paper check transportation, even without an adjustment, and many of us—or some of us—believe that this violates the intent of the Monetary Control Act. Even though the Fed, and I have talked to members of your staff, says that they recoup the subsidy from ITS elsewhere in the Fed's operations.

I am hopeful, Chairman Greenspan, that you will support some of the Members of this subcommittee that are supporting a bipartisan bill, the Efficient Check Clearing Act of 1997. I have spoken with some members of your staff about it. It is H.R. 2119. And this bill would basically end the subsidy of check transportation.

Mr. GREENSPAN. As I understand it, the Monetary Control Act requires us to recover, in total, all the costs that we expend, plus a profit margin and all taxes that would make it comparable to a private institution. We have gone further than that. We have set

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up several groupings of price services, one of which is check services, which we set our price structure for in a manner which recovers all costs according to the Monetary Control Act.

My understanding is that for check services, as a group, we have fully recovered all costs. Indeed, we have had a significant profit which, in effect, has been returned to the Treasury. My recollection is it is something like a billion dollars over the past 10 years for all of our priced services.

What you are raising is a question of what would be called, in a company, the "internal transfer" prices between various different types of cost structures. I have served on numerous corporate boards when I was in the private sector, and the general procedure to maximize the efficiency of the system, is often to find means by which you structure your ability to compete and the costs that you incur, so as to maximize the efficiency of the total system.

If you require that each and every subset of check services itself meets certain profit criteria, we will end up with a total clearing system for the Federal Reserve which, in my judgment, would probably be inefficient in general. We probably would not be able to recover our costs and, as a consequence, probably be forced to raise prices. The volumes would be reduced, and eventually we would probably exit from the check services function.

In the public discussions, which are being organized by Federal Reserve Vice Chair Rivlin, who is in charge of a whole review of our priced services and other aspects of our system, as far as I can judge, the general public comments have been strongly in favor of the Federal Reserve continuing as a significant player in the check services area.

I think the question that the Congress has to judge is the one you originally put forward, whether or not we should be in the business at all? I have had serious questions about that when I first came on board as Fed Chairman. I have since become a supporter of our being in the business, because I think we add very materially to the payments system of the United States by doing that. I would very strongly suggest that you take a closer look at the implications of what that bill that you are offering would require us to do, and whether it is consistent with our ability to function as an effective check clearer.

Mrs. MALONEY. Well, I am not questioning whether you should be allowed to provide the service. What I am questioning is whether or not it should be subsidized and I believe——

Mr. GREENSPAN. No, I don't believe——

Mrs. MALONEY.——I believe that it should not be subsidized.

Mr. GREENSPAN. I agree with that, it shouldn't be. But we are not doing that.

Mrs. MALONEY. We know that the ITS paper check transportation costs can be recovered separately in our Minority staff investigation of the ITS program, which began in 1995 and is still in progress. The extensive report of that investigation is quite explicit and contains a summary of statements from Federal Reserve employees who, in signed statements, say that the ITS is operating with a substantial subsidy. These are two of your current employees in signed statements.

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Mr. GREENSPAN. It is a question of fact as to what is being done. I understand that the Chairman is going to have hearings on this. This is a very complex subject and I think it is an important issue to raise.

The best thing for us to do is to make available in that testimony a judgment of, not of what people feel or believe, but, what are the facts. An issue of whether something is subsidized or not is not an issue of opinion; it is a question of analysis and a question of fact.

What I would suggest that we do in that hearing is to endeavor to find out what the facts are.

Chairman CASTLE. Mrs. Maloney, a couple of things. One, we need to move on. And second, you may not have been here, we do intend to have this as either part of a hearing, hopefully in September, or as a full hearing in September as well.

Mrs. MALONEY. Well, Mr. Chairman, since my time is up and I know Chairman Greenspan has been here for a long time, I just respectfully request that I could put in the record the signed statement of two current Federal Reserve employees who say that the ITS service is subsidized, a letter from Chairman Greenspan to Chairman Gonzalez isolating out the cost of the ITS and a statement and study done by the Trade Commission, again, on this particular subject that it is subsidized.

[The information referred to can be found beginning on page 108 in the appendix.]

As you know, we are trying to balance the budget. Just this week, there are numerous bills before Congress to cut out subsidies to various agricultural subsidies in the country. Since that is before Congress this week, I think that we should likewise have the opportunity to question whether we should be subsidizing a giant Government bureaucracy to provide a service which the private sector could likewise provide, at a cheaper price to the taxpayer, allowing more money to go to deficit reduction.

Chairman CASTLE. Thank you.

Mr. GREENSPAN. I would say you shouldn't subsidize it. It is a question of fact whether, indeed, that is what is being done and I would hope that at the September hearings we can make a determination.

I don't think there is any question that if, indeed, it is being subsidized, it is wrong. The question really is, is this a subsidy in the form of which you stipulated? Let's let the facts fall where they may.

Chairman CASTLE. Thank you.

All those documents, Mrs. Maloney, you asked for will be accepted as part of the record.

Mr. Bachus.

Mr. BACHUS. Thank you, Mr. Chairman.

Mr. Greenspan, there has been a lot of discussion about the inequalities of income, and you have expressed concern about it and Mr. Sanders did, and I think all of us in Congress are concerned about that, and I think what we have to focus on is what, if anything, we can do about that.

Now, Mr. Sanders—as you know, we have Democrats, Republicans and Independents—and, as you know, Mr. Sanders is a so-

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cialist, and I don't say that in a derogatory manner. He is proud of that designation.

He has asked you about what can we do about this? What are you going to do about it? Do you see anything—and we talked about different models for addressing this—do you see anything in the socialist model, or socialist approach, that would be of any benefit?

Mr. GREENSPAN. I do not, Congressman. I think the last 50 years or so have seen extraordinary almost controlled experiments between socialist societies and free market societies, and invariably the socialist model has failed. Indeed, as I think you know better than anyone, the emerging economies—if I may put it in that way—which are learning how to function, have switched, virtually universally, toward the free market in order to build up wealth and to create a higher standard of living for their people.

There are unquestionably problems with our model but, to paraphrase Winston Churchill, "Capitalism is the worst of all economic systems, save all others." And the problem is not whether or not we want a socialist system or a capitalist system. We have a capitalist system, it has given us an extraordinary standard of living, but, it has all sorts of problems associated with it. The purpose of public policy is to find ways to minimize them, but not switch to a system which has proven to be a failed means of achieving higher standards of living.

Mr. BACHUS. Yes. I thought it was quite ironic that a major advocate for a change was a gentleman who is an avid socialist, and he has complained about trapping large classes of people in low-income jobs, and I think the socialist model has done more to do that than the capitalist model.

Mr. GREENSPAN. We raised our voices a little bit in talking. But, these are precisely the issues that we should discuss. I think that Congressman Frank has raised the question more broadly, but I do think that to have divergent voices argue basic principles is very important in this society. Because, if we all agreed, we would stagnate. To have vigorous debate on various different ways that economies can function is the only way we are going to find the best way to solve the problems which we confront.

Mr. BACHUS. Yes, and we are all concerned about these things. It is just, how do you address them? And socialism is just one way to address them, but it hasn't worked very well.

Mr. GREENSPAN. I happen to think that Congressman Sanders is wrong, but I think he raises the right issues, which is important.

Mr. BACHUS. You mentioned educational reform. Do you see that as probably our best greatest hope of addressing this inequity?

Mr. GREENSPAN. I don't know whether I would call it reform, but we have to find a way to improve the quality of our elementary education, in my judgment, without question.

Mr. BACHUS. The last thing. The European Union, that was mentioned earlier, the very disturbing prospect that two of the large spheres of economic activity would get sideways over this Boeing issue. Would you—other than that one, and I suppose that is one of your concerns today, that in this good economy, things couldn't get better—that that is a disconcerting thing. How about the trade deficit?

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Mr. GREENSPAN. First of all, let me just say generally, that the reason why I am concerned about the dispute that is going on, is the evidence is really quite overwhelming that the huge increase in trade throughout the world has been a major contributor to everybody's standard of living. The growth rate in international trade far exceeds the growth rate of our domestic economy, meaning that, on average, we are all importing more than we used to and exporting more, and it is pretty clear that that specialization and that globalization, have enhanced living standards all over.

But, in the process, our trade deficit has increased as, indeed, our current account deficit has opened up. It would be a problem for us, were it not for the fact that the American dollar is such a preeminent reserve currency, and increasingly so as our rate of inflation falls and our currency, in that sense, becomes "harder," as we like to say. As that occurs, it means that portfolio investments around the world, despite the fact that the current account deficit is pumping additional dollars into the world system as an accounting necessity, despite that, the demand for dollars is greater than what is being supplied on a net basis.

So, at the moment, and for the quite foreseeable future, the current account deficit does not appear to be a problem. But current account deficits, in and of themselves, if prolonged indefinitely, engender the same type of problem that budget deficits do. When you have very large budget deficits, your interest payments go up, and unless curtailed, it is a progressive expansion of the deficit. Well, much the same arithmetic occurs in the current account deficit, that is, interest on foreign investment in the United States which is used to finance the deficit continues to rise.

We have had that for quite a long period of time. It has meant that our net international liabilities have risen. But it is pretty clear that the levels are small, that the overhang problems are not of considerable concern. It is something which, over the long run, is going to have to be resolved, but it doesn't have in it the type of short-term problems that the budget deficit created for us. It is something which we will have to address and resolve in the future, but it is not something which is an immediately urgent issue that has to be addressed in the same sense that the budget deficit did.

Mr. BACHUS. Thank you.

Chairman CASTLE. Thank you, Mr. Bachus.

Mr. Bentsen.

Mr. BENTSEN. Thank you, Mr. Chairman. Mr. Jackson and I were concerned the expansion might be over by the time you got down to this end of the table, but apparently it is not.

Chairman Greenspan, first of all, I want to follow up on what Mr. Kanjorski was talking about. I have a number of questions, but just in reading your testimony, and where I think you were saying the Fed is at this point, is you were not going to make a rate change—or you don't anticipate making a rate change in the near future. The economy is operating at near capacity, the unemployment level is extremely low, it is effectively almost a white-hot economy, but you still don't see enough indices that would encourage you to make a rate change.

In the future, after Congress adopts a balanced budget agreement and a tax cut, as I anticipate that they will, is it conceiv-

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able—or would it be appropriate—that in the Fed's consideration of future Fed fund rates and discount rates, that you would take into consideration the fact that we are cutting taxes and we might be adding fuel to a possibly overheated economy? Is that something that we should be thinking about, trying to get away from all the political theory? And, I appreciate the fact you don't want to engage in that. But, is that something you will take into consideration?

Mr. GREENSPAN. Congressman, let me first say that your characterization of my testimony is not exactly what I would say. I tried very hard, hopefully successfully, not to indicate what we might or might not do, and, indeed, that is a judgment for the Federal Open Market Committee to make, not for me to make. And we will make judgments one way or the other, depending on what is occurring in the economy at the particular time in which those judgments are made.

As I have said in the past when asked whether or not if budget deals were made, would that affect monetary policy, I said, "Only to the extent that the budget deal itself, whatever it is, affects the economy. We respond to the economy." So, I can't say to you that we will react in any particular way, depending on the way the budget negotiations come out or the specific content of them. What we do respond to is what the economy is doing and, to the extent that whatever budget deal comes out of the Congress affects the economy, it is the economy which we will be responding to, not specifically to the elements in the budget package itself.

Mr. BENTSEN. I guess you would respond if there is a dramatic increase in monetary aggregates or in liquidity? Those would be factors that you would consider, or that the FOMC would consider at certain times?

Mr. GREENSPAN. Most certainly.

Mr. BENTSEN. Let me ask, we talked about the oil imports in the past, and in the Fed's most current analysis, you state that oil prices have come back down from their minor spike in 1996, and would appear in the out period of this year to be relatively stable. Last week in the *Wall Street Journal*, there was an article talking about the fact that the United States and Germany were both looking at selling some of their oil stocks, government oil stocks, and that demand was increasing at a fairly rapid rate.

Do you feel that this increase in demand—the SPR, I think, is probably not, in and of itself, a sale. A potential sale is not that great, but the increasing demand on an annual basis of two million barrels per day, I think, is what this article says. Is that a problem we ought to be concerned about in the long run, or is capacity there to deal with that?

Mr. GREENSPAN. For the moment what we are observing is production being in excess of consumption worldwide, because the level of inventories worldwide is rising. We had, as you may recall, a year or so ago, exceptionally low inventories and indeed we got down to a level at one point, which was really quite unprecedented and was creating, as they called it then, a "just-in-time" oil inventory system. As a consequence, the spot prices were selling over the forward prices in the futures market.

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That has turned all around and inventories are now accumulating. In part because OPEC is obviously producing over its published quotas, the world level of oil production is in excess of consumption, and inventories are beginning to move up. If you take a look at the United States system, from a very low level of distillate fuel oil inventories, we have risen quite significantly and we have a reasonably good balance now in most of our products and that is true worldwide.

It is true that demand has accelerated in the most recent period, but I would certainly say with the quite impressive changes in technology that we have seen, which has enhanced our ability to draw oil out of older wells and to build much higher levels of output outside of conventional OPEC channels, in my judgment, has not created a situation in which we are looking at the need to increase world supply by bringing down government stockpiles.

Whether or not we choose to do that is a fiscal policy question. I don't see it, myself, as an oil problem.

Mr. BENTSEN. And you don't see—you feel fairly confident with the backup in inventory, at least in the near term, that we should not see any price fluctuation or spike in——

Mr. GREENSPAN. Well, I mean, obviously, there are——

Mr. BENTSEN. Right, other issues notwithstanding.

Mr. GREENSPAN. Sure, obviously.

All I can do is quote to you what the oil experts around the world are continuously saying, namely that the situation is not one in which inventories are being run down and product prices are rising. That is not the case.

Mr. BENTSEN. Thank you, Mr. Chairman.

Chairman CASTLE. Thank you, Mr. Bentsen.

Mr. Jackson, the long- and patiently-waiting Mr. Jackson.

Mr. JACKSON. Thank you, Mr. Chairman, I appreciate it.

Thank you, Chairman Greenspan, for once again spending this time with us.

Mr. Chairman, I have two questions. I want to preface my questions before I read them, by saying that I am not a socialist and I have to associate myself with many of the remarks delivered by Mr. Sanders. I don't think that any of us on this panel are perfect vessels for the transmission of the truth. But each of us, in our own way, is trying as best as we possibly can to represent the people of our districts who consistently send us to this institution. I wouldn't want his concerns—which I think to be very legitimate—to be written off because of the way he ascribes to a particular economic philosophy, no more than I want my questions to be ignored, just because I am the young, new, African-American guy who is sitting down there on the end, who has been waiting all day to have his question answered.

So, Mr. Chairman, with that in mind, we have heard much debate about the importance of the accuracy of the Consumer Price Index, the CPI, yet we have not heard similar calls for accuracy when it comes to calculation of the Nation's unemployment rate. While the official unemployment rate as of this June is about 5 percent—or approximately 7 million people who receive unemployment compensation but hold no job—the actual number of unemployed or underemployed people is closer to 15 to 20 million Ameri-

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cans. These numbers include those who are officially unemployed, persons working part-time jobs who would rather be working full time, underemployed persons who are working full-time jobs for which they are overqualified, those who have never had a job and those who have exhausted their unemployment benefits and have given up looking for a job. The official unemployment figure, widely reported, currently 5 percent, reflects only the officially unemployed category and, even here, the actual number of unemployed people is either not reported or not emphasized. As the work force expands, while the percentage may remain at 5 percent, the actual number of officially unemployed people is growing and, of course, all of the other categories are left out of the public debate.

In an economy where both Government and corporate employers are rewarded for downsizing, outsourcing and even streamlining, there are many Americans who are living on the brink of joining one of these categories. How does the Fed account for these uncounted Americans when calculating the tightness of the labor market for purposes of conducting monetary policy? Should the calculation, rather, be based on figures of a true full-employment economy, circumstances under which every able-bodied person willing to work is employed doing socially useful and necessary work and earning a livable wage?

Mr. Chairman.

Mr. GREENSPAN. Congressman, let me say that as I stipulated before, as I think you may have heard, I know that you were in the room, I disagree with most of what Congressman Sanders believes, but he raises the right questions. And I said previously, that it's important that that dialogue should be enhanced, because unless we continually raise the more fundamental questions which confront the organization of our society, we are subject to stagnation. I may disagree with him, but I applaud his voice in this Congress on the grounds that I think he enhances the level of dialogue. He may escalate the decibels from the Chairman of the Federal Reserve Board, but that is not bad, because these are important subjects.

With respect to the unemployment data, it is certainly the case that the official unemployment rate is 5 percent. Is that 7 million people?

Mr. JACKSON. I believe it is 7 million, Mr. Chairman.

Mr. GREENSPAN. There are an additional 5 million people who are not in the labor force who say they wish to have a job. They are not in the official data, largely because the official measure requires that the individual in the household stipulate that they are unemployed but have sought a job in the previous week. So there are 5 million people who say they want a job, but haven't been seeking one for a number of different reasons.

That number, however, has also gone down. It was, as I recall, 6.4 in early 1994. Indeed, I outline those figures in some detail in the written statement which will be submitted for the record.

So, the overall unemployment rate, no matter how measured, is coming down. But, there is still the issue, which you implicitly raise, that there are a very substantial number of Americans who want a job and don't have one.

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Mr. JACKSON. Would the Chairman comment on part-time workers and those who are overqualified?

Mr. GREENSPAN. Yes, there are two kinds of part-time workers. One, those who do it voluntarily, which I think is not an issue. But those who would like to be employed full time, but are working part time for economic reasons. That number has also been declining. So, while it is certainly the case that there is a substantial number of people who, as you point out, are either officially unemployed, want a job, or have a job and are not working full time as they would like to, that number is not a small number. Nonetheless, it is a lower number than it was 3 or 4 years ago.

On the issue of whether people are underemployed, which is very important, we have very little data on that. I am sure that there are a lot of academics who make estimates of what that is on the basis of matching education and jobs, and one could presumably do that. I don't know what the number is.

Mr. JACKSON. Let me just ask a quick follow-up, Mr. Chairman, and then I do have an additional question. I would like to ask unanimous consent for this additional question.

Mr. Greenspan, I am a little confused then. You indicated the official unemployment rate is 5 percent, or about 7 million people, and I gather that is the calculation that the Fed actually uses in making some of its determinations. But now you are also indicating that there are other numbers about the employed, or the underemployed or the overqualified, that exist.

I am wondering, are they ever factored into the calculation in making a determination about the well-being of the economy, or are they just other numbers that are unofficial and you, kind of, never get around to them?

Mr. GREENSPAN. No, indeed, when you finally get a chance to get the detailed report, which you just received at 2:00, you are going to find that what we did, in fact, do, is to take the total working age population—16 to 64—and try to segregate the proportion of newly-employed into whether they were part of the growth in that working age population, or whether people went to being employed either from being unemployed, as defined in the official data, which a lot did, or from the second category. That is the group of 5 million people who are not in the labor force, but wanted a job. Because that number came down from 6.4 to 5 million. It meant that in 3 years, a million-and-a-half of those people, in net, went from that category to employment.

So, indeed, the issue is not only to evaluate the official unemployment rate, but also to look at what is happening to those who are not in the labor force. Unless we do that, I don't think we can get a good sense of what the state of the labor supply is.

Mr. JACKSON. I appreciate that, Mr. Chairman.

I ask the Chairman's indulgence for one quick question.

Traditionally in its stated policy, the Fed has been concerned about economic climates in which rising growth and falling unemployment coincide, that these factors pose somehow an inflationary threat. Yet, we are now clearly experiencing rapid growth and rising incomes for some sectors of our population while concurrently experiencing declining inflation and stagnant wages, obviously, for the least well-off and least well-educated.

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I am interested in how you explain this new relationship between economic growth and inflation, in light of the fact that part of the population is doing well, but there may be segments that are stagnant?

Mr. GREENSPAN. That is the key question which is confronting all economists. Because, as you will hear in tomorrow's hearing, there are going to be a number of people who are very puzzled by this phenomenon and, indeed, it is certainly not unprecedented, but it is very unusual for this to occur and it is one of the major issues which we at the Federal Reserve are trying to resolve so that we can adapt our policy to a world that encompasses that particular phenomenon.

Mr. JACKSON. Thank you.

Chairman CASTLE. Thank you, Mr. Jackson.

I think we are going to be getting to votes here in just a very few minutes.

I have one very brief follow-up question. If other Members want to ask, what you can do—you have had a long day and if testifying was a long-distance race, you would be a winner for sure.

Mr. FRANK. There is no rule that questions have to be put in the same quarter in which the statement was made.

Chairman CASTLE. Let me just ask this question and let me, perhaps, preface it by saying that I am a cosponsor and active advocate for something we are going to be considering tomorrow called budget enforcement legislation. You already answered questions about the need to balance the budget. But my question, I will try to put it in a more general sense.

That is, would you agree that there is a need for a mechanism—or at least would it be helpful to have a mechanism in the Budget Reconciliation Act, which is the Balanced Budget Agreement—to require action if spending targets are not met in future years? Conceptually, the concept of some sort of a budget enforcement act?

Mr. GREENSPAN. I used to be very skeptical about those types of devices but, in retrospect, the spending caps have worked remarkably well, surprisingly well. Hence, I would say some form of enforcement mechanism—which I would have said 10 years ago, was worthless and would not work—I am now more congenial toward that sort of mechanism. I do think that when you are dealing with the type of budgetary structure that we have, the caps serve a very useful purpose in containing the level of expenditures to the level of receipts or whatever balance the Congress decides. Without it, I think it is rather difficult.

Remember, the reason why these mechanisms came into place in the first place is—certainly before the Budget Act of 1974—Congress really appropriated and then what you ended up with was added up, and that was the budget. Whether it was balanced or whether it wasn't balanced was an act of fate.

Chairman CASTLE. Thank you, Mr. Chairman, I hope to quote you extensively in the next 24 hours.

Mr. Frank, do you have a follow-up question?

Mr. FRANK. Yes. First, I do want to make a statement regarding the gentleman from Alabama's references to our colleague from Vermont. It certainly should be clear that when he was referring to the failure of socialism, I should be very clear. What happened

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in the Soviet Bloc is, of course, completely irrelevant to anything Mr. Sanders has ever stood for. I just want to make it very clear that when we talk about Mr. Sanders' "socialism", we would be referring to the model of Sweden, say, and I think we should be very careful and make it clear that there was no suggestion that he was, in any way, a fan of, or associated with, the failure of communism. I will yield to my friend if he wants me to yield.

Mr. BACHUS. And I was not saying that he did. And I was also——

Mr. FRANK. I understand. I just want to make it clear.

Mr. BACHUS. I just——

Mr. FRANK. I take back my time.

I just want to—it wasn't clear. There were just references to the failure of socialism in general, and I just thought that ought to be clear.

Now, I just want to return to where we ended, Mr. Greenspan, because—yes, I agree, skepticism is a very important philosophical position. My point is this. You and even more other members—and that's why I am glad we are going to have a chance tomorrow to talk to Mr. Meyer, who says he still believes in a nonaccelerating inflation rate of unemployment, Mr. McDonough from the New York Fed and some others.

I think there is an inequality—an intellectual inequality here—and that people are more inclined to believe the bad news than the good news. And there is a difference between openness and skepticism.

Let me read a sentence from your statement on page 15: "As I indicated, demand growth does appear to have moderated, but whether that moderation will be sufficient to avoid putting additional pressure on resources is an open question." I accept that.

But, if you had said, "But I am skeptical as to whether that moderation will be sufficient to avoid putting additional pressure on resources," I think you would agree that would have a different meaning. No one is more careful about nuance than you.

What I am saying is, I believe the general thrust is skepticism when openness is more appropriate. And let me say, then I will have you respond, I think my evidence for it is this: you and many others were unduly pessimistic in the past. You have acknowledged that. You were unduly pessimistic and, indeed, this is what bothers me, and let me formulate this exactly. As I read your statement, I see no evidence for the skepticism, and I suppose skepticism, by its nature, doesn't call for evidence. If you had evidence, you would be more than skeptical.

But here is the problem. The mind-set that led to undue pessimism over the last couple of years, appears to be all that you've got to talk in the future about: "Well, gee, we are going to have to do something in 1998." I would ask you to comment to that, but just make one specific question.

Other than your skepticism that the good news could really be as good as it has been, is there any evidence that we are likely to need any kind of a rate increase to stave off excessive inflation in 1998, or is it just—and this is what I hope it is not—is it just the sense this is just going too well and there is too much employment and the economy is going too well and therefore we think that a

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year from now it may be inflationary, and we have to do something? What I see in your statement is that is the basis for talking about future need to tighten, rather than any specific evidence.

Mr. GREENSPAN. It is really, in a sense, neither. This particular testimony is my attempt—and my colleagues' attempt—to try to explain, as best we can, what we think is going on in the economy, and how it interfaces with monetary policy. Remember that when we make decisions, there is very little lead time necessary, because all we have to do is get together as a group and legally make changes in the Federal funds rate, or the discount rate, or the instruments that have been given to us by law.

What we try to do is to deal with a complex situation which is very clearly changing, in the sense that things are happening today which don't follow the normal experience of the last 10 or 15 years, and which raise a flag, in that the models that one has been working with clearly are not producing the results which the real world is producing. Something is wrong, obviously it is not the real world.

The problem that you have to ask yourself though, is how much of the changes that you are looking at are so fundamental that those older models are completely worthless, or are you dealing with either minor or, say, moderately significant changes? And all I am saying to you, and I hope it is conveyed in this testimony, is that while there is no question that something different is happening, you cannot basically say that "because something different is happening, therefore all history is irrelevant." Obviously, one wouldn't want to say that. So that the question is, "What is the appropriate balance, in one's judgment, as to what are the forces currently driving the economy," and, therefore, how we, as central bankers, interface with those forces?

There are differences within the FOMC, as there always are differences in any committee. There are no differences with respect to the ultimate goal of monetary policy. There are no differences, as far as I can judge, in the general belief that low inflation or stable prices significantly contribute to, and are a necessary condition for long-term economic growth. There are differences in the committee on evaluating what is currently happening and how much of the historic model is still functioning and is not functioning. That is what the debate is currently about.

Mr. FRANK. I appreciate that. And I have only one last sentence. And here, for once, I think lawyers may have something to tell economists. They usually don't.

I agree that is the appropriate question. I just hope that you will decide it by a preponderance of the evidence, and not say that the good news has to prove itself beyond a reasonable doubt.

Mr. GREENSPAN. I couldn't agree with you more. It is not a good news/bad news; it is a preponderance of the evidence and the facts which I hope determine what we do. I can certainly tell you that is our purpose.

Chairman CASTLE. Dr. Paul.

Dr. PAUL. Thank you, Mr. Chairman.

Earlier on, several Members on that side made the point that ordinary people and poor people are having a tough time, and I think they are correct about this. I don't, of course, agree with some of the solutions they might propose, but I do not believe for a minute

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that adjustments, or an explanation of the CPI or price deflator will satisfy these people. There are a lot of people out there suffering. I think it is very real.

I think what we must remember is that the standard of living for many of these people has gone down in the period of time since we closed down the last monetary system in 1971. Fiat money—by its very nature, a characteristic of fiat money is that the middle class eventually gets wiped out if you have runaway inflation. If you have insidious inflation, you will have the poor people nibbled away with. The early users of credit benefit, the late users have difficulty. So, the people who borrow, the bankers, the big business and governments are going to have advantages that the little guy won't have. So, I really agree with the concerns that they express and I think that we should continue to think about this and try to solve that problem.

I have a specific question dealing with central bank purchases of U.S. debt. On June 23, Hashimoto, Prime Minister of Japan, made a comment that made the news and stirred up the markets for approximately 24 hours and then it passed. He threatened, of course, that he would sell Treasury bills if we didn't fix the dollar/yen ratio to something more to his liking. But even before that statement, I noticed that there has been a significant change in what central banks have been doing.

Up until approximately 3 months ago, central banks have been accumulating our debt at sometimes up to a rate of 20 percent annualized rate and yet, in the last 3 months, we have seen a change where it has gone to a point where it is decreasing. Not only are they not buying as many, they have actually unloaded some of this debt. It may be way too early to tell, but it could be a trend.

At the same time the foreign central banks were holding a lot less of our debt, the Federal Reserve, our Federal Reserve, has increased its purchase and Federal Reserve credit has subsequently gone up 10 to 11 percent in that same period.

So my question is, how serious is this? Is this a major part to your policy, and what happens if, in the next year, the foreign central banks don't dump just $10 or $15 billion, or $20 billion, what if they dump a whole $100 billion? What kind of pressure does this put on you and what kind of pressure does it put on the interest rates, and do they—or could they—hold us hostage?

Mr. GREENSPAN. Let me just respond to the general question. If central banks decided to sell U.S. Treasury debt, somebody else is obviously buying it. So really, what it is, is a swap in which the central bank switches out of government debt into other securities and some other party is doing the opposite. So, somebody will be holding our debt. The question really is, would it significantly affect the price of the debt in the process of that exchange? In other words, would long-term interest rates in the United States go up as a consequence?

It is conceivable in a very short-term sense that, for technical reasons, if you try to sell a lot of U.S. Treasury debt, the price of the bonds would go down and the interest rate would go up in part. But, over the longer run—and that is probably a more modest shorter run, as you pointed out earlier Congressman—the deter-

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mination of the level of interest rates is essentially the real interest rate plus the inflation premium. Ultimately, that is what will prevail. The mere sale of the U.S. Treasury debt would not, in and of itself, alter either the inflation premium or the real interest rate. So that, over the longer run, that should not have a significant effect.

Dr. PAUL. OK. My concern, though, is what if there were not enough other parties to buy? It seems that the pressure would be put on you to buy, and it looks like you may have already done this, because what you have done in the last 3 months is more active than you did in the previous 3 months. The net sales on foreign central bank holdings have certainly changed. There has been a definite change in the last 3 months.

Mr. GREENSPAN. No, our policy has been directed strictly at the issue of maintaining a portfolio which is consistent with our announced Federal funds rate. So what we do is we equilibrate the system of Federal funds, the supply and demand within the banking system, and adjust our portfolio in a manner to maintain something close—relatively close—to that rate.

Our open market operations are not related to this particular phenomenon but net, effectively, directed toward the Federal funds rate target.

Chairman CASTLE. Dr. Paul. I would like to let the others ask questions, if you will. And we are going to be voting shortly. I am afraid we won't get a chance if we don't go on the others.

Mrs. Maloney.

Mrs. MALONEY. Thank you.

Following up, really, on Barnie Frank's question, could you share with us what you and your colleagues look at, specifics, in determining if inflation is taking place? And second, following up on Mr. Castle's question on public policy, another public policy debate that we are having in this Congress is whether or not we should invest Social Security monies in the market and do you have any feelings on that particular issue?

Mr. GREENSPAN. I made a speech in Philadelphia about 9 months ago, or something like that, in which I addressed this particular issue and, rather than go into the details, may I just send you a copy?

Mrs. MALONEY. I would love a copy of the speech, but I would like to know the specifics that you look at in determining inflation.

Mr. GREENSPAN. At the moment, we try to look at the whole economy. Many years ago when our money supply targets were really working, in the sense that we could look at M2 as a proxy for the whole system, we didn't have to look at huge numbers of things, even though we did, just to be sure that M2 was working.

Now that money supply has not been giving the type of signal that it used to, indeed it broke down in the early 1990's and, as I say in my prepared remarks, there is some evidence that it may be coming back, but until that happens, we are forced to look at the total system.

We watch virtually all of the aspects of the economy with respect to the domestic production system, consumption, all of the financial variables and, indeed, to the extent that it affects us directly, what is going on in the international financial markets as well.

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I can't give you a simple list because, frankly, it changes from one period to the next depending on which set of forces we believe are the key factors driving the economy and the financial system.

Mrs. MALONEY. Could you give us the key factors now that are driving, in your opinion, since this is constantly shifting?

Mr. GREENSPAN. Sure. I tried to develop that in the prepared remarks in which I say how this particular economy is, say, different from where it was in 1991, when we couldn't get banks to lend. Remember those headwinds and the credit problems we had? That was a different sort of phenomenon and we couldn't have cared less, at that particular point, about the issue of whether or not capacity was being strained—or even reached—because we weren't even close.

Today, it is a wholly different sort of phenomenon and so our general focus is not on the same issues we looked at 5 or 6 years ago, but mainly on issues of evidences of strain in the system. So we look at questions of factory overtime, lead times in the deliveries of materials, issues of shortages, pressures in commodity markets or in other markets, anything which is indicative of strain in the system. Because history tells us when the economy is under strain, inflationary imbalances surface and inevitably the distortions undermine economic growth. It is those types of things which we are fearful will prematurely end this extraordinary business expansion which we have been experiencing.

Chairman CASTLE. Thank you.

Mr. Bachus.

Mr. BACHUS. Thank you.

When you discussed inequities of incomes and stagnant wages, and I think it has been suggested that the Federal Reserve policy has at least contributed to some of these by some of my colleagues, I would like to submit to you and to the Members of the subcommittee that remain, that the largest—at least large, and I think the largest—group of such working poor, when you describe people with low, stagnant wages, long hours, often away from home, under dangerous circumstances, is actually the U.S. military, which this Congress, and not the Federal Reserve, could best address.

Mr. GREENSPAN. Well, I am surprised you say that, Congressman, because in an earlier incarnation, I was a member of the Commission on the All-Volunteer Army and my recollection is that the deliberations of that Commission addressed these particular types of issues and tried to create a standard of living for the military which would create sufficient incentives to attract people with skills to run a modern armed force. I can't say that I have kept up with it to the extent that I would have liked, but I am somewhat distressed to hear these problems reemerge, because, clearly, it is not to the advantage of the country as a whole.

Mr. BACHUS. Thank you. I appreciate you saying that. And I say that out of tremendous respect and admiration for our service men, as you do, both of us having served.

But, I think when we do express our concern over wage stagnation and living conditions, that is a large group that we could focus on. Thank you.

Chairman CASTLE. Thank you, Mr. Bachus.

Mr. Jackson.

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Mr. JACKSON. Mr. Chairman, I just have one follow-up question really to follow up to my first question.

I am really interested in what the policy implications would be if the unemployment rate reflected a truer number, including the categories that you mentioned yourself?

Mr. GREENSPAN. It shouldn't change at all, Congressman. The reason, I hope, is that merely altering the categories doesn't change reality and reality is what it is. And I would hope that we look at the data that exist, operate according to what we think it is suggesting about the nature of reality and how the particular numbers are defined and what the unemployment rate officially is really shouldn't be a consideration——

Mr. JACKSON. So, Mr. Greenspan, then I am to understand that if the number, for example, including the part-time workers—or those who have given up looking for work—were not at 5 percent, but were roughly around 9 percent, and that was the reality, that it wouldn't trigger Fed action in terms of trying to expand the economy to increase employment opportunities for the increased number?

Mr. GREENSPAN. The answer is it shouldn't. And the reason I say that, is that in the past we used to have all sorts of different measures of unemployment or shortfalls of employment, and endeavored to see whether they altered the output of our various models. The answer is, there is no evidence that it does.

Mr. JACKSON. Mr. Chairman, then it is possible, sir, respectfully, to have 9 percent unemployment and still be doing well under the economic models?

Mr. GREENSPAN. We will be doing better than we were. The question of "well" always implies some form of standard and the question of the standard is something which reflects history.

So, we say now with the official unemployment rate under 5 percent, that is the lowest rate that we have seen in that figure for a quarter of a century and, in that context, by that limited standard, we say we are doing well. My suspicion is, although I haven't looked at the numbers directly, that if we looked at the broadest measure of unemployment, it too, would be lower than at any time in the last 25 years. And by that standard, we would be doing well.

Whether we are doing well enough is a different question. That really rests on an issue as to whether we could take, for example, the 9 percent unemployment rate, which would include those outside of the labor force, and say, "is there a way in which we can significantly reduce that?"

Now, I would suggest we should not be asking that question whether or not the measured official unemployment rate is 5 percent or 9 percent. In other words, the data should not affect what policy is doing and it clearly doesn't reflect reality.

Mr. JACKSON. Thank you, Mr. Chairman.

Thank you, Mr. Chairman.

Chairman CASTLE. Thank you, Mr. Jackson. We appreciate it.

We have come now to the time to close this. I have been informed—I don't know what happened to wage rates or unemployment today—but the stock market was up 155 points. My recollection is last time you were here, it was up a substantial amount too.

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You ran over to the Senate, when you went to the Senate before, it went down a little bit.

Mr. Frank suggested maybe we should have a hearing every day here, but I don't know if you would be ready for that.

We do appreciate you taking a lot of time to answer a lot of very diverse questions, and hopefully the formulation of all these questions and the answers will help all of us in developing policy.

Mr. GREENSPAN. Well, frankly, let me just say thanks to Congressman Frank, and if Congressman Sanders were here, I would thank him too. This has been, frankly, the most challenging hearing I have been at in quite a long time and I found it most interesting. I hope they have.

Chairman CASTLE. It has been the most challenging hearing I have attended in quite a long time also.

Thank you very much, Mr. Chairman. We do appreciate it.

[Whereupon, at 5:48 p.m., the hearing was adjourned.]

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APPENDIX

July 22, 1997

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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,
2:00 p.m., July 22, 1997
Room 2128 Rayburn House Office Building

Chairman Michael N. Castle's Opening Remarks:

The Subcommittee will come to order.

The Subcommittee meets today, to 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, welcome back to the House Committee on Banking and Financial Services, Subcommittee on Domestic and International Monetary Policy. I wish that I could promise that no one will utter the words "irrational" or "exuberance" in any combination, but I am afraid that is not possible. I guess a better question is "is this permanent exuberance?"

Mr. Chairman, I know that you are a student of the classics as well as business cycles and thus are familiar with the Roman Imperial practice of awarding triumphs to conquering leaders. They were driven through cheering crowds in a gilded chariot with a laurel wreath held above their head. However the guy holding the laurel wreath was required to repeat in the conqueror's ear, "remember, you are only human." Today you may get a well deserved triumphal tour of the Subcommittee, but you will also receive whispers or shouts in your ear about what the Fed should or should not be doing.

Most of the mandates in the Humphrey Hawkins Act have been ignored over the years. Now with the US economy nearing its 80th month of sustained growth and with the inflation rate still declining, this might be an occasion to revisit some of these goals. The Act established interim numerical goals of 4 percent unemployment and 3 percent inflation by 1983 and zero inflation by 1988. While these goals were to apply primarily to the Administration of the day, the Fed was required to report on how the pursuit of its long term goals of promoting maximum employment, stable prices and moderate long-term interest rates would affect the achievement of the Federal Government's broader goals. Customary wisdom among economists has been that full employment equaled an unemployment rate considerably in excess of the 4% dictated in the 1978 legislation. Now that level almost seems to be an achievable goal. We will look to you today and to your colleagues and critics tomorrow to explain to us if fundamental assumptions about the U.S. economy have been altered. Are we in a New Economy that can sustain continued growth without reigniting inflation? Should the Federal Reserve worry less about inflation and focus more on allowing more growth to create additional jobs for Americans? Those are some questions I hope you will address in your testimony.

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I believe that this Congress acted responsibly in seeking a balanced budget; and that responsible fiscal policy must go hand in hand with monetary policy to support long-term economic growth. The marketplace first had to believe that the Federal Government was serious about balancing the budget before it could accept the possibility of arriving at this outcome as a factor in future planning. Now, the health of the economy has so increased revenues that a balanced budget is beginning to be taken for granted. I think this is unwise and would like your comments on it.

As long as the economy continues to be healthy with inflation in check, Federal Reserve policies will receive support and your stature will continue to grow. We briefly considered simply giving you a standing ovation and adjourning the hearing, but instead we have scheduled a second day of hearings here tomorrow in the full committee. There we will hear from supporters of current monetary policy, as well as critics who believe the Federal Reserve should concentrate more on other aspects of economic growth and less on worrying about signs of inflation.

The relative value of the dollar seems to reflect the leading position of our economy with regard to both Europe and the Far East. As integration of economies continues in the direction of a unitary world marketplace the leverage exerted by the Federal Reserve System grows accordingly. I am concerned that the Board of Governors will continue to have access to the tools necessary to exert adequate influence for the successful conduct of monetary policy.

This subcommittee is still planning to hold oversight hearings, following the August recess, to review the role of the central bank as a competitor with the private sector for certain banking support services. We also plan to review Fed preparation for the transition to electronic forms of money. We look forward to hearing how the Fed is planning for the way new technology will affect systemic security, safety, soundness, consumer privacy as well as the future conduct of monetary policy. In this future hearing, or series of hearings, we can examine the various ways that the approaching digital revolution in money will affect the operations of the Federal Reserve System. I am increasingly persuaded that dramatic change in how we define and employ money may soon be upon us. This in turn, must affect the payment system and institutions charged with its stewardship. Thus, we have continued our series of hearings into the Future of Money with our recent inquiry into electronic authentication.

In the meantime, since the economy seems to have been running ahead of what would be indicated by traditional models, we would welcome any comments you could make about adjustments being incorporated into your model.

As always, we are delighted to have you with us and look forward to a lively discussion.

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Committee on Banking and Financial Services
(Subcommittee on Domestic
and International/Monetary Policy)

Background Materials

July 18, 1997

Gail Makinen
Specialist in Economic Policy
and
Thomas Woodward
Specialist in Macroeconomics
Economics Division

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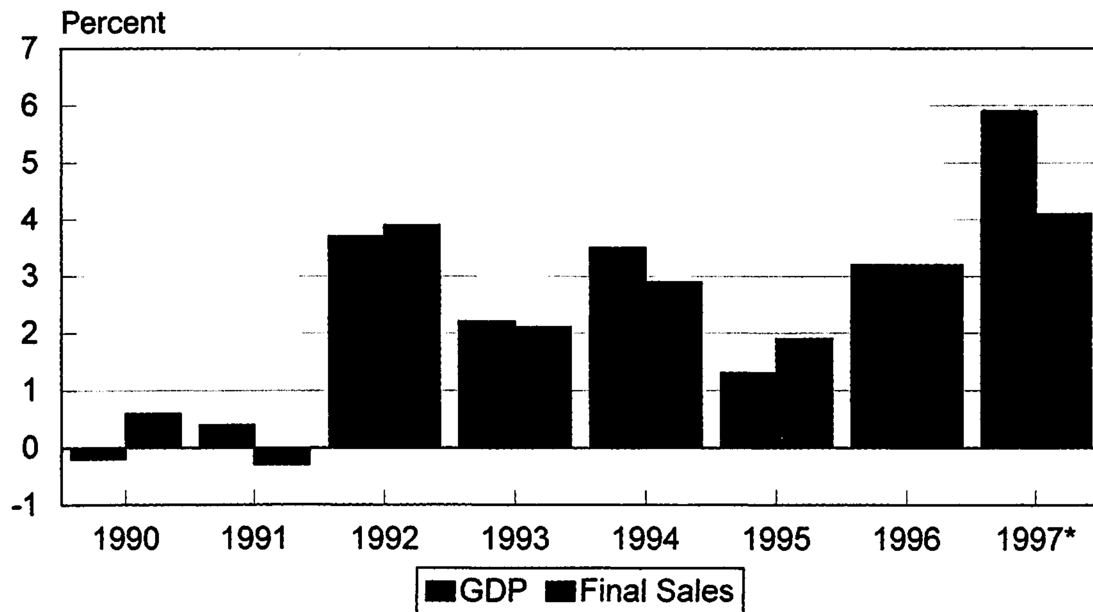

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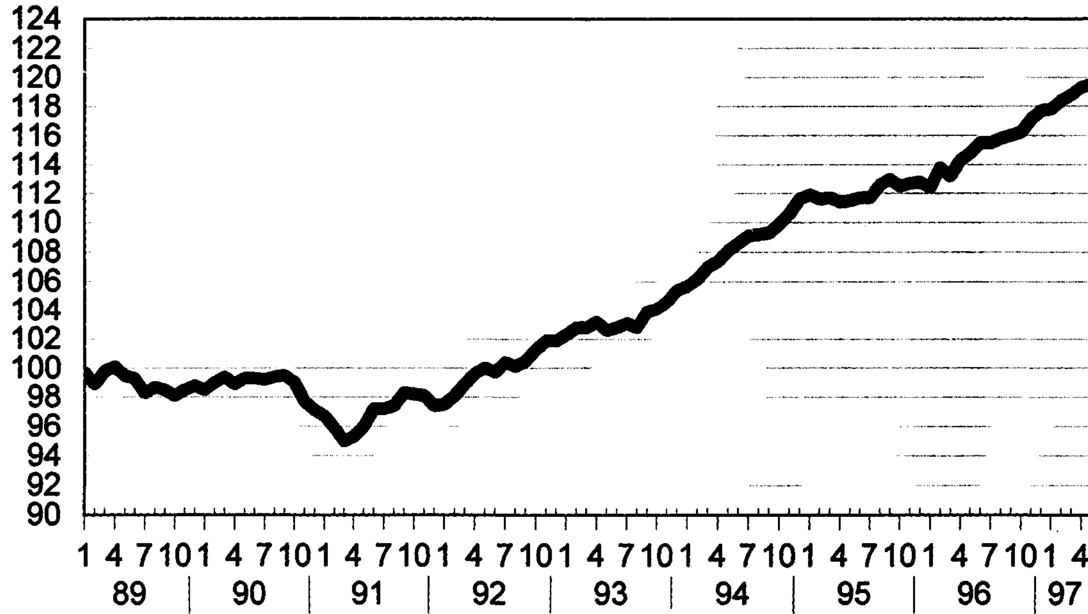
Industrial Production Index

1992 =100



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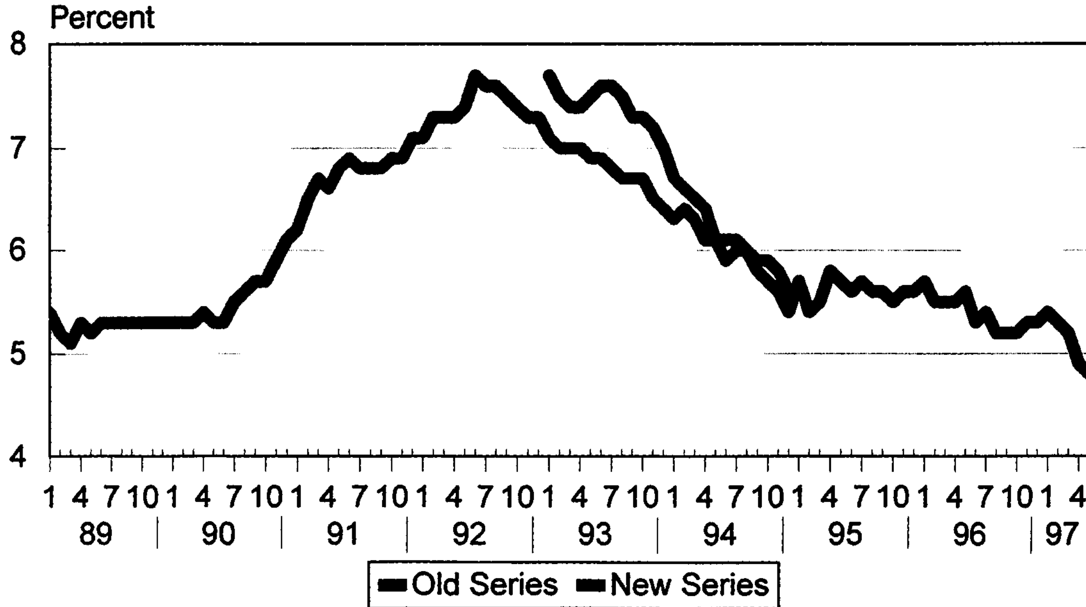
Civilian Unemployment Rate



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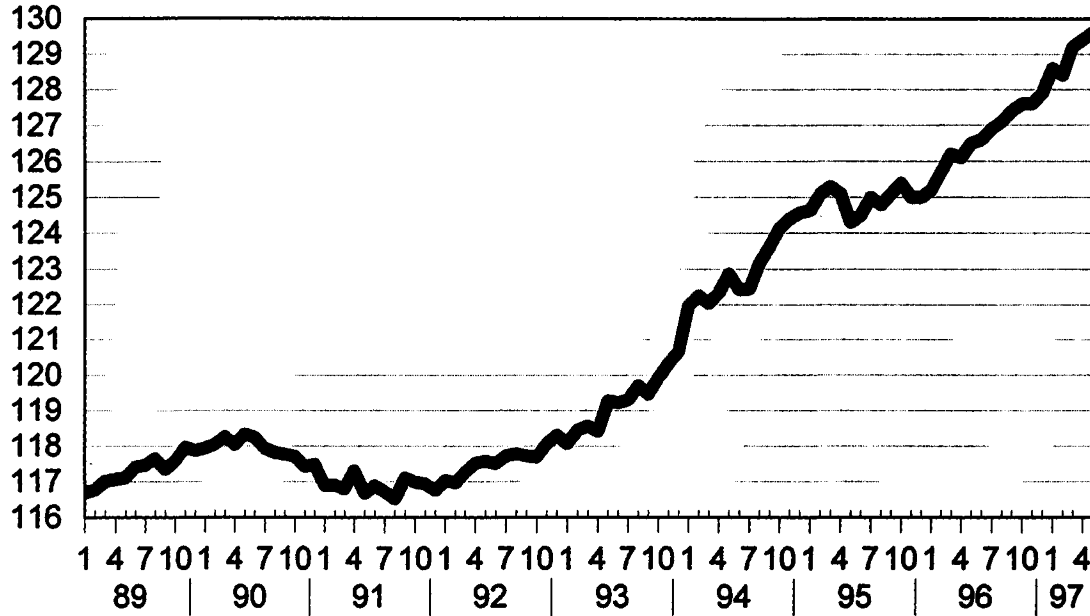
Civilian Employment

(data in millions)



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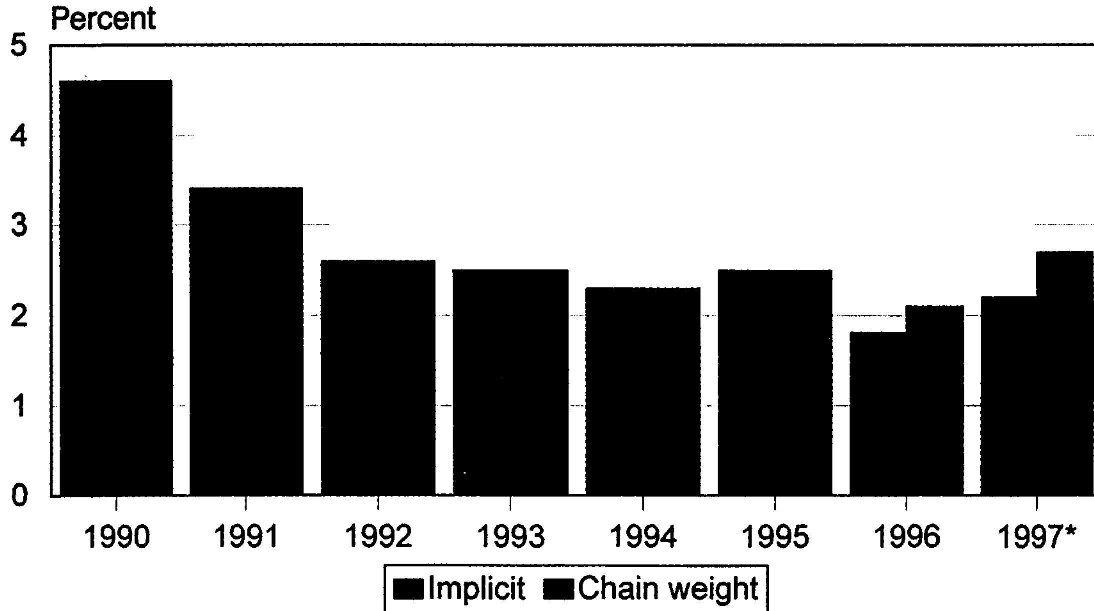
GDP Deflators

(Rate of Increase)



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*Annualized first quarter rate.

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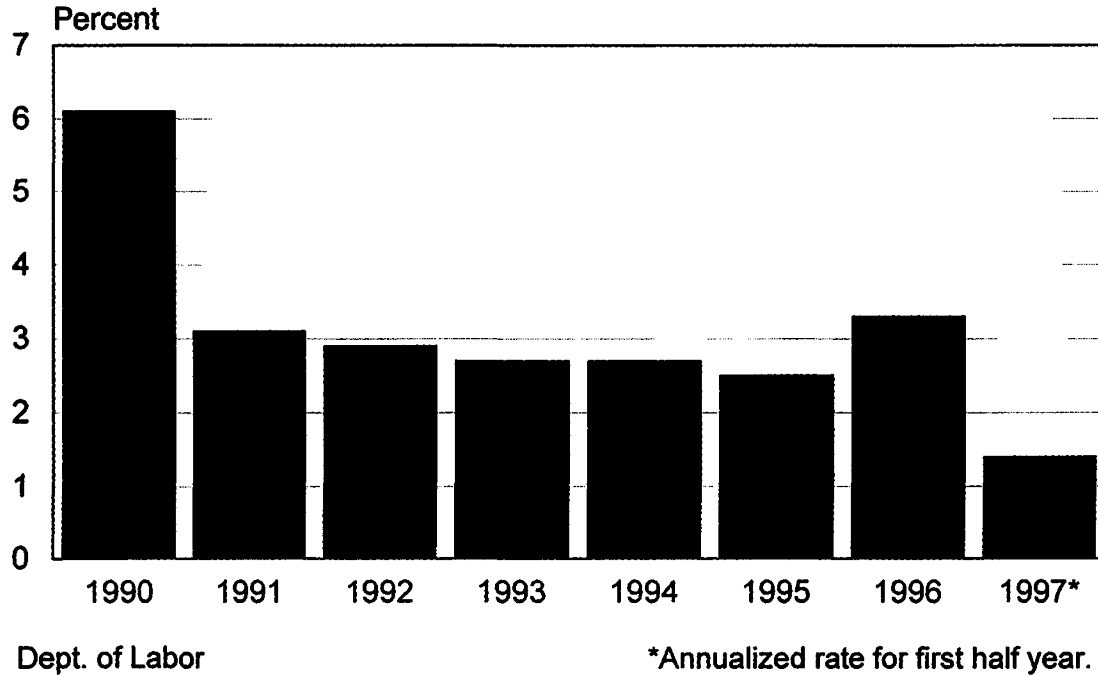

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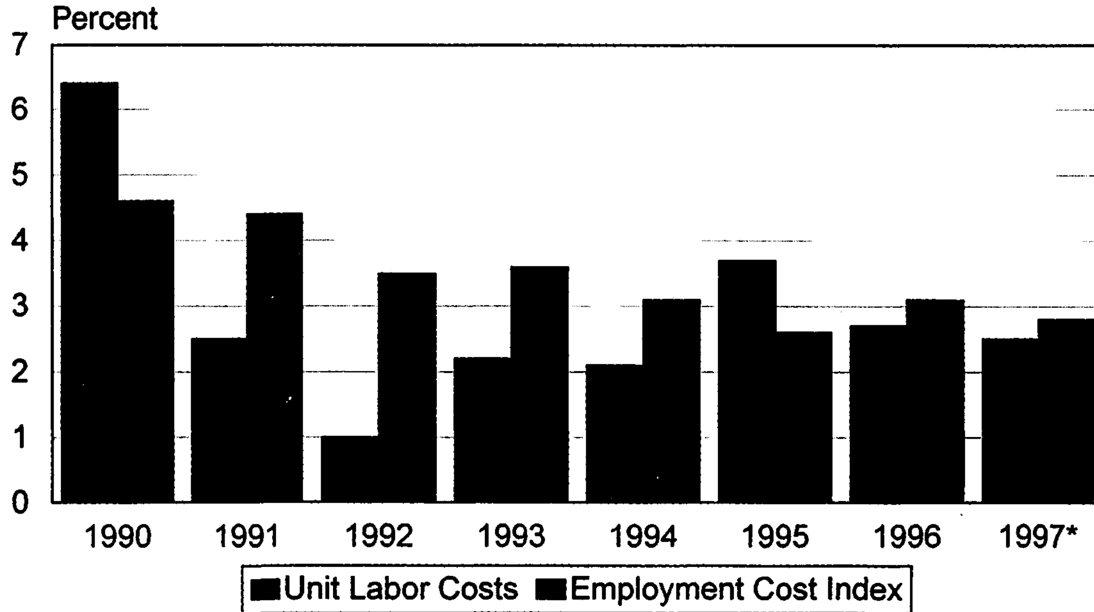
Labor Costs

(Rate of Increase)



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*Employment Cost Index for 12-months ended in March.
Unit Labor Costs at annualized rate for first quarter.

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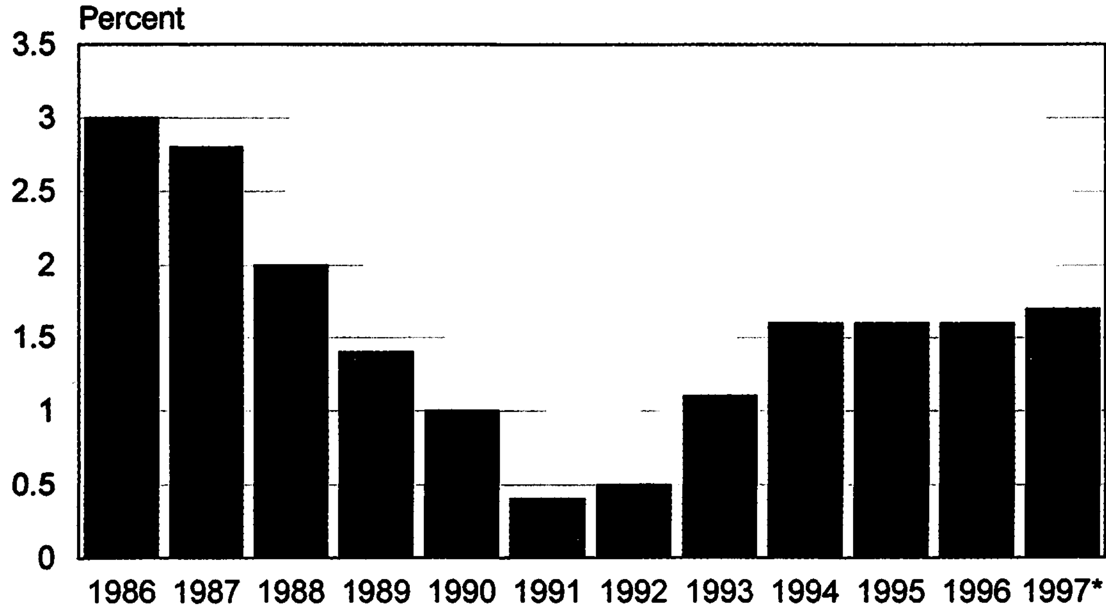
U.S. Foreign Trade Deficit

(Percent of GDP)



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*Based on first quarter data.

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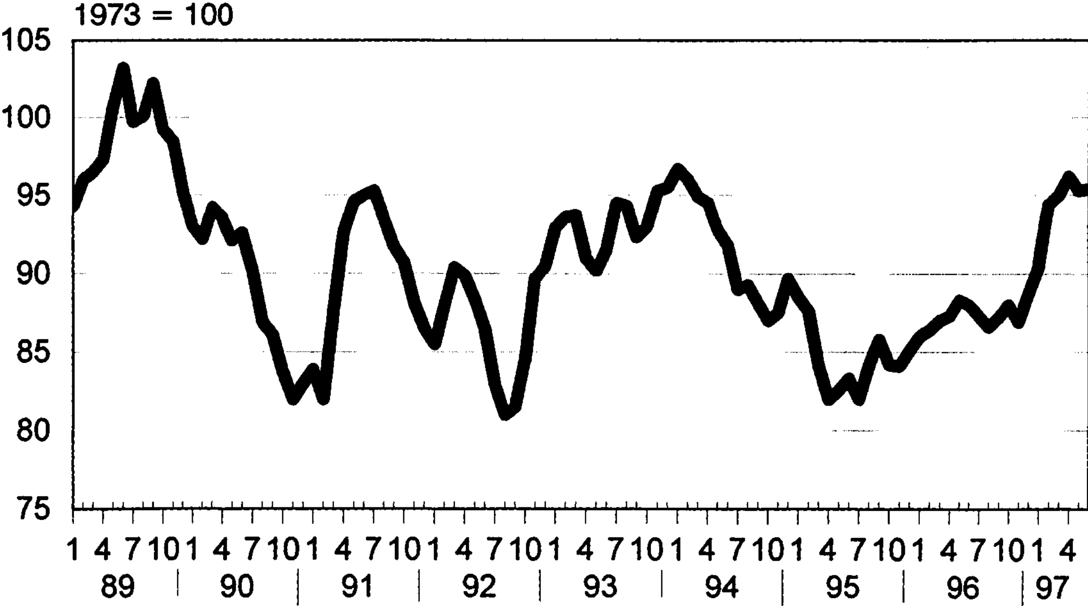
Dollar Exchange Rate



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Monetary Aggregates
(Rate of Growth)

Period	Aggregate Reserves	Monetary Base	M1	M2	M3
91:12 - 92:12	19.5	10.6	14.1	1.7	0.1
92:12 - 93:12	11.4	10.0	10.1	1.5	0.9
93:12 - 94:12	-2.1	8.4	1.7	0.9	1.4
94:12 - 95:12	-5.1	3.9	-2.2	4.6	6.1
95:12 - 96:12	-11.0	4.2	-4.3	4.9	7.4
96:06 - 97:06	-12.9	5.0	-4.6	4.7	7.1
96:12 - 97:06	-11.5	4.0	-3.2	4.4	6.7
97:03 - 97:06	-9.7	3.5	-4.2	3.5	5.5

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Growth in Major Components of M2

(data in percentage)

Period	Curr.	Dmd. Dep.	Other Chek.Dep.	Nontrans. Component
90:12 - 91:12	8.3	4.4	13.2	1.2
91:12 - 92:12	9.4	17.1	15.7	-2.9
92:12 - 93:12	10.0	13.3	7.6	-1.9
93:12 - 94:12	10.1	-0.5	-2.8	0.5
94:12 - 95:12	5.2	1.9	-12.4	7.4
95:12 - 96:12	6.0	2.9	-22.9	8.9
96:06 - 97:06	7.3	-3.2	-20.8	8.6
96:12 - 97:06	6.4	-2.5	-16.8	7.4
97:03 - 97:06	5.4	-5.4	-15.7	6.6

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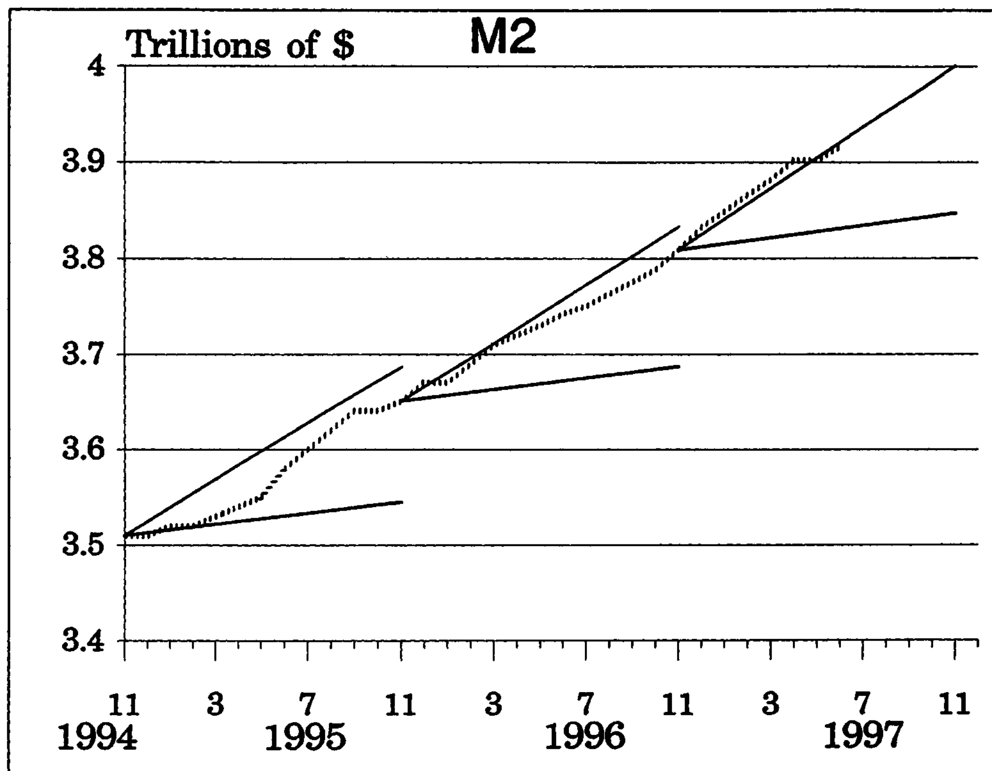

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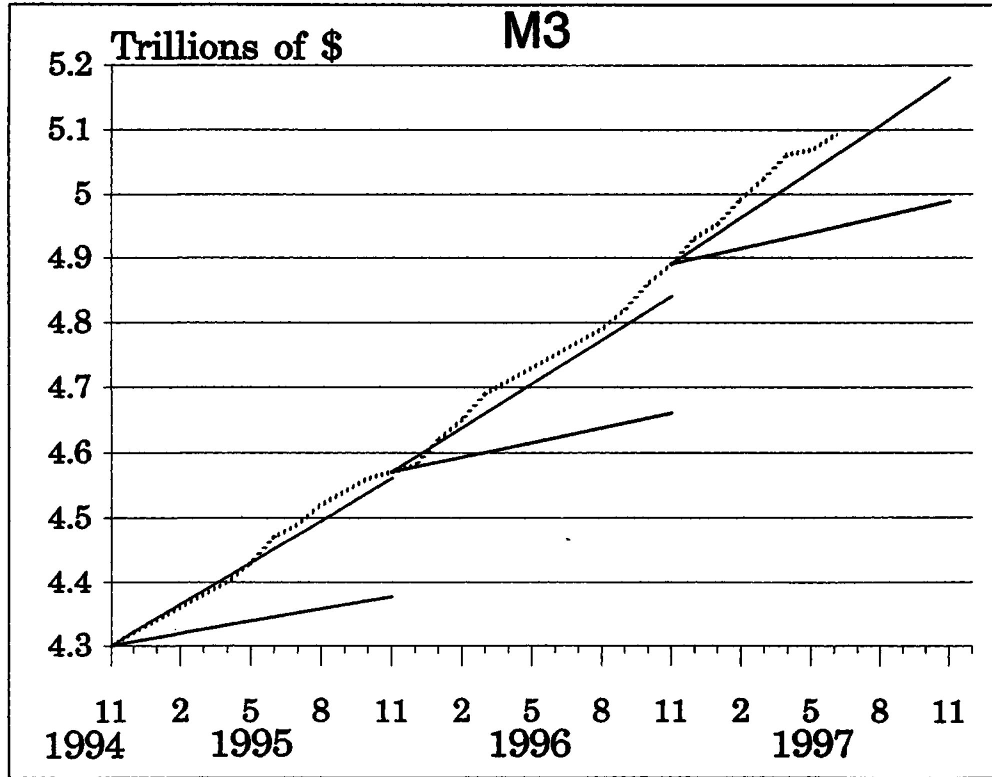

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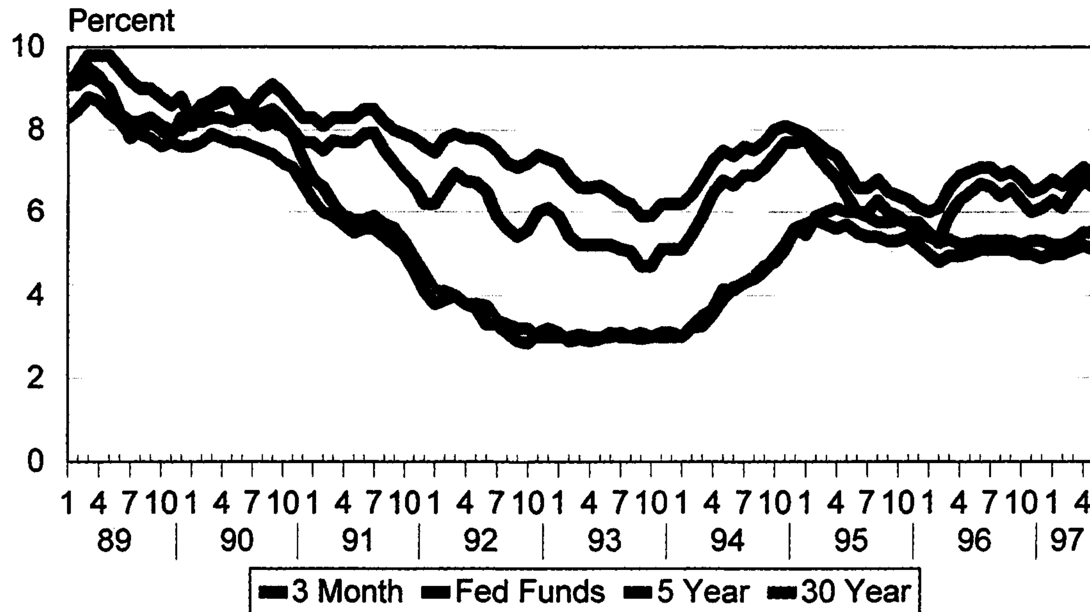
Yield on Selected Treasury Securities



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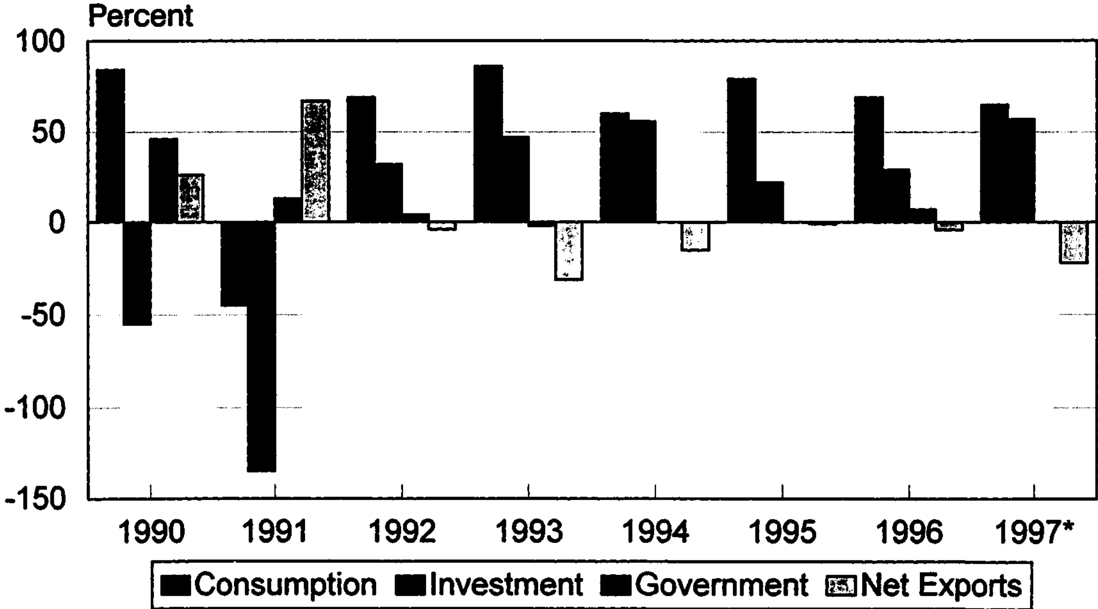
Sources of GDP Growth



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*Based on first quarter data.

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Economic Forecasts, 1997-1998

(data in percent)

	1996		1997						
	3*	4*	1*	2	3	4	96*	97	98
REAL GDP									
OMB							3.1	2.0	2.0
CBO							3.1	2.1	2.1
DRI	2.1	3.8	5.9	2.0	2.3	2.6	3.1	3.2	2.1
WEFA	2.1	3.8	5.9	1.6	2.6	2.5	3.1	3.2	2.3
BC	2.1	3.8	5.9	2.1	2.6	2.2	3.1	3.2	2.1
UNEMPLOYMENT									
OMB							5.3	5.4	5.6
CBO							5.3	5.4	5.7
DRI	5.2	5.3	5.3	4.9	5.0	5.0	5.3	5.0	5.1
WEFA	5.2	5.3	5.3	4.9	5.0	5.1	5.3	5.1	5.1
BC	5.2	5.3	5.3	4.9	5.0	5.0	5.3	5.0	5.3

* Actual data.

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Economic Forecasts, 1997-1998

(data in percent)

	1996*	1997	1998
GDP DEFLATOR			
OMB	2.1	2.5	2.6
CBO	2.1	2.4	2.6
DRI	2.1	2.2	2.2
WEFA	2.1	2.2	2.5
BC	2.1	2.3	2.5
CPI			
OMB	3.3	2.6	2.7
CBO	3.3	2.9	3.0
DRI	3.3	2.2	2.7
WEFA	3.3	2.4	3.0
BC	3.3	2.3	3.0

* Actual data.

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Economic Forecasts, 1997-1998

(data in percent)

	1996*	1997	1998
TREASURY BILL RATE			
OMB	5.0	5.0	4.7
CBO	5.0	5.0	5.0
DRI	5.0	5.2	5.4
WEFA	5.0	5.2	5.8
BC	5.0	5.2	5.4
10-YEAR RATE			
OMB	6.4	6.1	5.9
CBO	6.4	6.2	6.1
DRI	6.4	6.6	6.5
WEFA	6.4	6.7	7.0
BC	6.4	6.7	6.6

* Actual data.

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CRS Report for Congress

Current Economic Conditions and Selected Forecasts

Updated July 16, 1997

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Congressional Research Service • The Library of Congress

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CONTENTS

Current Economic Conditions 1

Recent Macroeconomic Developments 2

Posture of Monetary and Fiscal Policy . . . 6

Summary of Current Developments . . . 8

Sources of GDP Growth 9

Economic Forecasts, 1997-1998 9

Promotion of Economic Growth . . . 12

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Current Economic Conditions and Selected Forecasts

Current Economic Conditions

In March 1997, the American economy completed its 72nd month of expansion according to the National Bureau of Economic Research, the nonprofit, nonpartisan organization that dates the phases of the business cycle for the United States. The length of the current expansion is above average. The nine completed expansions since the end of World War II have averaged 50 months. This average is dominated by two long expansions: one ran for 106 months and dominated the decade of the 1960s, while the other dominated the decade of the 1980s and ran for 92 months. GDP growth during the early part of the current expansion was insufficient to keep the unemployment rate from rising.[1] Substantial growth began in 1992. The higher rate of growth reversed the rise in the unemployment rate which had reached 7.7% in June 1992. The fall in the unemployment rate was accomplished in an environment of low inflation. Thus far, the rate of increase of most broad-based price and wage indexes have remained fairly low even as the economy moves toward over-full employment. Given the expected growth rates in the labor force and productivity, the determinants of a sustainable rate of growth, growth in GDP in the 2.0%-2.5% range would be compatible with a continued low rate of inflation. This is, no doubt, why the Federal Reserve hiked interest rates seven times beginning in February 1994 in an effort to reduce GDP growth to a more sustainable rate. During 1995, GDP growth was 2.0%, most of which took place in the third quarter. During 1996, however, GDP growth accelerated to 2.4% (with growth at a 3.9% annual rate during the fourth quarter). This prompted the Federal Reserve to raise interest rates on March 25, 1997. During the first quarter of 1997 GDP growth accelerated further to an annual rate of 5.9%.

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[1] Gross Domestic Product rather than Gross National Product is now used as the principal measure of economic activity for the United States. The two measures differ in their treatment of foreign-owned productive resources in the United States and similar U.S.-owned resources abroad.

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Recent Macroeconomic Developments

The growth rate of GDP both before and after the 1990-1991 recession is shown in table 1.[2] The relatively shallow recession was followed by a recovery/expansion of modest proportions. Only in 1992 did GDP growth become relatively rapid. This continued into 1994. As the economy approached full employment, the Federal Reserve began to tighten monetary policy to sustain the expansion. As this happened, inventories began to accumulate during 1994. During 1995 and the first quarter of 1996, inventories were reduced to bring them into line with the slower rate of growth of sales. This slowed GDP growth during 1995. For 1996 as a whole, however, inventories did not increase as Final Sales rose 2.8%. This was the case during 1997:1 since final sales rose at an annual rate of 4.1% vs a GDP growth of 5.9%.

TABLE 1. The Growth Rate of Real GDP vs. Final Sales
(in percentages)

	1990	1991	1992	1993	1994	1995	1996	1997:1
GDP								
Year Over Year	1.3	-0.1	2.7	2.3	3.5	2.0	2.4	5.9
4thQ Over 4thQ	-0.2	0.4	3.7	2.2	3.5	1.3	3.1	4.1
Final Sales								
Year Over Year	1.6	-0.7	2.5	2.1	2.1	2.4	2.8	4.1
4thQ Over 4thQ	0.6	-0.4	3.9	2.1	2.9	1.9	3.3	3.6

Source: U.S. Department of Commerce.

The unemployment rate, a near constant 5.3% for 2 years, began rising in July 1990. It rose sharply over the ensuing 10 months, reaching 6.7% in March 1991, the official trough of the recession. However, initially, even as the economy recovered, the unemployment rate continued to rise, reaching a high of 7.7% in June 1992. Since that time, the rate has fallen slowly, reaching an expansion low of 4.9% in April 1997. Since August 1994, the rate has fluctuated within a range of from 4.8% to 6.0%. This range is thought by many economists to be consistent with full employment. However, a rate of 4.8% is below most estimates of the lower bound of the range. Since the expansion began in March 1991, civilian employment has risen by more than 10.0 million.

---

[2] The annual rate of growth of GDP and other economic variables can be computed in two ways. One is to take the annual average of GDP for 1996, for example, and compare it to the annual average for 1995. When this method is used, the calculated growth rate is actually GDP's growth from the mid point of 1995 to the mid point of 1996. An alternative method is to compute its growth from the fourth quarter of 1995 to the fourth quarter of 1996 (or where monthly data are available, from December to December). This method has the advantage of computing growth over the past 12 months in question. The GDP growth rates used in the text of this report are those on a year over year basis.

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The unemployment data recorded since January 1994 are computed on the basis of substantial changes in the questionnaire used in the survey of households from which the labor market data are obtained, and thus, are not comparable with the pre-1994 data shown on table 2.

TABLE 2. Civilian Unemployment Rate
(in percentages)

	J	F	M	A	M	J	J	A	S	O	N	D
1992	7.1	7.3	7.3	7.3	7.4	7.7	7.6	7.6	7.5	7.4	7.3	7.3
1993	7.1	7.0	7.0	7.0	6.9	6.9	6.8	6.7	6.7	6.7	6.5	6.4
1994	6.7	6.6	6.5	6.4	6.1	6.1	6.1	6.0	5.8	5.7	5.6	5.4
1995	5.7	5.4	5.5	5.8	5.7	5.6	5.7	5.6	5.6	5.5	5.6	5.6
1996	5.7	5.5	5.5	5.5	5.6	5.3	5.4	5.2	5.2	5.2	5.3	5.3
1997	5.4	5.3	5.2	4.9	4.8	5.0						

Source: U.S. Department of Labor.

As the economic expansion has taken hold and the unemployment rate has fallen, fears of a renewed burst of inflation have arisen. Thus far, there is little evidence in the broad based price and wage indexes that inflationary pressures are building.[3]

As shown in table 3, the CPI rose 3.3% during 1996 due largely to increases in food and energy prices. For the 12 months ended it June it rose 2.3% and for the 3 months ended in June it rose at an annual rate of only 1.0%. The rate of inflation shown by the two price indexes derived from the GDPs accounts recorded in table 4, has shown a continued tendency to fall. During 1994, both the implicit price deflator and the chain weight deflator rose 2.3%. During 1995, they both rose 2.5%. During 1996, the chain weighted index rose 2.1% while the implicit deflator rose 1.8%.[4] Both indexes rose at slightly higher rate during 1997:1.

Labor costs, regarded by some as an indication of future inflation, as shown in table 5, have turned in an encouraging performance. Per unit labor costs, which are heavily influenced by productivity, rose slowly during the recovery

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[3] For a more extensive discussion of inflation and other alternative measures of the inflation rate, see Library of Congress. Congressional Research Service. *Inflation: Causes, Costs and Current Status*. CRS Report 96-914 E, by Gail Makinen.

[4] On a year over year basis, the rise in the Implicit Price Deflator between 1990 and 1996 was respectively, 4.3% 4.0%, 2.7%, 2.6%, 2.3%, 2.5%, and 2.0%. The corresponding rise in the chain type deflator was, at most, 0.1% higher per year.

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because recorded productivity was high.[5] This is characteristic of the initial stages of an economic upturn. The rise in the Employment Cost Index for private industry has shown no tendency to accelerate over the past 2 to 3 years. In fact, its rate of increase has tended to fall.

TABLE 3. Rate of Change in the Consumer Price Index
(in percentages)

	1990	1991	1992	1993	1994	1995	1996	1997:2
Dec. Over Dec.	6.1	3.1	2.9	2.7	2.7	2.5	3.3	1.4
Year Over Year	5.4	4.2	3.0	3.0	2.6	2.8	2.9	2.5

Source: U.S. Department of Labor.

TABLE 4. Rate of Change in the GDP Deflators
(in percentages)

	1990	1991	1992	1993	1994	1995	1996	1997:1
Implicit Price Deflator	4.6	3.4	2.6	2.5	2.3	2.5	1.8	2.2
Chain Type Deflator	4.6	3.4	2.6	2.5	2.3	2.5	2.1	2.7

Source: U.S. Department of Commerce.

TABLE 5. Rate of Change in Labor Costs
(in percentages)

	1990	1991	1992	1993	1994	1995	1996	1997:1
Unit Labor Costs	6.4	2.5	1.0	2.2	2.1	3.7	2.7	2.5
Employment Cost Index*	4.6	4.4	3.5	3.6	3.1	2.6	3.1	3.0

* The employment cost index is for private industry and for the 12 months ending in December, except for 1997 when it is for the 12 months ended in March.

Source: U.S. Department of Labor.

TABLE 6. U.S. Foreign Trade Deficit
(as a percent of GDP)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997:1
Trade Deficit	2.8	2.0	1.4	1.0	0.4	0.5	1.1	1.6	1.6	1.7	1.7

Source: U.S. Department of Commerce.

[5] On a year over year basis, the rise in per unit labor costs for 1990 through 1996 was respectively, 5.0%, 4.2%, 1.9%, 2.1%, 1.5%, 2.9%, and 2.9%.

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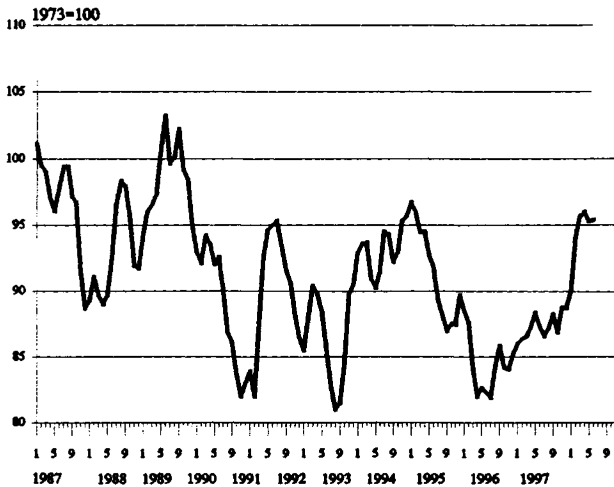
The U.S. foreign trade deficit (net imports), as shown in table 6, recorded a continued and dramatic fall from 1986 through 1991. In each of these years the trade deficit declined as export growth exceeded import growth. During 1992 the trade deficit began to grow as a fraction of GDP. However, over the past three years, it has been a fairly constant portion of GDP.

The increase in the U.S. foreign trade deficit during 1992-1996 reminds us that the United States still receives a substantial inflow of capital from abroad.

Figure 1 records the movement in the foreign exchange value of the dollar. Since early 1994 the dollar has been under heavy selling pressure. It probably would have continued to fall in price (depreciate) during 1995, 1996, and 1997 had it not been for substantial foreign central bank intervention. Net official inflows of capital, a measure of central bank intervention, accounted for about 75% of the net capital inflow in 1995, about 60% during 1996, and about 50% during the first quarter of 1997.

FIGURE 1. Dollar Exchange Rate



Source: Board of Governors of the Federal Reserve System.

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Posture of Monetary and Fiscal Policy

The course of GNP growth can respond significantly to changes in fiscal and monetary policy. The posture of fiscal policy depends on how it is measured. A generally accepted method is to examine the ratio of the structural or full employment budget deficit to full employment GDP. When that is done, as shown in table 7, fiscal policy during 1996 was contractionary as the full employment deficit fell from 2.8% to 1.7% of potential GNP. An alternative, although inferior measure, is the ratio of the actual budget deficit to actual GDP. When this ratio is examined, fiscal policy in 1996 was also contractionary as the actual deficit fell from 2.3% to 1.4% of actual GDP.

TABLE 7. Alternative Measures of Fiscal Policy
($ in billions)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Standardized Budget Deficit	$135	$149	$150	$177	$202	$239	$246	$197	$199	$127
Full Employment GDP	4651	4949	5300	5659	6025	6311	6578	6851	7166	7480
Ratio	0.029	0.030	0.028	0.034	0.031	0.038	0.037	0.029	0.028	0.017
Actual Budget Deficit	$150	$155	$152	$221	$269	$290	$255	$203	$164	$107
Actual GDP	4609	4957	5355	5683	5861	6149	6477	6837	7187	7484
Ratio	0.032	0.031	0.029	0.039	0.044	0.046	0.039	0.030	0.023	0.014

Source: Congressional Budget Office (January 1997).

Traditionally, the posture of monetary policy has been judged either by the growth of the monetary aggregates or by movements in interest rates.[6] In fact, neither is an unambiguous indicator. The monetary aggregates, for example, give a confused picture. While M1 can explain how the economic expansion got underway, it cannot explain the expansions continuation. The opposite is true for both M2 and M3.

While the contraction of reserves could indicate monetary tightening, it is, in fact, compatible with monetary expansion. This occurs because over much of this expansion, demand deposits have been declining and it is against these deposits that banks are legally obligated to hold reserves. Each dollar of decline frees up about 10 cents in reserves that banks can lend. Thus, even though reserves have fallen, they have declined by less than the reserves set free by the contraction of demand deposits. This has increased the net lending powers of banks.

[6] For a more comprehensive discussion of monetary policy, see U.S. Library of Congress. Congressional Research Service. *Monetary Policy: Current Policy of Conditions*. CRS Report 96-983E, by Gail Makinen.

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Some of the dollars that were in checking accounts have found their way into passbook savings and CDs. These shifts can explain why M1 falls without a commensurate fall in M2 and M3. For the latter to grow, however, funds must be added to passbook savings and CDs that were not originally in checking accounts.

TABLE 8. The Growth Rates of the Monetary Aggregates
(Annualized rates of change)

Time Period	Aggregate Reserves	Monetary Base	M1	M2	M3
88:12-89:12	0.3%	4.1%	0.9%	5.1%	3.7%
89:12-90:12	2.9	9.3	4.0	3.5	1.4
90:12-91:12	9.5	5.8	8.6	3.1	1.3
91:12-92:12	19.5	10.6	14.2	1.7	0.1
92:12-93:12	11.4	10.0	10.1	1.5	0.9
93:12-94:12	-2.1	8.4	1.7	0.9	1.4
94:12-95:12	-5.1	3.9	-2.2	4.6	6.1
95:12-96:12	-11.0	4.2	-4.3	4.9	7.4
96:06-97:06	-12.9	5.0	-4.6	4.7	7.1
96:12-97:06	-11.5	4.0	-3.2	4.4	6.7
97:03-97:06	-9.7	3.5	-4.2	3.5	5.5

Source: Board of Governors of the Federal Reserve System

The growth in the reserves of depository institutions results to a large degree from decisions to move the key federal funds' interest rate (shown in figure 2). The rate was forced down beginning in October 1990. From April through July 1991, the rate was held at a fairly steady 5.75%. In August it was moved toward 5.50%, in September to 5.25%, in November to 4.75%, in January 1992 to about 4.0%, in April toward 3.75%, in July toward 3.25%, and in September toward 3.0%, where it was maintained for nearly 16 months. Beginning in February 1994, the Board of Governors, in a series of seven steps culminating in February 1995, raised the federal funds rate to 6.0%. (The increase in the federal funds rate was achieved by reducing the level of aggregate reserves available to depository institutions.) Early in July, as a pronounced slowdown in economic activity became apparent, the federal funds rate was reduced to 5.75%. In mid-December it was reduced to 5.5% and on January 31, 1996, it was reduced to 5.25%. However, as GDP growth rose in 1996 to a rate believed to be unsustainable, the Federal Reserve reversed course and hiked the rate to 5.5% on March 25, 1997.

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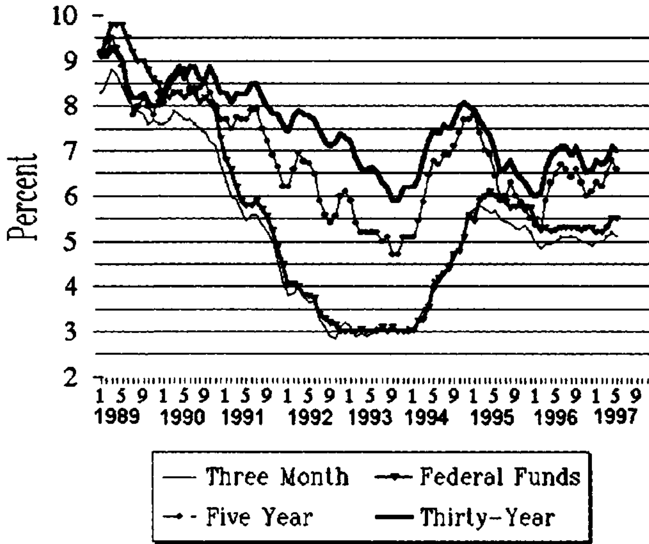
FIGURE 2. Yield on Selected U.S. Treasury Securities and Federal Funds



Source: Board of Governors of the Federal Reserve System.

As shown in figure 2, movements in short term interest rates mimic closely movements in the federal funds rate. This is not as true for longer term rates. Their rise and fall as well as the magnitude of their shifts is often different from the timing and magnitude of shifts in the federal funds rate. This is due in part to the fact that they respond to the longer run outlook for inflation and the financing requirements necessitated by the budget deficit, both current and prospective.

Summary of Current Developments

The NBER decided that the U.S. recession that began in July 1990 ended in March 1991. By 1992:1 GDP recovered the ground lost in the three quarters during which output contracted. The growth rate of GDP during the recovery was, however, low when compared with the average of past expansions. The unemployment rate began to rise in July 1990. It rose rapidly, reaching 6.8%

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in May 1991. For the first 6 months of 1992 it slowly crept upward, reaching a high of 7.7% in June. Since then it has fallen. Over the past 24 months, it has ranged between 4.8 and 6.0%, a range consistent with most measures of full employment. During the expansion more than 10.0 million jobs have been added to the U.S. economy. All three price indexes show that the inflation rate during the expansion has remained low. Monetary policy, responsible for the recovery, was adjusted to slow the growth of aggregate demand. This has involved seven upward adjustments to the federal funds rates between February 1994 and February 1995. The rate was adjusted downward by 0.25% in early July and mid-December of 1995, and on January 31, 1996. While this led to a rise in the growth rate of GDP, the rate achieved was thought to be too high. Consequently, on March 25, 1997, the Federal Reserve hiked the rate by 0.25%.

Sources of GDP Growth

Table 9 records the sources of growth in GDP over the current expansion. These data record two interesting developments. First, investment spending has played an important role in this expansion. And among the categories of investment, outlays for personal computers have been important. This bodes well for the longer run growth in productivity. Second, except for 1996, purchases by all levels of government have played virtually no role in the expansion.

TABLE 9. Sources of GDP Growth: 1990 through 1996

	1990	1991	1992	1993	1994	1995	1996	1997:1
Real GDP Growth*	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Consumption	84.2	-44.9	69.0	86.0	59.8	79.3	68.6	65.2
Investment	-55.5	-135.4	31.9	46.6	55.7	22.0	28.6	56.6
Govt. Purchases	45.5	12.9	3.5	-2.0	0.0	0.0	6.4	0.4
Federal	(13.0)	(4.3)	(-6.9)	(-13.5)	(-8.7)	(-12.8)	(-3.2)	(-4.0)
State & Local	(32.4)	(-17.2)	(10.3)	(11.5)	(8.7)	(12.8)	(9.5)	(4.4)
Net Exports	25.9	67.3	-4.4	-30.5	-15.1	-1.4	-3.6	-22.2

* Computed using real GDP at 1992 chained dollars.
Source: Department of Commerce.

Economic Forecasts, 1997-1998

All of the forecasts summarized in table 10 expect the expansion now in progress to continue through 1997 and 1998. If these forecasts come to pass, the economy is expected to maintain a soft landing in the sense that GDP growth at about 2.0% to 2.5% will be sufficient to keep the unemployment rate about 5.0%. The inflation rate is expected to remain in the 2.0% to 3.0% range. Similarly, the modest nature of the expansion is expected to keep both short-term and long-term interest rates from rising much above their 1996 levels.

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The *Wall Street Journal* published the results of its survey of 55 economic forecasters in its July 7, 1997 edition. These forecasters, on average, expect real GDP to grow 2.6% during the second half 1997 and the CPI is expected to rise 2.5% for the year ended in November. The 3-month Treasury bill rate and 30-year bond rate are expected to be 5.41% and 6.79% on December 31 and 5.45% and 6.64% on June 30, 1998.

The chairman of the Board of Governors of the Federal Reserve presented the economic projections of the Federal Reserve for 1997 in testimony before the Senate Banking Committee on February 26, 1997. The Federal Reserve projects that over the four quarters of 1997 real GDP will grow between 2.0% and 2.25% and that the CPI will increase from 2.75% to 3.0%. The civilian unemployment rate is expected to average between 5.25% and 5.5% during the fourth quarter of the year.

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TABLE 10. Economic Forecasts, 1997

	1996				1997				1996*	1997	1998
	1*	2*	3*	4*	1*	2	3	4			
Nominal GDP[a]											
OMB	4.2	6.5	3.8	5.4	8.3	NA	NA	NA	4.4	4.8	4.7
CBO	4.2	6.5	3.8	5.4	8.3	NA	NA	NA	4.4	4.6	4.6
DRI	4.2	6.5	3.8	5.4	8.3	3.6	4.5	5.1	4.4	5.5	4.5
WEFA	4.2	6.5	3.8	5.4	8.3	3.6	4.8	4.8	4.4	5.5	4.8
BC	4.2	6.5	3.8	5.4	8.1	3.9	4.6	4.3	4.6	5.6	4.6
Real GDP[a]											
OMB	2.0	4.7	2.1	3.8	5.9	NA	NA	NA	2.4	2.2	2.0
CBO	2.0	4.7	2.1	3.8	5.9	NA	NA	NA	2.4	2.3	2.1
DRI	2.0	4.7	2.1	3.8	5.9	2.0	2.3	2.6	2.4	3.6	2.1
WEFA	2.0	4.7	2.1	3.8	5.9	1.6	2.6	2.5	2.4	3.5	2.3
BC	2.0	4.7	2.1	3.8	5.9	2.1	2.6	2.2	2.4	3.5	2.2
Unemployment[b]											
OMB	5.6	5.4	5.2	5.3	5.3	4.9	NA	NA	5.4	5.3	5.5
CBO	5.6	5.4	5.2	5.3	5.3	4.9	NA	NA	5.4	5.3	5.6
DRI	5.6	5.4	5.2	5.3	5.3	4.9	5.0	5.0	5.4	5.0	5.1
WEFA	5.6	5.4	5.2	5.3	5.3	4.9	5.0	5.1	5.4	5.1	5.1
BC	5.6	5.4	5.2	5.3	5.3	4.9	5.0	5.0	5.4	5.1	5.2
GDP Deflator[a] (chain weights)											
OMB	2.3	2.2	2.0	1.9	2.7	NA	NA	NA	2.1	2.5	2.6
CBO	2.3	2.2	2.0	1.9	2.7	NA	NA	NA	2.1	2.3	2.5
DRI	2.3	2.2	2.0	1.9	2.7	1.7	2.2	2.5	2.1	2.2	2.4
WEFA	2.3	2.2	2.0	1.9	2.7	1.8	2.2	2.3	2.1	2.2	2.4
BC	2.3	2.2	2.0	1.9	2.7	2.1	2.3	2.4	2.1	2.1	2.4
CPI-U[a]											
OMB	3.2	3.9	2.3	3.1	2.3	NA	NA	NA	2.9	2.7	2.7
CBO	3.2	3.9	2.3	3.1	2.3	NA	NA	NA	2.9	2.9	2.9
DRI	3.2	3.9	2.3	3.1	2.3	1.0	2.3	3.1	2.9	2.4	2.6
WEFA	3.2	3.9	2.3	3.1	2.3	1.4	2.9	2.7	2.9	2.6	2.8
BC	3.2	3.9	2.3	3.1	2.3	1.8	2.7	2.9	2.9	2.7	2.8
T-BILL Rate[b]											
OMB	5.0	5.0	5.1	5.0	5.1	5.1	NA	NA	5.0	5.0	4.7
CBO	5.0	5.0	5.1	5.0	5.1	5.1	NA	NA	5.0	5.0	5.0
DRI	5.0	5.0	5.1	5.0	5.1	5.1	5.2	5.4	5.0	5.2	5.4
WEFA	5.0	5.0	5.1	5.0	5.1	5.1	5.1	5.3	5.0	5.2	5.8
BC	5.0	5.0	5.1	5.0	5.1	5.1	5.3	5.4	5.0	5.2	5.4
10-Year Rate[b]											
OMB	5.9	6.7	6.8	6.3	6.6	6.7	NA	NA	6.4	6.1	5.9
CBO	5.9	6.7	6.8	6.3	6.6	6.7	NA	NA	6.4	6.2	6.1
DRI	5.9	6.7	6.8	6.3	6.6	6.7	6.6	6.6	6.4	6.6	6.5
WEFA	5.9	6.7	6.8	6.3	6.6	6.7	6.6	6.8	6.4	6.7	7.0
BC	5.9	6.7	6.8	6.3	6.6	6.7	6.7	6.7	6.4	6.7	6.6

* Actual data, subject to revisions. The annual data for nominal GDP, real GDP, the GDP deflator and the CPI are on a year over year basis; and the unemployment and interest rate data are either quarterly or annual averages.

a. Annualized quarterly rates of change.

b. Quarterly averages.

Sources: Data Resources, Inc., *U.S. Forecast Summary*, July 1997; Wharton Econometric Forecasting Associates Group. *U.S. Economic Outlook*, July 7, 1997; *Blue Chip Economic Indicators*, July 10, 1997. Congressional Budget Office, March 1997; and, the Office of Management and Budget, February 1997.

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Promotion of Economic Growth

Over the longer run, the economic well-being of a nation depends on the growth of potential output or GDP per capita. Crucial to this growth is the fraction of a nation's resources devoted to capital formation. The ability to add to the capital stock through investment depends on a nation's saving rate.

Saving comes from several sources. In the private sector individuals (households) and businesses are responsible for saving. The former save when all of their after tax income is not used for consumption. Businesses save through retained earnings and capital consumption allowances.

The public sector can also be a source of national saving and this occurs when government revenues are larger than expenditures. Budget surpluses, then, can be viewed as a source of national saving.

In table 11 the sources of saving for the United States during the past 35 years are shown. There are several things to note about these data. First, the gross private sector savings rate has averaged a remarkably stable 16%-17% of GDP, with most of the saving being done by businesses. More significantly, however, the private sector saving rate net of depreciation, representing saving available for additions to capital, declined considerably in the 1980s. Thus, even without a federal budget deficit, the United States would have had a "saving problem."

Second, over this 35-year period, the saving done by the public sector, as a whole, has declined. There is, however, diversity as to the contribution made by the level of government. The large negative contribution made by the federal government during the 1980s reflects the widely publicized budget deficit. Even though state and local governments have been running sizable budget surpluses, they have not been large enough to offset the federal deficits.

Third, the data show that for 20 of these 35 years, the United States exported a small fraction of its savings to the rest of the world (i.e., was a net exporter of capital). This changed during the 1980s when the United States started to import the savings of the rest of the world.

Should efforts to correct the international trade deficit prove fruitful, the net inflow of foreign saving will cease. Should this occur without a significant improvement in either the private sector saving rate or the negative saving rate of the public sector, the rate of new investment will fall to a very low level in the United States and with it the means for improving the well-being of future generations of Americans.

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TABLE 11. U.S. Saving By Sector
(as a percent of GDP)

	Private Sector				Public Sector					
Year	Pers.	Bus.	Total	Net of Deprec.	Fed.	State & Local	Total	Net of Deprec.	Net Private & Pub.[a]	Net[b] Foreign
1960-9	5.1	11.3	16.4	8.3	2.1	2.9	5.0	2.4	10.7	-0.6
1970-9	5.5	11.8	17.3	7.9	-0.5	3.1	2.6	0.2	8.1	-0.2
1980-9	4.7	12.1	16.8	6.3	-2.1	2.9	0.8	-1.3	5.0	1.8
1984	6.0	12.9	18.9	8.4	-2.9	3.2	0.3	-1.8	6.6	2.3
1985	4.9	12.6	17.5	7.2	-2.8	3.2	0.4	-1.7	5.5	2.8
1986	4.4	11.6	16.0	5.7	-2.9	3.1	0.2	-1.9	3.8	3.2
1987	3.6	11.9	15.5	5.2	-1.6	2.8	1.2	-1.0	4.2	3.3
1988	3.7	12.3	16.0	5.8	-1.3	2.7	1.4	-0.7	5.1	2.3
1989	3.5	11.5	15.0	4.9	-1.0	2.7	1.7	-0.3	4.6	1.7
1990	3.6	11.4	15.0	5.0	-1.6	2.4	1.2	-1.3	3.7	1.4
1991	4.2	11.6	15.8	5.6	-2.2	2.3	0.1	-2.0	3.6	-0.1
1992	4.4	11.2	15.6	5.8	-3.4	2.4	-1.0	-3.1	2.7	0.8
1993	3.3	11.4	14.7	4.9	-2.8	2.5	-0.3	-2.5	2.4	1.3
1994	2.7	11.8	14.5	4.6	-1.7	2.4	0.7	-1.3	3.3	2.0
1995	3.3	11.4	14.8	5.2	-1.2	2.3	1.1	-0.9	4.3	1.9
1996	3.6	11.7	15.3	6.0	-0.7	2.2	1.5	-0.5	5.5	2.0

a. Equal to the sum of private sector saving net of depreciation and total public sector saving net of depreciation.

b. Negative sign indicates the export of saving from the United States. Positive sign indicates the import of saving from abroad.

Source: U.S. Department of Commerce.

A sudden increase in the national saving rate is, however, not without some possible adverse consequences. In the short run, a sudden increase in the saving rate means decreased consumption and/or lower public sector net spending. In either case, the demand for some types of output would fall to be replaced by an increased demand for other types of output. As a result, some industries and firms would have to contract while others expand. Resources would have to transit from declining to growing industries. These short-run dislocations should be borne in mind if a higher national saving rate becomes the object of public policy.

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Statement of Floyd H. Flake
Subcommittee on Domestic and International Monetary Policy
July 22, 1997

Good Morning Chairman Castle, and welcome Chairman Greenspan to today's Humphrey-Hawkins Act report on the state of the nation's economy. This hearing is perhaps one this subcommittee's most important, and useful, duties to the extent that it gives Congress and the American people an in-depth glimpse at the economic health of the United States. I look forward to Mr. Greenspan's remarks, and I will only make a few comments so that we may move directly to his testimony.

My main concern, in both a political and economic sense, is how we as a nation will move into the 21st century. Will we move in a direction where all sectors of society will reap economic benefits? Will we have an economy that is inclusive to the extent that parents have ability to provide good homes and educational opportunities for their children? Will the turn of the century stand as a benchmark for a new era expansion? And will the United States still lead the world in an ever expanding global economy?

Toward that end, I would like to hear Mr. Greenspan's thoughts on whether or not we should be changing the way we approach economic analysis, and what Congress' reaction should be with respect to the changing characteristics of the job-place. And I note that the changes are both demographic and qualitatively in the sense that the manufacturing models are becoming obsolete. Obsolete in that the technological revolution we currently function in should present the Fed with different economic data to track, and puts politicians in a quandary as we represent various interests which stand to benefit or lose, both profits and good paying jobs. We all recognize that technology driven industries are growing, that small business represents the bulk of all new employment opportunities, and that the once standard hourly-wage job at the "factory" is disappearing.

Add to that a global employment base, and the question thus becomes does the Fed look beyond traditional data. Do you have a means to gauge the real job prospects of unemployed people who are the victims of corporate downsizing based on technology? Or do you, as an example, have the means to track increasing electronic commerce and its effects on the economy?

The United States has had a continuing policy of government putting to use all practicable means to coordinate all its plans, functions, and resources in a manner calculated to foster free enterprise and employment opportunities for all those willing to work. It has also been our policy to promote maximum employment, production, and purchasing power. Mr. Greenspan, recognizing our national policy in this light, I for one would like to hear your thoughts about our future. Not necessarily on whether you or other members of the FMOC will recommend interest rate hikes at your next meeting, but our long-term future. Long-term in the sense of what kinds of data the Fed should be looking at ten years from now, where will job creation take place, and more importantly what can we do now to brighten our future.

Thank you.

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JESSE L. JACKSON, JR.
2D DISTRICT, ILLINOIS

Congress of the United States
House of Representatives
Washington, DC 20515–1302

COMMITTEES
BANKING AND FINANCIAL SERVICES
SUBCOMMITTEE ON HOUSING AND COMMUNITY OPPORTUNITY
SUBCOMMITTEE ON DOMESTIC AND INTERNATIONAL MONETARY POLICY
SMALL BUSINESS
RANKING MEMBER
SUBCOMMITTEE ON REGULATORY REFORM AND PAPERWORK REDUCTION

STATEMENT BY CONGRESSMAN JESSE L. JACKSON, JR.
COMMITTEE ON BANKING AND FINANCIAL SERVICES
SUBCOMMITTEE ON DOMESTIC AND
INTERNATIONAL MONETARY POLICY
HUMPHREY HAWKINS HEARING
THE STATE OF THE U.S. ECONOMY
JULY 22, 1997

Thank you, Mr. Chairman. I appreciate the opportunity to welcome the Chairman of the Federal Reserve, the Honorable Alan Greenspan, in his second address to the 105th Congress. Chairman Greenspan, it is with great pleasure and admiration that I welcome you today to apprise us of the status of the American economy and your judgments as to the activities of the Federal Reserve System in fulfilling its duty, among others, of conducting national monetary policy in pursuit of the objectives of price stability and full employment. Welcome, Chairman Greenspan.

Chairman Greenspan, I also want to commend you for your leadership in resisting forces which encouraged unnecessarily raising interest rates during the Federal Reserve's Open Market Committee meetings in May. I also would like to thank you for insights related to the "new economic age" that we have clearly entered. Global market expansion and increased spending on new technology have produced big productivity gains. I concurred with your assessment that there is no need for an interest rate hike under current economic conditions.

However, I must register my dissent with those who would claim that we may be entering a period where the economy may overheat, and for

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this reason slowing the economy and reducing job creation is a necessary course of action for the Fed. While conventional wisdom speaks to expansion and growth -- the stock market has reached record levels, indicators reflect rapid growth, falling unemployment, rising incomes for some sectors of the population with a concurrent decline in inflation -- the least well-off and the least-educated among us, however, continue to experience stagnant wages.

Assessing the state of the economy depends upon one's vantage point. You see one thing if you are on top looking down and you see quite another if you are a worker or poor or economically insecure and looking up.

If you are one of the 15-to-20 million Americans who are unemployed, underemployed, have never had a job or gave up looking for one, or you have been the victim of corporate downsizing, then the exuberant economic indicators do not reflect your individual circumstances.

Chairman Greenspan, I believe that this is a more accurate picture of the economic conditions of communities like those in my district on the South Side of Chicago or in the South Suburbs and explains the widespread levels of economic anxiety currently plaguing the American people.

In light of the foregoing, Chairman Greenspan, I will be listening intently to your testimony and particularly with respect to your views on how the Fed can encourage and guide the economy towards attaining true levels of full employment. Once again, thank you Chairman Greenspan for joining us today. I look forward to hearing your testimony. Thank you, Mr. Chairman.

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OPENING STATEMENT
THE HONORABLE MARGE ROUKEMA
HUMPHREY-HAWKINS HEARING
JULY 22, 1997

I am pleased to be here today to here from Chairman Greenspan on the results of the Federal Reserve Board's determinations with regard to domestic and international monetary policy and the far-reaching implications for the financial services marketplace and the global economy.

We are bearing witness for the first time in many years to a robust economy while simultaneously moving deeper into an economic "brave new world." With the Dow Jones breaking 8'000 and having daily market swings, we continue to be challenged by heightened global competition that is restraining U.S. wage growth and limiting companies' abilities to pass along higher costs. In addition, U.S. corporations are massively investing in new technologies that have labor-saving effects, but still result in production levels reaching all time highs.

What is even more astounding is that, in the midst of continued corporate downsizing, we are achieving the lowest unemployment figures we have seen in years without triggering inflation-one of the prime indicators to adjust interest rates higher.

We are essentially achieving this through fiscally conservative attitudes on all levels of our society. I see all this in a positive light, with Americans placing greater value on job security than on higher pay. In addition, we have finally addressed the need and are beginning to reap the benefits of successful deficit reduction through demonstrated restraint on government spending, which has given the Fed the opportunity to ease up on the tight monetary policy it had to apply during the ballooning deficit years of the late '80's and early-90's.

I expect that you will give some advice to Congress on maintaining 1) fiscal restraint; 2) genuine deficit reduction; and 3) investment-oriented tax policy.

I will always remain guarded when viewing the economy. However, I do applaud the strong leadership of Chairman Greenspan in handling all of the complex indicators that steer the Board's monetary policy. I hope that we can continue to see this as we move even further into this brave new world, and equally importantly, when we modernize our financial services system to bring it into the modern era. If we do this successfully, while carefully monitoring all the other factors that affect our economy, I believe that we will have done a great service for ourselves, our children, and generations to come.

Thank You.

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OPENING STATEMENT OF BERNIE SANDERS, JULY 22, 1997

Thank you, Mr. Chairman. And I would like to welcome Mr. Greenspan here this afternoon.

And before I begin let me be clear on one thing: what I am going to say about Mr. Greenspan is harsh because, intellectually, I disagree with him on almost every issue. But it is not disrespectful. I happen to believe that anyone who serves in the public arena, no matter what their point of view is, deserves respect because they at least have the courage to stand up for their convictions under the harsh light of day. And Mr. Greenspan certainly has done that over the years.

Mr. Greenspan, what I would like to do now is very briefly touch on your political background and some of the positions that you have advocated over the years, because I think there is not full understanding, on the part of the American people of those positions. I do this because I think it is important for the American people to understand that you have spent much of your political career representing some of the wealthiest and most powerful people in this country, and that you continue to do that today. Further, in my view, you have developed policies which have been extremely harmful for the middle class, working class and low income people of the United States.

My understanding is that, politically, you served on the Committee to elect Ronald Reagan President. My further understanding is that you have made political contributions to Jesse Helms, who some consider to be one of the very most right wing members of a very conservative U.S. Senate. In addition, it is my understanding that in 1985 you wrote letters to

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regulators and lobbied Congressman on behalf of Charles Keating and his Lincoln Savings and Loan, which subsequently collapsed, at a cost of taxpayers of 2.6 billion dollars---and that you also served as a consultant for 15 other Savings and Loans, 14 of which eventually failed.

Further, in recent years you have advocated a number of policies which clearly benefit the richest people in this country while opposing almost any public policy which benefits working families.

For example, my understanding is that despite the fact that the minimum wage of $4.25 was lower in real dollars than it had been in forty years, you opposed raising the minimum wage. Further, despite the fact that tax rates for the rich and corporations has decline precipitously over the last 20 years, you told the Senate Budget Committee last January that, "The appropriate capital gains tax is zero." My understanding is that if Congress enacted that policy it would cost the Treasury roughly $50 billion per year in revenues, with 70% of the benefits of that tax cut going to households earning over $100,000 per year. This policy, if enacted by Congress, would almost certainly result in even more cutbacks in Medicare, Medicaid and other important programs for low and moderate income families.

In 1983, as Chair of the Social Security Commission, you lead the effort to raise the highly regressive payroll taxes by about $ 200 billion at the same time, you advocated huge tax decreases for the richest people in America.

My understanding is that currently you advocate a reduction of the CPI for social security

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recipients which would result in extreme hardship for millions of elderly people trying to survive on 8 to 9 thousands dollars per year.

I will give you credit for strong consistency throughout your political career. As best as I can understand it, you have always advocated for the wealthy and the powerful at the expense of ordinary Americans. It does say something about the power of corporate America in controlling our two party system, that you were appointed Chairman of the Federal Reserve Board by Ronald Reagan, a conservative Republican, and also appointed by Bill Clinton, presumably a moderate to liberal Democrat. Maybe that is why the majority of the American people no longer bother to vote.

The focus of this hearing today is on the State of the Economy. And in recent years Mr. Greenspan, you have echoed the corporate media in telling us how strong the economy is, and what a wonderful economic period we are living in. I must tell you, however, that is not the assessment of the working families in my state of Vermont, nor I believe throughout this country. In fact, it is very clear that we have two economies. For the rich in this country, in fact, things have never been better. Their economy is in fact doing very well. But the story is very very different for the middle class and working families of this country.

Last year, the CEOs of large corporations saw, according to *Business Week*, a fifty four percent increase in their compensation and now earn over 200 times what their workers make. Yes, the economy is good for them. Corporate profits are soaring and the stock market is reaching the sky.

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In the last 20 years, the wealthiest one percent of American families saw their after-tax incomes more than double. The richest 1 % now own over 40% of the wealth of this nation---more than the bottom 90%. And the United States today has the most unequal distribution of wealth and income in the industrialized world.

But life is not quite so good for the average working families of this country.

Twenty years ago, U.S. workers were the best compensated in the world. Today, U.S. workers rank 13th among industrialized nations in terms of wages and benefits. Foreign companies are investing in the U.S. as a source of cheap labor.

Adjusted for inflation, the average pay for four-fifths of American workers plummeted by 16% between 1973 and 1993. In 1973, the average worker earned $445 per week; 20 years later, $373. According to Business Week, the working people of this country actually saw a 1% decline in their earnings last year. In the midst of this so-called "boom".

While unemployment is relatively low, most of the new jobs that are being created are low wage, part time, and temporary. Americans at the bottom end of the wage scale have become the lowest-paid workers in the industrialized world. Eighteen percent of those with full-time jobs are paid so little that their wages do not enable them to live above the poverty level.

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As bad as the current situation is, it is worse for the young. In the last 15 years, the wages for entry-level jobs for male high school graduates have declined 30%, and for females by 18%. Families headed by persons younger than 30 saw their inflation-adjusted median income collapse by 32% from 1973 to 1990.

To compensate for declining wages, the average American worker is working about 160 hours a year more than he or she did in 1969. The number working at more than one job almost has doubled over the last 15 years.

Poverty, which declined significantly between 1965 and 1973, is rising today. The U.S. today has the dubious distinction of having, by far, the highest rate of child poverty in the Western industrialized world. More than 20% of American children live in poverty and an estimated 5,000,000 kids go hungry every day. For these American children, Mr. Chairman and Mr. Greenspan, the economy is not doing so well, and I am a little bit tired of hearing how great this economy is, because in my view that is just not true for average working families.

While millions drop out of the middle class into poverty, while hundreds of thousands of poor people sleep on the streets, while a black male infant born in New York City's inner-city neighborhoods has a lower life expectancy than one born in Bangladesh, another phenomenon is taking place. The wealthiest people in the nation are becoming richer, and the gap between the rich and the poor is growing wider.

The richest one percent of our population now owns close to 42% of the nation's wealth,

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more than the bottom 90% do. To put a family into the richest one percent requires $2,300,000 in assets.

Economist Edward N. Wolff concluded a recent study of America's concentration of wealth by saying, "We are the most unequal industrialized country in terms of income and wealth, and we're growing more unequal faster than the other industrialized countries."

This is the issue which I think we should be discussing today and an issue that I would expect you, Mr. Greenspan, to touch upon in your comments today. How do we address the growing inequality of wealth in our nation?

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FEDERAL RESERVE BANK OF BOSTON

Memorandum

To: Bill McDonough

Date: November 8, 1995

From: Thom Hunt and Tom McFarland

Subject: Responses to the Congressional Committee Inquiry of November 7, 1995

Question 1: Thomas Hunt and Thomas McFarland in their explanations sent to the Committee state that the weight reported as being carried by ITS is overstated by approximately 9.5 percent. This is due, in part, to the ITS shipping procedures which require that the weight of each bag of checks shipped by ITS be rounded up to the next highest pound. This means that the weight carried on ITS has been overstated by approximately 9.5 percent and, therefore, the Federal Reserve was not recovering 9.5 percent of the reported cost of the annual budgeted cost of ITS through their surcharges fees from 1986 through 1994 when the FRBB used a calculated recovery rate that was based solely on the reported weight.

Please have FRBB Senior Vice President Robert K. LaRocca, FRBB Vice President Richard Burns, Thomas Hunt, Thomas McFarland, and any other FRBB management or ITS staff who have knowledge of cost-revenue matching at ITS answer the following:

1A.) Have you been under the impression that it is the obligation to match ITS annual cost and revenue? If your answer is "yes" state what actions and statements of the officials of the Federal Reserve led to this impression.

Response: Up until early 1995 it was Thom Hunt's understanding that ITS was required to match annual costs with annual revenues. Up until late in the year 1991 it was Tom McFarland's understanding that the ITS network match its annual costs with its annual revenues. Both of these opinions were based on conversations with the ITS Officer and reinforced through memoranda from Senior Officers of the FRBB and other internal written documentation. Copies of these documents can be provided to the Committee upon request. Beginning in 1992 (after ITS calculated revenues recovered only 87 percent of the ITS network cost for 1991 due, in part, to the Gulf oil crisis) Tom McFarland was given to understand that it was over the long run, three to five years, that ITS was required to match costs with revenues. Recently, (since this Committee's investigation) we have been told by FRBB officers, Board staff and FRBB auditors that it is not necessary that the ITS network ever match annual costs with annual revenues.

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1B.) Is it true over the past ten years the primary factor for determining if ITS was recovering its costs and for determining what the ITS transportation [surcharge] fees should be was based on the weights reported by Federal Reserve Banks (FRBs) as being carried by ITS?

Response: Certainly the primary factor for determining if the ITS network was recovering its costs was based on the weights reported as being shipped by the FRBs and, therefore, carried by ITS. The ITS transportation surcharge fees, however, were based on the projected check volume expected to be carried by ITS for a given year based on the prior year's check volume and a survey of anticipated check volume changes submitted by each Federal Reserve District.

1C.) Is it true that ITS transportation [surcharge] fees are expected to recover ITS costs?

Response: As explained in question 1A. this has been an evolving position within the FRBB. Prior to 1995 ITS surcharge fees were determined by continually changing the existing surcharge fees until the projected costs of ITS were met by multiplying the anticipated check volume (as supplied by the FRBs) times the new surcharge fees. Therefore, by definition ITS transportation surcharge fees are expected to recover costs.

1D.) If the transportation fees are based on ITS weights and the basis for these weights is overstated, is it a reasonable assumption that the transportation [surcharge] fees published by the FRBB have been artificially low and that ITS has probably been overstating its actual revenues by the same 9.5 percent?

Response: We are quite certain that the ITS revenues calculated from ITS surcharge fees have been understated by somewhere between 9 and 10 percent. We also believe that there can be little doubt that the ITS transportation surcharge fees are, and for the past ten years, have been artificially low.

1E.) Does it seem reasonable that if ITS has been showing a cost/revenue recovery rate of 95 percent yearly average over the long term (1992 through 1994) it has actually been closer to 91 percent?

Response: We believe that if ITS is showing an average cost revenue recovery rate of 95 percent that the actual average cost/revenue recovery rate is closer to 86 percent.

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1F.) Consider the following three conditions: the weight carried on ITS is overstated by approximately 9.5 percent, the FRBB charges the Treasury almost $5 a pound and is dependent on the Treasury for 10 percent of ITS revenue, and the FRBB states that it recovered 93, 96, and 96 percent of its costs, respectively, for the years 1992, 1993 and 1994. Does it, therefore, seem reasonable to conclude that if the Treasury was charged approximately $3.00 per pound and 9.5 percent of projected revenue is subtracted from calculations, the ITS system was actually recovering between 70 and 75 percent of its costs? Would the ITS surcharges have to be approximately 40 percent higher than the current surcharges to fully recover ITS costs without relying on the Treasury payments? Please make an estimate for 1995.

Response: As we stated in our earlier response we believe that ITS weight has been overstated by 9.5 percent. We also believe that while the $4.96 per pound actually charged to the Treasury is excessive, given the alternative transportation options that are available to the Treasury that charging $3.00 per pound would also be excessive. However, as you have pointed out by charging the Treasury close to $5 per pound ITS receives 10 percent of its revenue from the Treasury, therefore, if ITS were to charge the Treasury $3 per pound ITS would expect to receive 6 percent of its revenue from the Treasury. Given the above we believe that it would be a more accurate indication of the actual ITS cost/revenue recovery rate if we were to subtract the 9.5 percent of overstated weight and the 4 percent revenue overcharge to the Treasury from the internally calculated 93 to 96 percent cost/revenue recovery rate. This would yield an estimated cost/revenue recovery rate closer to 80 percent. This would indicate that ITS surcharges should have been approximately 25 percent higher than they were in 1992, 1993 and 1994. This increase would also apply to 1995 and 1996 surcharge fees, however, ITS surcharge fees were not changed for 1995, and the FRBB has determined that ITS surcharge fees will not be changed for 1996.

If the ITS network were to fully recover its costs without relying on revenue from the Treasury then the new calculated recovery rate would be 95 percent (estimated ITS recovery) less 9.5 percent (overstated weight) less 10 percent (Treasury revenue) which would equate to about 75.5 percent. This scenario would likely require that ITS surcharge fees be increased by 33 percent if the ITS network were to fully recover costs.

1G.) Given the previous conditions of the ITS pricing system, [do they] tend to give ITS a competitive advantage over private sector transportation services that must recover their full costs over the long run?

Response: Yes.

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1H.) Are computations from source data made in an independent manner or are there adjustments or manipulations made to show higher cost-revenue matching? Please describe the adjustments or manipulations, if any, and designate who ordered them.

Response: Over the years there have been instances where volume data has been manipulated to effect the projected ITS cost/revenue recovery rate. In some years during the period from 1986 through 1993 Bob LaRocca changed projected volume data sent in by Federal Reserve Districts to project a higher percent check volume increase to project a more favorable cost/revenue match. We believe that Bob did this when he determined that more projected volume was required to justify keeping surcharge fees constant or to minimize surcharge fee increases.

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BEFORE THE

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

WASHINGTON, D.C. 20551

Interdistrict Transportation

System Price Structure, 1991 Docket No. R-0705

COMMENT OF

THE STAFF OF THE BUREAU OF ECONOMICS OF THE

FEDERAL TRADE COMMISSION[1]

(submitted March 19, 1991)

[1] These comments represent the views of the staff of the Bureau of Economics of the Federal Trade Commission. They are not necessarily the views of the Commission or any individual Commissioner. Questions about these comments may be addressed to James D. Reitzes or John C. Hilke, Federal Trade Commission, Bureau of Economics, 6th Street and Pennsylvania Avenue, N.W., Washington, D.C. 20580, telephone: (202) 326-3349 or 326-3483.

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I. INTRODUCTION

The staff of the Bureau of Economics of the Federal Trade Commission [FTC] appreciates the opportunity to submit this comment to the Board of Governors of the Federal Reserve System [FRS] concerning proposed changes in the price structure for transporting checks using the FRS's Interdistrict Transportation System [ITS]. As part of the FRS's check collection service, the ITS network transports checks between pairs of the FRS's forty-eight check-processing locations. The FRS proposes to amend the current ITS pricing structure by establishing a maximum charge for transporting checks that have been presorted by destination before delivery to a local FRS office. The FRS states that its "objective of modifying the price structure of ITS surcharges is to ensure that the price structure reflects the underlying cost function of interdistrict check transportation." Currently, the FRS charges a specific fee per check for shipping checks on the ITS network. Under the new proposal, per-check

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charges would apply until a maximum charge is attained per shipment. In effect, per check charges would be reduced for any shipment whose volume exceeds the ceiling. The proposed maximum charge would not apply to bundles of unsorted checks that are sorted by the FRS and transported using ITS. Unsorted checks are priced separately and are unaffected by the present proposal.

In what follows, we discuss ambiguities in the FRS's pricing proposal and go on to consider what effects certain interpretations of its proposal might have on private firms that provide check transportation services in competition with the FRS. However, before turning to these topics, the check clearing process and the FRS's role in it are briefly described.

II. EXPERTISE OF THE STAFF OF THE FEDERAL TRADE COMMISSION

The FTC is an independent regulatory agency responsible for maintaining competition and safeguarding the interests of consumers. The staff of the FTC, upon request by federal, state, and local government bodies, often analyzes regulatory or legislative proposals that may affect competition or the efficiency of the economy. In the course of this work, as well as in antitrust and consumer protection research and litigation, the staff applies economic theory and empirical analysis to address policy issues that include the determination of the effects on consumers and competition arising from particular price structures, and the assessment of the market in which sellers compete.

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The staff of the FTC has commented previously on various issues before the Board of Governors of the Federal Reserve System.[2] The staff also has commented before the Postal Rate Commission on issues involving rates for transportation services, competition between government and private industry, and the regulatory advantages of government suppliers.[3] In the area of transportation regulation, the staff has prepared several reports and provided numerous comments to state and national regulatory agencies.[4]

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[2] Comments have been submitted in: Docket R-0687, The Matter of Truth and Lending; Home Equity Disclosure and Substantive Rule (April 20, 1990); Letter from Acting Chairman Calvani, dated December 23, 1985, concerning application of margin requirements to takeover bids; Docket R-0545, Amendments of Regulation Z (July 19, 1985); Docket R-0541, Revision of Regulation B (June 21, 1985). For additional discussion of instances in which government enterprises compete with private firms, see Statement of Timothy J. Muris, Director, Bureau of Consumer Protection Concerning The Provision of Telecommunications and Information Services By the Federal Government in Competition with the Private Sector, submitted to the House Committee on Government Operations (February 25, 1982).

[3] These matters include: (1) discussion of competition issues inherent in proposed rate and classification changes related to electronic computer-originated mail, ECOM (PRC Docket No. R83-1, filed June 1, 1983); (2) drawbacks to a proposed modification of the test period for cost recovery in ECOM (PRC Docket No. R83-1, filed June 16, 1983); (3) advantages of setting ECOM rates to cover full costs (PRC Docket No. R84-1, filed December 23, 1983); (4) expedited procedures in reviewing proposed rate changes for Express Mail (PRC Docket No. RM88-2, filed October 14, 1988); (5) a complaint urging a study of the potential public benefits of exempting addressed third-class mail from the private express statutes (PRC Docket No. C89-1, filed February 28, 1989); and (6) recent developments in monopoly theory (PRC Docket RM89-4, filed September 1, 1989 and related testimony published in Monopoly Theory Inquiry, Washington, D.C.: PRC, November 1989, pp. 357 - 390).

[4] See, for example, Ogur, J., et al., The Deregulated Airline Industry: A Review of the Evidence, Washington, D.C.: FTC, 1988; "Pricing Practices of Motor Common Carriers of Property Since the Motor Carriers Act of 1980, Ex Parte No. MC-166," before the Interstate Commerce Commission (January 19, 1983); Breen, D., Regulatory Reform and the Trucking Industry: An Evaluation of the Motor Carriers Act of 1980, submitted to the Motor Carrier Ratemaking Study Commission (March 1982); "Economic Deregulation of Trucking," submitted to the Washington State Legislature, March 1985; FTC staff comments to Congress in the Railroad Antimonopoly Act of 1986, submitted May and June, 1986; (continued...)

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III. BACKGROUND

A. The Check Clearance Process

The FRS has operated the ITS check-transportation system as part of its check collection services for many years.[5] Check collection includes a series of steps whereby a financial institution that receives a check, known as a bank of first deposit [BFD], returns that check to the payor bank for payment of funds. As illustrated in Figure 1, the check collection process typically requires the services of check sorting, check transportation, and check presentment. In Figure 1, providers of these services within the check collection process are denoted by boxes; all providers of a given service are located in the same column. Note that once the customer uses an FRS service, such as sorting or transportation, that customer must use FRS services for the remaining steps in the clearance process.

Figure 1 indicates that the BFD must obtain sorting services prior to transportation. Sorting is required to determine the location of the payor bank, and, in some instances, to separate checks for large amounts. Sorting can be conducted directly by the BFD, or obtained for a fee from a correspondent bank or the FRS.[6] When a bank leaves an unsorted

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[4](...continued)
Frankena, M., and Pautler P., An Economic Analysis of Taxicab Regulation, Washington, D.C.: FTC, 1984; "Possible Restrictive and Anticompetitive Practices in South Carolina's Public Service Commission Statutes," submitted to the Legislative Audit Council of South Carolina, 1987; and, Reitzes, J., Mathios, A., and Daniel, T., An Analysis of the Maritime Industry and the Effects of the 1984 Shipping Act, FTC Report to Congress, 1989.

[5] This section relies heavily on the GAO Report No. GAO/GGD-89-61., Check Collection: Competitive Fairness Is an Elusive Goal, Washington, D.C.: May 1989.

[6] The FRS has 48 offices throughout the United States, each of which is a drop-off point for sorting services.

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bundle of checks at the FRS, that bundle is considered a "mixed sort." If the FRS sorts the check, it then requires that the check also be transported and presented by the FRS.[7] If, instead, a correspondent bank performs the sorting services, that bank typically arranges transportation and presentment services as well. The correspondent bank then charges the BFD for the performance of all these steps.[8]

If sorting services are furnished by a non-FRS supplier, that supplier has the option of using private transportation services or the ITS service to transport the check to the payor bank. Private transportation services are available from couriers that operate their own fleets of planes, or from freight forwarders that typically rent freight space aboard commercial airlines. A presorted bundle of checks, which is then given to the FRS for transportation [and presentment], is considered a "consolidated sort."

Once a check reaches its destination, it is then presented for payment. If presented by the FRS, immediate payment is required by law, and the FRS need not pay a presentment fee. If presented by a private bank, however, then that bank must typically pay a fee in order to receive immediate payment. Hence, the FRS enjoys an apparent regulatory advantage in the presentment of checks.[9] Unless there are

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[7] The existence of private providers of sorting, transportation, and presentment services implies that this requirement, by itself, is unlikely to be inefficient.

[8] BFDs that use the FRS or correspondent banks for sorting and subsequent check-processing steps may do so in part because they prefer "one-stop shopping."

[9] See the GAO Report, Check Collection: Competitive Fairness Is an Elusive Goal, *supra* note 5. The report states that, "The inability of [private] collecting banks to match Reserve bank collection terms, especially obtaining same-day payment without incurring bank fees, has constrained the collection options open to collecting banks; the collection services they may sell; and, in turn, the potential efficiencies they may (continued...)

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economies from vertical integration, however, this advantage should not necessarily affect competition in the transportation segment of the check clearance process. Correspondent banks can also obtain immediate payment upon presentment of checks without paying a fee if the private bank sorts and bundles the checks and delivers them to the appropriate FRS office for presentment.

Of the bundle of services that comprise check collection, the proposed fee change concerns only charges related to check transportation through the ITS system. Further, the proposed ceiling on transportation charges affects only checks that have been presorted by destination when they arrive at an FRS office. These consolidated sorts will be assessed a standard fee per check that varies based on the origin and destination until the ceiling on charges is reached.[10]

B. FRS Presence in the Check Clearance Process

Until 1980, the FRS provided check-collection services, including transportation, as a "free" service to member banks.[11] The Monetary Control Act of 1980, and subsequent FRS regulations, established that the FRS should price these services using pricing principles that consider

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[9](...continued) bring to the market. GAO found no evidence that the check collection system would be damaged if the differences in basic check presentment abilities of collecting and Reserve banks were narrowed or eliminated. In fact, the system might be improved by such a change." See pp. 2 and 3.

[10] Mixed sorts are typically assessed a standard fee per check regardless of the destination of each check. The transportation component of this fee is not subject to any ceiling, based on the new FRS rate proposal.

[11] The costs of these services were effectively paid by interest the FRS earned on the reserves that member banks were required to deposit with the FRS. Member banks received no return on these reserves. Nonmember banks could utilize the FRS's check collection services by using a member bank as a correspondent bank.

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costs that would be borne if the FRS operated as a private organization.[12] Other goals of the pricing policy are to foster private competition, improve the efficiency of the payments mechanism, and lower the costs of check-processing services to society at large. The FRS seeks these goals within the context of its overriding mission of maintaining public confidence in the integrity and safety of the nationwide payments system.[13]

After 1980, the FRS's check-collection system was opened to all banks on a fee-for-service basis. Partially as a result of its fee structure, FRS check-collection volume apparently declined six percent from 1980 to 1981.[14] Since then, however, FRS check-collection volume has grown: 14.6 billion checks in 1983, 16.0 billion checks in 1985, 17.0 billion checks in 1987, and 18.0 billion in 1989.[15]

The FRS's market share of check-collection services differs based on the size of the bank of first deposit. A study by the Association of Reserve City Bankers indicates that smaller banks are less likely to use

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[12] FRS Transmittal 45, Nov. 1984, p. 7.53 and 7.54.

[13] FRS Transmittal 111, May 1990, pp. 7.85 - 7.87.

[14] See GAO Report No. GAO/GGD-89-61, Check Collection: Competitive Fairness Is an Elusive Goal, supra note 5, p. 71.

[15] The FRS estimates that 55 billion checks will be written in 1990. Of these, 25 percent are "on us" checks, i.e., those for which the BFD and the payor are the same bank. Another 11 percent of the checks are presented through local clearinghouse arrangements. The remaining 64 percent include checks presented directly between banks [either locally without the aid of clearinghouses or interdistrict], checks collected through correspondent banks, checks collected through Federal Home Loan Banks, and checks collected through the FRS. (See, Board of Governors of the Federal Reserve, Annual Report, Washington, D.C.: 1983-89.) Unlike correspondent banks and the FRS, Federal Home Loan Banks can only offer check-collection services to thrift institutions. For diagrammatic simplicity, this source of check-collection services was omitted from Figure 1.

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the FRS directly for check-collection services.[16] Overall, however, the FRS's share of check-collection services has increased over the past several years according to survey data from the American Bankers Association and the Association of Reserve City Bankers.[17]

Historically, the FRS's revenue from check collection has exceeded its reported costs. Between 1983 and 1989, FRS revenue from commercial check collection rose from $383 million in 1983 to $549 million in 1989. During this same period, the FRS reported that its real and imputed costs[18] associated with FRS check collection rose from $358 million to $538 million.[19]

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[16] The following table presents the proportion of checks collected (exclusively) through the FRS and through correspondent banks (CBs) in 1987 for various size categories of BFDs. Percentages in each row do not sum to one hundred because some checks were collected in other ways (e.g., clearinghouses and holding company affiliates). In addition, checks that reach correspondent banks may subsequently be given to the FRS for some check-collection services.

BFD Assets ($ millions)	Percent of checks collected by FRS	Percent of checks collected by CBs
25-100	36%	51%
100-500	41	44
500-750	44	32
over 750	43	20

Source: GAO Report No. GAO/GGD-89-61, Check Collection: Competitive Fairness Is an Elusive Goal, Appendix II.

[17] This survey indicates that from 1983-87, the market share of correspondent banks dropped 10-16 points for depository institutions in the $25-$100 million asset range, 13-23 points in the $100-$500 million asset range, 12-18 points in the $500-$750 million asset range, and 2-7 points in the over $750 million asset range. These data also indicate that the FRS has gained market share in the smaller asset ranges [below $750 million]. See GAO Report No. GAO/GGD-89-61, Check Collection: Competitive Fairness Is an Elusive Goal, Appendix II.

[18] This category includes float costs and charges that would accrue to a private firm involved in check collection [such as sales taxes and any finance charges that would normally be associated with the private acquisition of assets used in check collection].

[19] See "Pro Forma Income Statement for Federal Reserve Priced Services, by Service," contained in the Board of Governors of the Federal Reserve System, Annual Report, Washington, D.C., 1983-89.

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IV. THE PRICING PROPOSAL

The FRS proposes a pricing schedule that would establish a maximum charge for shipping bundles of presorted checks between two FRS banks. Once the maximum charge is reached, larger bundles would not lead to higher total charges. A major effect of the FRS proposal would be to lower shipping costs to large shippers. There is nothing necessarily wrong with such a result. Shippers of large bundles of presorted checks may impose less cost per check on the ITS system than shippers of small bundles of presorted checks. Costs per check may be lower for a great many reasons which we do not here attempt to articulate. If the cost per check of transporting checks declines as a shipper's volume increases, it would be efficient to establish a pricing schedule that reflects such declining costs. We are concerned, however, that the reasons given by the FRS in support of its proposal do not demonstrate that large shippers impose lower costs per check than small shippers. The FRS notes:

> ITS network costs are essentially fixed. Of total 1990 network costs, more than 90 percent do not vary with volume. Once the Federal Reserve enters into multi-year contracts with the couriers to provide aircraft, pilots, ground operations, and other components of the network, those costs are fixed....Thus, the Federal Reserve uses an entirely variable price structure to recover largely fixed costs....A price structure with some fixed element would enable depository institutions, and particularly shippers of large volumes, to enjoy the benefits of the largely fixed cost ITS network.[20]

The foregoing description of ITS network costs paints a picture in which total costs and total capacity are relatively fixed over the life of the FRS's multi-year contracts. While such a situation may mean that the

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[20] Federal Reserve System, Docket No. R-0705, pp. 3-4.

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FRS's total short-run costs are more or less the same regardless of the total volume of checks shipped by all shippers, it does not necessarily mean that large shippers should be charged a lower average price per check than small shippers. If the cost per check of transporting checks declines as a shipper's volume increases, a fee schedule that rises less than proportionately with shipper volume would be desirable. But the FRS does not express why or how the shippers of large volumes impose less cost per check than do shippers of small volumes.[21]

A second potential difficulty with the FRS proposal is that it assumes not only that large shippers impose lower costs per check than small shippers, but also that costs per shipper do not increase at all with any volume larger than that eligible for the ceiling or maximum charge. Although this could be true, the FRS proposal does not indicate why or how this might be so. As the FRS notes, total costs may not vary substantially with total volume while contracts are in place in the short run.[22] However, over a longer time horizon, the zero charge for shipment volumes larger than the ceiling volume could induce a larger proportion of shipments of such sizes. When contracts are renegotiated, it seems to us unlikely that an increase in shipments of this size would impose no cost on the FRS. If they do impose additional cost, then charging zero for such shipment sizes as suggested by the FRS proposal

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[21] We assume that transportation costs and prices can be considered independently of the other steps in the check clearance process (sorting and presentment). This assumption appears consistent with the FRS's approach to this issue. It is possible that cost and demand interrelationships exist between transportation and these other services. Accounting for these interrelationships would complicate the development of a cost-based price structure. See Baumol, W., Panzar, J., and R. Willig, Contestable Markets and the Theory of Industry Structure, New York: Harcourt Brace Jovanovich, 1982.

[22] The FRS believes that as much as 10 percent of its costs vary with volume even when contracts are fixed and in place.

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would not reflect costs accurately. If costs are imposed by an increase in larger shipment volumes, then the FRS might account for this by an increase in the ceiling charge during the next contract period. We note however that this implies that shipment volumes above the current ceiling would impose costs on the FRS rather than zero cost as the pricing proposal suggests. It may well be that larger shipment volumes do not impose as much cost as do smaller shipment volumes. But again, the reasons why this might be so are not discussed in the FRS proposal.

It is true that the FRS might be able to align its price structure more closely with costs by using flexible fee ceilings. In fact the FRS has suggested that it might ultimately adopt ceilings that vary as origins and destinations vary.[23] Nonetheless, geographically flexible fee ceilings may not accurately reflect variations in costs due solely to shipment volume. We note that if large shipment volumes are priced below cost, efficient private competitors could be disadvantaged. This is discussed in greater detail in the following section.

It is possible that a price structure with a maximum charge is easier to administer than alternative pricing structures that more accurately reflect ITS costs in relation to shipment volume. If the FRS believes that such administrative simplicity will save costs, then the FRS may then wish to consider more explicitly whether any reduction in administrative costs due to a price ceiling offsets the benefits from a closer relationship of prices to costs.

The FRS supports its fee ceiling proposal, in part, by noting that private couriers purportedly charge their customers a fixed fee that is independent of volume. The FRS notes that a price structure with some fixed element, "would also bring the Federal Reserve closer to prevailing

[23] See Docket No. R-0705, p. 6.

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market practice..."[24] If private couriers actually do set a maximum charge, then the FRS proposal may well be appropriate. Some of the comments submitted to the FRS suggest otherwise, however. Private couriers may assess a flat charge plus a fee that increases at various volume increments.[25] Under the FRS proposal, a flat fee is charged only to shippers of bundles equal to or larger than the size eligible for the ceiling charge. All other shippers are charged a fee that varies directly in proportion to bundle size. This seems quite different from the fee structure used by private couriers.

By establishing a price schedule that reflects its costs, the FRS would encourage competition by promoting the entry or survival of efficient providers of check-transportation services.[26] The FRS would

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[24] See, Federal Reserve Docket No. R-0705, pp. 4-5. Discussions with FRS staff indicate that their information concerning industry pricing practices was not based on a detailed investigation of the market. These discussions suggested that more information was being gathered.

[25] For example, comments of First Wisconsin National Bank of Milwaukee, submitted October 8, 1990 [p. 3], state, "We currently have contracts that charge per pound, and we have a base rate with additional charge[s] when the weight exceeds a determined amount." Similarly, First Fidelity Bancorporation, comments as follows [submitted October 26, 1990, p. 2]: "... we are not aware of any private courier company that prices for check shipments in the manner proposed by the Federal Reserve. The majority of prices quoted to FFB by private couriers asks for a minimum price per endpoint which varies upward as certain weight limits are reached."

Our conversations with industry sources and review of industry comments also indicate that ITS pricing behavior differs from that used by private providers. Private couriers tend to negotiate rates with customers, whereas the FRS does not.

[26] The policy guidelines of the FRS require that as part of its cost adjustments, the FRS include an allowance for sales and income taxes. After these adjustments, the FRS then compares its "net" return on capital with the "normal" return on capital earned by a private firm engaged in similar activities.

Although these "private sector" adjustments are not normally part of the accounting costs of government enterprises, we believe that they allow the FRS to assess more accurately the efficiency of its provision of check-collection services. Without the tax adjustments, the FRS might overinvest in the provision of check-clearing services.

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also encourage efficient provision of related services such as check sorting and check presentment.

If the FRS sets a price schedule that recovers its costs, but charges certain banks (larger shippers) less than the costs they directly impose, then smaller shippers will pay more than the cost of providing their check-transportation services if the ITS is their only shipping option. It would seem that this effect should be avoided. Competition from private couriers may prevent FRS prices from significantly exceeding the cost of providing check-transportation services to smaller shippers. If so, the FRS could not charge some banks (large shippers) less than the costs they directly impose without also subsidizing ITS operations. The FRS may also wish to avoid this possibility.

V. COMPETITION WITHIN THE RELEVANT MARKET

The proposed change in the ITS fee structure will likely influence the demand faced by private couriers and the quantity of checks they ship. In most markets, staff would not suggest that firms should be constrained from lowering price because their competitors would be injured. Similarly, staff would suggest that the effects on private couriers be given little consideration if ITS prices reasonably follow the costs that its services impose. So long as prices reflect costs, more-efficient [or equally-efficient] private providers of transportation services will compete successfully with ITS. Furthermore, pricing by the FRS that reflects its costs will be more likely to induce the FRS to adjust the quantity of its services to an efficient level. However, if the FRS chooses a pricing structure that does not recover ITS costs, and maintains the structure by subsidizing the ITS network with funds

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derived from other sources (such as other sources of FRS income), then potentially more-efficient providers of check transportation services might exit the market or curtail their service.

In its initial review of the competitive impact of the proposed fee change, the FRS concluded that it should improve the competitive position of correspondent banks [that provide check-collection services] because the ITS transport price to large shippers may be lower. The FRS acknowledges that the ITS rate change may shift demand to ITS from private air networks, but concludes:

> The modified ITS price structure may induce a shift in volume from direct-sent arrangements through private air couriers to consolidated shipments on ITS. The Federal Reserve does not compete directly with private sector air couriers. The ITS network transports only checks that are accounted for on the books of the Reserve Banks and other Federal Reserve materials between Federal Reserve Bank offices. Thus, ITS is an integral part of the Federal Reserve's check collection service. Private air couriers provide a broad range of services, including delivery of checks to correspondent banks and transportation of many other types of cargo.
>
> Even if the Federal Reserve were perceived to be in competition with private air couriers, the proposed ITS price structure would not have a direct and material adverse effect on the ability of air couriers to compete effectively. The proposed price structure is consistent with the current pricing practices of most air carriers.[27]

Our examination of the FRS's request for comments, comments and interviews with private couriers and banks,[28] GAO reports,[29] and

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[27] Docket No. R-0705, pp. 8-9.

[28] Thirty-six comments were received in response to the initial request for comments due on October 19, 1990. This initial deadline was subsequently extended for ninety days.

[29] See GAO Report No. GAO/GGD-90-17 The Federal Reserve: Information on the System's Check Collection Service, Dec. 1989, and GAO Report No. GAO/GGD-89-61 Check Collection: Competitive Fairness Is an Elusive Goal, May 1989.

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publicly available market information[30] suggest that private air courier services do compete with ITS. The FRS seems to conclude that because the FRS integrates sorting, transportation, and presentment activities into a single service offering, private couriers do not compete with the FRS. The FRS may wish to reexamine this interpretation. A vertically integrated supplier [such as the FRS] does compete with firms that supply one stage of the vertical process whenever single-stage suppliers can be linked with suppliers at other stages to provide a close substitute for the integrated service. Our current understanding is that customers, in fact, have such alternatives.

Of particular relevance is that the FRS offers ITS transportation services to banks that do not purchase sorting services from the FRS. Correspondent banks are welcome to presort and then deliver checks to either the ITS or a private courier for transportation prior to presentment. Faced with these alternative sources of transportation, some correspondent banks may be expected to switch toward ITS services when the price of ITS services declines and away from ITS services when the price of ITS services increases.[31]

Further, the fact that non-ITS private couriers provide transportation services to many other industries need not mean, as the FRS appears to conclude, that these couriers would therefore experience little, if any, impact if forced to cease or curtail the provision of check-transportation services. The ability to shift resources to serve the transportation requirements of other industries reduces the risk of

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[30] Public references that provide information on air courier services include Moody's Transportation Manual, U.S. Industrial Outlook, and filings by air couriers to the Securities and Exchange Commission.

[31] The FRS also expressed this expectation in the passage previously cited in this section.

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providing transportation services to any given industry. Nevertheless, it may be, although we do not know this as a fact, that non-ITS private couriers bear significant expenses, some perhaps specified in long-run contracts, particular to the provision of check-transportation services. If so, then a reduction or cessation of these services may imply that insufficient revenues are generated to offset these costs. Hence, losses may be experienced.

While the impact on firms from a rival's pricing policy would generally reflect the procompetitive workings of market forces -- and thus not warrant regulatory scrutiny -- the FRS's proposed pricing change, were it not to reflect costs reasonably, may adversely affect efficiency. This would be so if the FRS's pricing proposal caused private competitors to curtail their service or leave the market when they would not curtail their service or leave if the FRS's proposal reasonably reflected its costs.

VI. CONCLUSION

The pricing schedule proposed by the FRS would establish a maximum charge for shipping bundles of presorted checks. The effect of the maximum charge would be not only to reduce per-check prices to shippers of large bundles, but also to establish a ceiling above which total charges would not vary with volume. We would encourage the FRS to explore the relationship between bundle size and cost. Although it may be that large bundles impose lower costs per check on the FRS, we do not believe that the FRS has demonstrated that this is so. Moreover, our analysis suggests that a rate ceiling may not appropriately consider the relationship between cost and volume.

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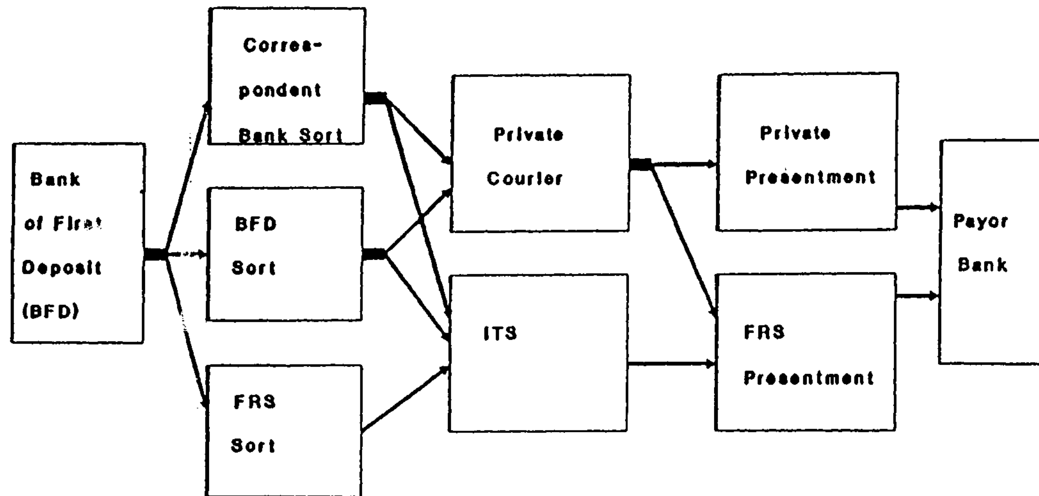
Fig. 1 CHECK CLEARING PROCESS: INTER-DISTRICT CHECKS



Notes:
FRS = Federal Reserve System
Decision points occur at the branches at the ends of the thick lines.

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

July 22, 1997

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I am pleased to appear before this Subcommittee to present the Federal Reserve's report on the economic situation and monetary policy.

The recent performance of the economy, characterized by strong growth and low inflation, has been exceptional--and better than most anticipated. During the first quarter of 1997, real gross domestic product expanded at nearly a 6 percent annual rate, after posting a 3 percent increase over 1996. Activity apparently continued to expand in the second quarter, albeit at a more moderate pace. The economy is now in the seventh consecutive year of expansion, making it the third longest post-World-War-II cyclical upswing to date.

Moreover, our Federal Reserve Banks indicate that economic activity is on the rise, and at a relatively high level, in virtually every geographic region and community of the nation. The expansion has been balanced, in that inventories, as well as stocks of business capital and other durable assets, have been kept closely in line with spending, so overhangs have been small and readily corrected.

This strong expansion has produced a remarkable increase in work opportunities for Americans. A net of more than thirteen million jobs has been created since the current period of growth began in the spring of 1991. As a consequence, the unemployment rate has fallen to 5 percent--its lowest level in almost a quarter century. The expansion has enabled many in the working-age population, a large number of whom would have otherwise remained out of the labor force or among the longer-term unemployed, to acquire work experience and improved skills. Our whole economy will benefit from their greater productivity. To be sure, not all segments of our population are fully sharing in the economic improvement. Some Americans still have trouble finding jobs, and for part of our work force real wage stagnation persists.

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In contrast to the typical postwar business cycle, measured price inflation is lower now than when the expansion began and has shown little tendency to rebound of late, despite high rates of resource utilization. In the business sector, producer prices have fallen in each of the past six months. Consumers also are enjoying low inflation. The consumer price index rose at less than a 2 percent annual rate over the first half of the year, down from a little over 3 percent in 1996.

With the economy performing so well for so long, financial markets have been buoyant, as memories of past business and financial cycles fade with time. Soaring prices in the stock market have been fueled by moderate long-term interest rates and expectations of investors that profit margins and earnings growth will hold steady, or even increase further, in a relatively stable, low-inflation environment. Credit spreads at depository institutions and in the open market have remained extremely narrow by historical standards, suggesting a high degree of confidence among lenders regarding the prospects for credit repayment.

The key question facing financial markets and policymakers is what is behind the good performance of the economy, and will it persist. Without question, the exceptional economic situation reflects some temporary factors that have been restraining inflation rates. In addition, however, important pieces of information, while just suggestive at this point, could be read as indicating basic improvements in the longer-term efficiency of our economy. The Federal Reserve has been aware of this possibility in our monetary policy deliberations and, as always, has operated with a view to supplying adequate liquidity to allow the economy to reach its highest potential on a sustainable basis.

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Nonetheless, we also recognize that the capacity of our economy to produce goods and services is not without limit. If demand were to outrun supply, inflationary imbalances would eventually develop that would tend to undermine the current expansion and inhibit the long-run growth potential of the economy. Because monetary policy works with a significant lag, policy actions are directed at a future that may not be clearly evident in current experience. This leads to policy judgments that are by their nature calibrated to the relative probabilities of differing outcomes. We moved the federal funds rate higher in March because we perceived the probability of demand outstripping supply to have increased to a point where inaction would have put at risk the solid elements of support that have sustained this expansion and made it so beneficial.

In making such judgments in March and in the future, we need to analyze carefully the various forces that may be affecting the balance of supply and demand in the economy, including those that may be responsible for its exceptional recent behavior. The remainder of my testimony will address the various possibilities.

Inflation, Output, and Technological Change in the 1990s

Many observers, including us, have been puzzled about how an economy, operating at high levels and drawing into employment increasingly less experienced workers, can still produce subdued and, by some measures even falling, inflation rates. It will, doubtless, be several years before we know with any conviction the full story of the surprisingly benign combination of output and prices that has marked the business expansion of the last six years.

Certainly, public policy has played an important role. Administration and Congressional actions to curtail budget

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deficits have enabled long-term interest rates to move lower, encouraging private efficiency-enhancing capital investment. Deregulation in a number of industries has fostered competition and held down prices. Finally, the preemptive actions of the Federal Reserve in 1994 contained a potentially destabilizing surge in demand, short-circuiting a boom-bust business cycle in the making and keeping inflation low to encourage business innovation. But the fuller explanation of the recent extraordinary performance may well lie deeper.

In February 1996, I raised before this Committee a hypothesis tying together technological change and cost pressures that could explain what was even then a puzzling quiescence of inflation. The new information received in the last eighteen months remains consistent with those earlier notions; indeed, some additional pieces of the puzzle appear to be falling into place.

A surge in capital investment in high tech equipment that began in early 1993 has since strengthened. Purchases of computer and telecommunications equipment have risen at a more than 14 percent annual rate since early 1993 in nominal terms, and at an astonishing rate of nearly 25 percent in real terms, reflecting the fall in the prices of this equipment. Presumably companies have come to perceive a significant increase in profit opportunities from exploiting the improved productivity of these new technologies.

It is premature to judge definitively whether these business perceptions are the harbinger of a more general and persistent improvement in productivity. Supporting this possibility, productivity growth, which often suffers as business expansions mature, has not followed that pattern. In addition, profit margins remain high in the face of pickups in compensation

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growth, suggesting that businesses continue to find new ways to enhance their efficiency. Nonetheless, although the anecdotal evidence is ample and manufacturing productivity has picked up, a change in the underlying trend is not yet reflected in our conventional data for the whole economy.

But even if the perceived quicker pace of application of our newer technologies turns out to be mere wheel-spinning rather than true productivity advance, it has brought with it a heightened sense of job insecurity and, as a consequence, subdued wage gains. As I pointed out here last February, polls indicated that despite the significant fall in the unemployment rate, the proportion of workers in larger establishments fearful of being laid off rose from 25 percent in 1991 to 46 percent by 1996. It should not have been surprising then that strike activity in the 1990s has been lower than it has been in decades and that new labor union contracts have been longer and have given greater emphasis to job security. Nor should it have been unexpected that the number of workers voluntarily leaving their jobs to seek other employment has not risen in this period of tight labor markets.

To be sure, since last year, surveys have indicated that the proportion of workers fearful of layoff has stabilized and the number of voluntary job leavers has edged up. And, indeed, perhaps as a consequence, wage gains have accelerated some. But increases in the Employment Cost Index still trail behind what previous relationships to tight labor markets would have suggested, and a lingering sense of fear or uncertainty seems still to pervade the job market, though to a somewhat lesser extent.

Consumer surveys do indicate greater optimism about the economy. However, it is one thing to believe that the economy,

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indeed the job market, will do well overall, but quite another to feel secure about one's individual situation, given the accelerated pace of corporate restructuring and the heightened fear of skill obsolescence that has apparently characterized this expansion. Persisting insecurity would help explain why measured personal saving rates have not declined as would have been expected from the huge increase in stock market wealth. We will, however, have a better fix on savings rates after the coming benchmark revisions to the national income and product accounts.

The combination in recent years of subdued compensation per hour and solid productivity advances has meant that unit labor costs of nonfinancial corporations have barely moved. Moreover, when you combine unit labor costs with nonlabor costs -- which account for one-quarter of total costs on a consolidated basis - total unit costs for the year ended in the first quarter of 1997 rose only about half a percent. Hence, a significant part of the measured price increase over that period was attributable to a rise in profit margins, unusual well into a business expansion. Rising margins are further evidence suggesting that productivity gains have been unexpectedly strong; in these situations, real labor compensation usually catches up only with a lag.

While accelerated technological change may well be an important element in unraveling the current economic puzzle, there have been other influences at play as well in restraining price increases at high levels of resource utilization. The strong dollar of the last two years has pared import prices and constrained the pricing behavior of domestic firms facing import competition. Increasing globalization has enabled greater specialization over a wider array of goods and services, in effect allowing comparative advantage to hold down costs and enhance efficiencies. Increased deregulation of

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telecommunications, motor and rail transport, utilities, and finance doubtless has been a factor restraining prices, as perhaps has the reduced market power of labor unions. Certainly, changes in the health care industry and the pricing of health services have greatly contributed to holding down growth in the cost of benefits, and hence overall labor compensation.

Many of these forces are limited or temporary, and their effects can be expected to diminish, at which time cost and price pressures would tend to reemerge. The effects of an increased rate of technological change might be more persistent, but they too could not permanently hold down inflation if the Federal Reserve allows excess liquidity to flood financial markets. I have noted to you before the likelihood that at some point workers might no longer be willing to restrain wage gains for added security, at which time accelerating unit labor costs could begin to press on profit margins and prices, should monetary policy be too accommodative.

When I discuss greater technological change, I am not referring primarily to a particular new invention. Instead, I have in mind the increasingly successful and pervasive application of recent technological advances, especially in telecommunications and computers, to enhance efficiencies in production processes throughout the economy. Many of these technologies have been around for some time. Why might they be having a more pronounced effect now?

In an intriguing paper prepared for a conference last year sponsored by the Federal Reserve Bank of Boston, Professor Nathan Rosenberg of Stanford documented how, in the past, it often took a considerable period of time for the necessary synergies to develop between different forms of capital and technologies. One example is the invention of the dynamo in the mid 1800s.

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Rosenberg's colleague Professor Paul David had noted a number of years ago that it wasn't until the 1920s that critical complementary technologies of the dynamo - for example, the electric motor as the primary source of mechanical drive in factories, and central generating stations -- were developed and in place and that production processes had fully adapted to these inventions.

What we may be observing in the current environment is a number of key technologies, some even mature, finally interacting to create significant new opportunities for value creation. For example, the applications for the laser were modest until the later development of fiber optics engendered a revolution in telecommunications. Broad advances in software have enabled us to capitalize on the prodigious gains in hardware capacity. The interaction of both of these has created the Internet.

The accelerated synergies of the various technologies may be what have been creating the apparent significant new profit opportunities that presumably lie at the root of the recent boom in high-tech investment. An expected result of the widespread and effective application of information and other technologies would be a significant increase in productivity and reduction in business costs.

We do not now know, nor do I suspect can anyone know, whether current developments are part of a once or twice in a century phenomenon that will carry productivity trends nationally and globally to a new higher track, or whether we are merely observing some unusual variations within the context of an otherwise generally conventional business cycle expansion. The recent improvement in productivity could be just transitory, an artifact of a temporary surge in demand and output growth. In view of the slowing in growth in the second quarter and the more

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moderate expansion widely expected going forward, data for profit margins on domestic operations and productivity from the second quarter on will be especially relevant in assessing whether recent improvements are structural or cyclical.

Whatever the trend in productivity and, by extension, overall sustainable economic growth, from the Federal Reserve's point of view, the faster the better. We see our job as fostering the degree of liquidity that will best support the most effective platform for growth to flourish. We believe a noninflationary environment is such a platform because it promotes long-term planning and capital investment and keeps the pressure on businesses to contain costs and enhance efficiency.

The Federal Reserve's policy problem is not with growth, but with maintaining an effective platform. To do so, we endeavor to prevent strains from developing in our economic system, which long experience tells us produce bottlenecks, shortages, and inefficiencies. These eventually create more inflation, which undermines economic expansion and limits the longer-term potential of the economy.

In gauging the potential for oncoming strains, it is the effective capacity of the economy to produce that is important to us. An economy operating at a high level of utilization and growing 5 percent a year is in little difficulty if capacity is growing at least that fast. But a fully utilized economy growing at 1 percent will eventually get into trouble if capacity is growing less than that.

Capacity itself, however, is a complex concept, which requires a separate evaluation of its two components, capital and labor. It appears that capital, that is, plant and equipment, can adapt and expand more expeditiously than in the past to meet

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demands. Hence, capital capacity is now a considerably less rigid constraint than it once was.

In recent years, technology has engendered a significant compression of lead times between order and delivery for production facilities. This has enabled output to respond increasingly faster to an upsurge in demand, thereby decreasing the incidence of strains on capital capacity and shortages so evident in earlier business expansions.

Reflecting progressively shorter lead times for capital equipment, unfilled orders to shipment ratios for nondefense capital goods have declined by 30 percent in the last six years. Not only do producers have quicker access to equipment that embodies the most recent advances, but they have been able to adjust their overall capital stock more rapidly to increases in demand.

The current lack of material shortages and bottlenecks, despite the high level and recent robust expansion of demand, is striking. The effective capacity of production facilities has increased substantially in recent years in response to strong final demands and the influence of cost reductions possible with the newer technologies. Increased flexibility is particularly evident in the computer, telecommunications, and related industries, a segment of our economy that seems far less subject to physical capacity constraints than many older-line establishments, and one that is assuming greater importance in our overall output. But the shortening of lags has been pervasive even in more mature industries, owing in part to the application of advanced technologies to production methods.

At the extreme, if all capital goods could be produced at constant cost and on demand, the size of our nation's capital stock would never pose a restraint on production. We are

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obviously very far from that nirvana, but it is important to note that we are also far from the situation a half-century ago when our production processes were dominated by equipment such as open hearth steel furnaces, which had very exacting limits on how much they could produce in a fixed time frame and which required huge lead times to expand their capacity.

Even so, today's economy as a whole still can face capacity constraints from its facilities. Indeed, just three years ago, bottlenecks in industrial production though less extensive than in years past at high levels of measured capacity utilization -- were nonetheless putting significant upward pressures on prices at earlier stages of production. More recently vendor performance has deteriorated somewhat, indicating that flexibility to meet demands still has limits. Although further strides toward greater facilities flexibility have occurred since 1994, this is clearly an evolutionary, not a revolutionary, process.

Labor Markets

Moreover, technology and management changes have had only a limited effect on the ability of labor supply to respond to changes in demand. To be sure, individual firms have acquired additional flexibility by increased use of outsourcing and temporary workers. In addition, smaller work teams can adapt more readily to variations in order flows. While these techniques put the right workers at the right spots to reduce bottlenecks, they do not increase the aggregate supply of labor. That supply is sensitive to changes in demand, but to a far more limited extent than for facilities. New plants can almost always be built. But labor capacity for an individual country is constrained by the size of the working-age population, which,

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except for immigration, is basically determined several decades in the past.

Of course, capital facilities and labor are not fully separate markets. Within limits, labor and capital are substitutes, and slack in one market can offset tightness in another. For example, additional work shifts can expand output without significant addition to facilities, and similarly more labor-displacing equipment can permit production to be increased with the same level of employment.

Yet despite significant increases in capital equipment in recent years, new additions to labor supply have been inadequate to meet the demand for labor. As a consequence, the recent period has been one of significant reduction in labor market slack.

Of the more than two million net new hires at an annual rate since early 1994, only about half have come from an expansion in the population aged 16 to 64 who wanted a job, and more than a third of those were net new immigrants. The remaining one million plus per year increase in employment has been pulled from those who had been reported as unemployed (600 thousand annually) and those who wanted, but had not actively sought, a job (more than 400 thousand annually). The latter, of course, are not in the official unemployment count.

The key point is that continuously digging ever deeper into the available work age population is not a sustainable trajectory for job creation. The unemployment rate has a downside limit if for no other reason than unemployment, in part, reflects voluntary periods of job search and other frictional unemployment. There is also a limit on how many of the additional 5 million who wanted a job last quarter but were not actively seeking one could be readily absorbed into jobs - in

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particular, the large number enrolled in school, and those who may lack the necessary skills or face other barriers to taking jobs. The rise in the average workweek since early 1996 suggests employers are having increasingly greater difficulty fitting the millions who want a job into available job slots. If the pace of job creation continues, the pressures on wages and other costs of hiring increasing numbers of such individuals could escalate more rapidly.

To be sure, there remain an additional 34 million in the working-age population (age 16 64) who say they do not want a job. Presumably, some of these early retirees, students, or homemakers might be attracted to the job market if it became sufficiently rewarding. However, making it attractive enough could also involve upward pressures in real wages that would trigger renewed price pressures, undermining the expansion.

Thus, there would seem to be emerging constraints on potential labor input. Even before we reach the ultimate limit of sustainable labor supply growth, the economy's ability to expand employment at the recent rate should rapidly diminish. The availability of unemployed labor could no longer add to growth, irrespective of the degree of slack in physical facilities at that time. Simply adding new facilities will not increase production unless output per worker improves. Such improvements are possible if worker skills increase, but such gains come slowly through improved education and on-the-job training. They are also possible as capital substitutes for labor, but are limited by the state of technology. More significant advances require technological breakthroughs. At the cutting edge of technology, where America finds itself, major improvements cannot be produced on demand. New ideas that matter are hard won.

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The Economic Outlook

As I noted, the recent performance of the labor markets suggests that the economy was on an unsustainable track. Unless aggregate demand increases more slowly than it has in recent years - more in line with trends in the supply of labor and productivity imbalances will emerge. We do not know, however, at what point pressures would develop -- or indeed whether the economy is already close to that point.

Fortunately, the very rapid growth of demand over the winter has eased recently. To an extent this easing seems to reflect some falloff in growth of demand for consumer durables and for inventories to a pace more in line with moderate expansion in income. But some of the recent slower growth could simply be a product of abnormal weather patterns, which contributed to a first-quarter surge in output and weakened the second quarter, in which case the underlying trend could be somewhat higher than suggested by the second-quarter data alone. Certainly, business and consumer confidence remains high and financial conditions are supportive of growth. Particularly notable is the run-up in stock market wealth, the full effects of which apparently have not been reflected in overall demand, but might yet be.

Monetary policymakers, balancing these various forces, forecast a continuation of less rapid growth in coming quarters. For 1997 as a whole, the central tendency of their forecasts has real GDP growing 3 to 3-1/4 percent. This would be much more brisk than was anticipated in February, and the upward revision to this estimate largely reflects the unexpectedly strong first quarter. The central tendency of monetary policymakers' projections is that real GDP will expand 2 to 2-1/2 percent in 1998. This pace of expansion is expected to keep the unemployment rate close to its current low level.

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We are reasonably confident that inflation will be quite modest for 1997 as a whole. The central tendency of the forecasts is that consumer prices will rise only 2-1/4 to 2-1/2 percent this year. This would be a significantly better outcome than the 2-3/4 to 3 percent CPI inflation foreseen in February.

Federal Open Market Committee members do see higher rates of inflation next year. The central tendency of the projections is that CPI inflation will be 2-1/2 to 3 percent in 1998 -- a little above the expectation for this year. However, much of this increase is presumed to result from the absence of temporary factors that are holding down inflation this year. In particular, the favorable movements in food and energy prices of 1997 are unlikely to be repeated, and non-oil import prices may not continue to decline. While it is possible that better productivity trends and subdued wage growth will continue to help damp the increases in business costs associated with tight labor markets, this is a situation that the Federal Reserve plans to monitor closely.

I have no doubt that the current stance of policy - characterized by a nominal federal funds rate around 5-1/2 percent -- will need to be changed at some point to foster sustainable growth and low inflation. Adjustments in the policy instrument in response to new information are a necessary and, I should like to emphasize, routine aspect of responsible policymaking. For the present, as I indicated, demand growth does appear to have moderated, but whether that moderation will be sufficient to avoid putting additional pressures on resources is an open question. With considerable momentum behind the expansion and labor market utilization rates unusually high, the Federal Reserve must be alert to the possibility that additional

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action might be called for to forestall excessive credit creation.

The Federal Reserve is intent on gearing its policy to facilitate the maximum sustainable growth of the economy, but it is not, as some commentators have suggested, involved in an experiment that deliberately prods the economy to see how far and fast it can grow. The costs of a failed experiment would be much too burdensome for too many of our citizens.

Clearly, in considering issues of monetary policy we need to distinguish carefully between sustainable economic growth and unsustainable accelerations of activity. Sustainable growth reflects the increased capacity of the economic system to produce goods and services over the longer run. It is largely the sum of increases in productivity and in the labor force. That growth contrasts with a second type, a more transitory growth. An economy producing near capacity can expand faster for a short time, often through unsustainably low short-term interest rates and excess credit creation. But this is not growth that promotes lasting increases in standards of living and in jobs for our nation. Rather, it is a growth that creates instability and thereby inhibits the achievement of our nation's economic goals.

The key questions are how monetary policy can best foster the highest rate of sustainable growth and avoid amplifying swings in output, employment, and prices. The historical evidence is unambiguous that excessive creation of credit and liquidity contributes nothing to the long-run growth of our productive potential and much to costly shorter-term fluctuations. Moreover, it promotes inflation, impairing the economy's longer-term potential output.

Our objective has never been to contain inflation as an end in itself, but rather as a precondition for the highest possible

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long-run growth of output and income the ultimate goal of macroeconomic policy.

In considering possible adjustments of policy to achieve that goal, the issue of lags in the effects of monetary policy is crucial. The evidence clearly demonstrates that monetary policy affects the financial markets immediately but works with significant lags on output, employment, and prices. Thus, as I pointed out earlier, policy needs to be made today on the basis of likely economic conditions in the future. As a consequence, and in the absence of once-reliable monetary guides to policy, there is no alternative to formulating policy using risk-reward tradeoffs based on what are, unavoidably, uncertain forecasts.

Operating on uncertain forecasts, of course, is not unusual. People do it every day, consciously or subconsciously. A driver might tap the brakes to make sure not to be hit by a truck coming down the street, even if he thinks the chances of such an event are relatively low; the costs of being wrong are simply too high. Similarly, in conducting monetary policy the Federal Reserve needs constantly to look down the road to gauge the future risks to the economy and act accordingly.

Growth of Money and Credit

The view that the Federal Reserve's best contribution to growth is to foster price stability has informed both our tactical decisions on the stance of monetary policy and our longer-run judgments on appropriate rates of liquidity provision. To be sure, growth rates of monetary and credit aggregates have become less reliable as guides for monetary policy as a result of rapid change in our financial system. As I have reported to you previously, the current uncertainties regarding the behavior of the monetary aggregates have implied that we have been unable to

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employ them as guides to short-run policy decisions. Accordingly, in recent years we have reported annual ranges for money growth that serve as benchmarks under conditions of price stability and a return to historically stable patterns of velocity.

Over the past several years, the monetary aggregates - M2 in particular - have shown some signs of reestablishing such stable patterns. The velocity of M2 has fluctuated in a relatively narrow range, and some of its variation within that range has been explained by interest rate movements, in a relationship similar to that established over earlier decades. We find this an encouraging development, and it is possible that at some point the FOMC might elect to put more weight on such monetary quantities in the conduct of policy. But in our view, sufficient evidence has not yet accumulated to support such a judgment.

Consequently, we have decided to keep the existing ranges of growth for money and credit for 1997 and carry them over to next year, retaining the interpretation of the money ranges as benchmarks for the achievement of price stability. With nominal income growth strong relative to the rate that would likely prevail under conditions of price stability, the growth of M2 is likely to run in the upper part of its range both this year and next, while M3 could run a little above its cone. Domestic nonfinancial sector debt is likely to remain well within its range, with private debt growth brisk and federal debt growth subdued. Although any tendency for the aggregates to exceed their ranges would not, in the event, necessarily call for an examination of whether a policy adjustment was needed, the Federal Reserve will be closely examining financial market prices and flows in the context of a broad range of economic and price

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indicators for evidence that the sustainability of the economic expansion may be in jeopardy.

Concluding Comment

The Federal Reserve recognizes, of course, that monetary policy does not determine the economy's potential. All that it can do is help establish sound money and a stable financial environment in which the inherent vitality of a market economy can flourish and promote the capital investment that in the long run is the basis for vigorous economic growth. Similarly, other government policies also have a major role to play in contributing to economic growth. A continued emphasis on market mechanisms through deregulation will help sharpen incentives to work, save, invest, and innovate. Similarly, a fiscal policy oriented toward limited growth in government expenditures, producing smaller budget deficits and even budget surpluses, would tend to lower real interest rates even further, also promoting capital investment. The recent experience provides striking evidence of the potential for the continuation and extension of monetary, fiscal, and structural policies to enhance our economy's performance in the period ahead.

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Tuesday
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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

July 22, 1997

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Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM
Washington, D.C., July 22, 1997

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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Table of Contents

		Page
Section 1:	Monetary Policy and the Economic Outlook	1
Section 2:	Economic and Financial Developments in 1997	6

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Section 1: Monetary Policy and the Economic Outlook

The economy continued to perform exceptionally well in the first half of 1997. Real output grew briskly, while inflation ebbed. Sizable further increases in payrolls pushed the unemployment rate below 5 percent for the first time in nearly twenty-five years. Although growth in real gross domestic product appears to have slowed in the spring, this slackening came on the heels of a dramatic surge in the opening months of the year; all indications are that the expansion remains well intact. The members of the Board of Governors and the Reserve Bank presidents anticipate that the economy will grow at a moderate pace in the second half of this year and in 1998 and that inflation will remain low. Conditions in financial markets are supportive of continued growth: Longer-term interest rates are in the lower portion of the range observed in this decade, the stock market has registered all-time highs, and credit remains readily available to private borrowers.

Since the February report on monetary policy, Federal Reserve policymakers have revised upward their expectations for growth of real activity in 1997 and trimmed their forecasts of inflation. This combination of revisions highlights the extraordinarily positive conditions still prevailing more than six years into the current economic expansion. In part, the recent confluence of higher-than-expected output and lower inflation has reflected the favorable influences on prices of retreating oil prices and a strong dollar. But it may also be attributable to more durable changes in our economy, notably a greater flexibility and competitiveness in labor and product markets and more rapid, technology-driven gains in efficiency. In essence, the economy may be experiencing an upward shift in its longer-range output potential.

To the extent that aggregate supply is expanding more rapidly, monetary policy can accommodate extra growth in demand without fostering increased inflationary pressures. In late March, however, the Federal Open Market Committee concluded that there was a significant risk that aggregate demand would grow faster in the coming quarters than available supply, which, with utilization already at a very high level, would place the economy's resources under increasing strain. If such unsustainable growth persisted, the resulting inflationary imbalances would eventually undermine the health of the expansion—the all too frequent pattern of past business cycles. To protect against the possibility of such an outcome, the Committee tightened policy slightly. With the softening of demand in the spring, the Committee was able to maintain a steady posture in the money market while closely monitoring economic developments. The ongoing objective of monetary policy is to help the nation achieve maximum sustainable economic growth and the highest average living standards. The Federal Reserve recognizes that it can best accomplish this objective by keeping inflation in check, because an environment of price stability is most conducive to sound, long-term planning by households and businesses.

Monetary Policy, Financial Markets, and the Economy over the First Half of 1997

The rapid economic growth observed in the closing months of 1996 continued in the first quarter of this year, with real GDP advancing almost 6 percent at an annual rate. Consumer spending surged, fueled by a significant increase in income, upbeat consumer attitudes, and the effects of the huge run-up in equity prices over the past couple of years on household net worth. Business fixed investment was strong, and companies restocked inventories that had become thin as sales soared. The advance in real output provided support for considerable new hiring; rising pay and greater job availability drew additional people into the workforce, lifting the labor force participation rate to a new high during the first quarter of the year. The underlying trend in consumer price inflation was still subdued. Inflation pressures were held in check by smaller food price increases, declining prices for non-oil imports, the marked expansion of industrial capacity in recent years, and continuing efforts by businesses to boost efficiency.

At their meeting in late March, Federal Open Market Committee (FOMC) members expected that the growth of economic activity would ease in the coming months, but they were uncertain about the likely extent of that slowing. Although the first-quarter burst in production had owed importantly to a number of temporary factors, many of the fundamentals underlying consumer and business demand remained quite positive. The Committee was concerned about the risk that if outsized gains in real output continued, pressures on costs and prices would emerge that could eventually undermine the expansion. Therefore, to help foster more sustainable trends in output and guard against potential inflationary imbalances, the Committee firmed policy slightly by

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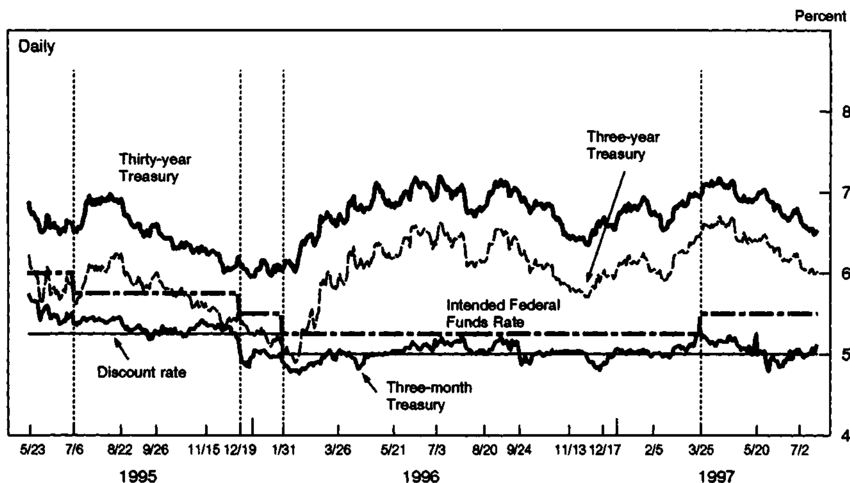
Selected Interest Rates



Note. Dotted vertical lines indicate days on which the Federal Open Market Committee (FOMC) announced a monetary policy action. The dates on the horizontal axis are those on which the FOMC held meetings. Last observations are for July 18, 1997.

raising the expected federal funds rate from around 5¼ percent to around 5½ percent.

The unsustainably strong pace of economic growth in the first quarter weighed on financial markets. Interest rates rose substantially, even before the System's action, despite favorable news on inflation. Because the policy tightening was widely anticipated, rates were little affected by the announcement, but they moved up a little more in the following weeks as incoming data suggested persistent strength in economic activity. Equity prices rose early in the first quarter and then declined, changing relatively little on net. The trade-weighted value of the dollar in terms of the other G-10 currencies increased about 7 percent in the first quarter, reflecting the unexpectedly strong economic growth in the United States and market uncertainty about economic performance abroad.

As the second quarter progressed, it became increasingly evident that economic activity had indeed decelerated. The expansion of consumer spending eased considerably, while business fixed investment remained strong. Employment continued to climb rapidly, pushing the unemployment rate down below 5 percent on average in the second quarter—the lowest level since the early 1970s. Despite high levels of employment and production through the first half of the year, there were few signs that inflation was deviating significantly from recent trends. Although overall consumer price inflation dipped in the second quarter as energy prices declined, consumer prices excluding food and energy increased at about the same pace in the first half of the year as in 1996.

Continued favorable price movements and the slowing of economic growth suggested to financial market participants that inflation might remain damped without a further tightening of financial conditions, and this belief prompted a substantial drop in interest rates from late April to mid-July, reversing the earlier advance. With resource utilization still at very high levels, and with economic and financial conditions conducive to robust increases in spending, the FOMC at its May meeting continued to view the risks as skewed toward the re-emergence of inflationary pressures. But the moderation in aggregate demand and uncertainty about the relationship between utilization rates and inflation led the Committee to leave reserve conditions unchanged in May and again in July. The drop in market interest rates in the second quarter may also have been encouraged by favorable news about this year's federal budget

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deficit and by the agreement between the President and the Congress to balance the budget in fiscal year 2002. Spurred by lower rates and greater optimism about the long-term outlook for earnings, the stock market surged in the second quarter and into July. The value of the dollar rose somewhat further in foreign-exchange markets, on balance, an increase more than accounted for by an appreciation against continental European currencies.

During the first half of the year, credit remained available on favorable terms to most households and businesses. High delinquency rates for consumer loans encouraged many banks to tighten standards, but consumer loan rates generally stayed fairly low relative to benchmark Treasury rates, and consumer credit continued to grow faster than income and only a little below the pace of 1996. Home mortgage debt advanced at a moderate rate, with home equity loans expanding especially rapidly in the spring. Businesses continued to have access to ample external funding both directly in capital markets and through financial intermediaries. The spreads between yields on corporate bonds and Treasury securities stayed low or fell further, and, relative to market rates, bank business loan rates held near the lower end of the range seen in the current expansion.

Total domestic nonfinancial debt expanded more slowly in the first half of 1997 than in 1996, mainly because of a reduced pace of federal borrowing. Trends in the monetary aggregates during the first half of 1997 were similar to those in 1996, with M2 near the upper end of the range set by the FOMC and M3 somewhat above its range. This outcome was in line with FOMC expectations, because the ranges had been set to be consistent with conditions of price stability, and inflation, while damped, remained above this level. The behavior of M2 in the first part of the year was again reasonably well explained by changes in nominal GDP and interest rates.

Economic Projections for 1997 and 1998

After growing swiftly on balance over the first half of the year, economic activity is expected to expand more moderately in the second half of 1997 and in 1998. For this year, the central tendency of the GDP growth forecasts put forth by members of the Board of Governors and the Reserve Bank presidents is 3 percent to 3¼ percent, measured as the change in real output between the final quarter of 1996 and the final quarter of 1997. For 1998, most of the forecasts anticipate growth of real GDP within a range of 2 percent to 2½ percent. With this pace of continued economic expansion over the next six quarters, the central tendency of forecasts for the civilian unemployment rate remains a little under 5 percent through 1998, about the average for the second quarter of this year.

Economic activity appears to have entered the second half with considerable positive momentum. Households have experienced hefty gains in employment, income, and wealth, and their optimism about the future is quite high. These factors seem likely to outweigh any drag on consumer demand that might be associated with the debt-servicing problems that some households have experienced. Lower mortgage rates are buttressing demand for homes. In the business sector, healthy balance sheets and profits and a moderate cost of external funds, along with a continuing desire to install new technology, are providing support and impetus for investment in equipment. Meanwhile, investment in structures should follow last year's strong performance with further increases, because of declining vacancy rates in some sectors and ready access to financing.

Notwithstanding the economy's positive momentum, growth is expected to be more moderate in the next year and a half than in the first half of 1997. In part, this deceleration is likely to reflect the influence on demand of the substantial buildup of stocks of household durables and business plant and equipment thus far in the expansion. As well, the pace of inventory investment will need to slacken considerably relative to that observed in the first part of this year, lest stock-to-sales ratios become uncomfortably high. In the external sector, the strength of the dollar on exchange markets since last year could damp export sales and encourage U.S. firms and households to purchase foreign-produced goods and services.

Federal Reserve policymakers believe that this year's rise in the CPI will be smaller than that of 1996, mostly because of favorable developments in the food and, especially, energy sectors. After last year's run-up, crude oil prices have dropped back significantly, pulling down the prices of petroleum products. Food price increases also have been subdued this year, as the decline in grain prices that began in the middle of last year has been working its way through to the retail level. Looking ahead to next year, the governors and Reserve Bank presidents expect larger increases in the CPI, with a central tendency from 2½ percent to 3 percent. Food and energy prices are not expected to repeat this year's

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Economic Projections for 1997 and 1998
Percent

Indicator	Federal Reserve governors and Reserve Bank presidents	
	Range	Central tendency
1997		
Change, fourth quarter to fourth quarter[1]		
Nominal GDP	5 to 6	5 to 5½
Real GDP	3 to 3½	3 to 3¼
Consumer price index[2]	2 to 2¾	2¼ to 2½
Average level in the fourth quarter		
Civilian unemployment rate	4¾ to 5¼	4¾ to 5
1998		
Change, fourth quarter to fourth quarter[1]		
Nominal GDP	4¼ to 5¾	4½ to 5
Real GDP	2 to 3	2 to 2½
Consumer price index[2]	2½ to 3	2½ to 3
Average level in the fourth quarter		
Civilian unemployment rate	4½ to 5¼	4¾ to 5

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

2. All urban consumers.

salutary performance, and non-oil import prices may be less of a restraining influence than in 1997, absent a continued uptrend in the dollar. Moreover, there is a risk that high levels of resource utilization could begin putting upward pressure on business costs.

As noted in past monetary policy reports, the CPI forecasts of Federal Reserve policymakers incorporate the technical improvements that the Bureau of Labor Statistics is making to the CPI in 1997 and 1998. A series of technical changes is estimated to have trimmed reported rates of CPI inflation slightly in recent years, and the additional changes will affect the index this year and next. In light of the challenges of accurately measuring price changes in a complex and dynamic economy, the governors and Reserve Bank presidents will continue placing substantial weight on other price indexes, along with the CPI, in gauging progress toward the long-run goal of price stability.

The Administration has not yet released an update of the economic projections contained in the February *Economic Report of the President.* The earlier Administration forecasts were broadly similar to those in the Federal Reserve's February report, with Administration forecasts for growth and inflation within or near the range anticipated by Federal Reserve policymakers in February. Because of developments in the economy since that time, the central tendency of forecasts for real GDP growth put forth by the members of the Board of Governors andthe Reserve Bank presidents has moved higher, while their forecasts for the CPI have moved down.

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Ranges for Growth of Monetary and Debt Aggregates
Percent

Aggregate	1996	1997	Provisional for 1998
M2	1 to 5	1 to 5	1 to 5
M3	2 to 6	2 to 6	2 to 6
Debt	3 to 7	3 to 7	3 to 7

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

Money and Debt Ranges for 1997 and 1998

At its meeting earlier this month, the Committee reaffirmed the ranges for 1997 growth of money and debt that it had established in February: 1 percent to 5 percent for M2, 2 percent to 6 percent for M3, and 3 percent to 7 percent for the debt of the domestic nonfinancial sectors. The Committee also set provisional ranges for 1998 at the same levels as for 1997.

In choosing the ranges for M2 and M3, the Committee recognized the continuing uncertainty about the future behavior of the velocities of the two aggregates. For several decades until the 1990s, these aggregates exhibited fairly stable trends relative to nominal spending, and variations in M2 growth around its trend were reasonably closely related to changes in the spread between market rates and yields on the assets in M2. These relationships were disrupted in the first part of this decade. Between 1991 and early 1994, the velocities of M2 and M3 climbed well above the levels that were predicted by past experience, as households shifted substantial amounts out of lower-yielding deposits into higher-yielding stock and bond mutual funds, and as banks and thrift institutions sharply curtailed their lending to focus on rebuilding capital. Since mid-1994, the velocities have been moving more nearly in line with their historical patterns with respect to changes in opportunity costs—albeit at higher levels. This recent period of renewed stability is still brief, however, and has occurred at a time of relatively stable financial and economic conditions, leaving open the important question of whether the stability would be sustained in the future under a wider variety of circumstances.

In light of this uncertainty, the Committee again decided to view the ranges as benchmarks for monetary growth rates that would be consistent with approximate price stability and historical velocity relationships. If velocities change little over the next year and a half, Committee members' expectations of nominal GDP growth in 1997 and 1998 imply that M2 and M3 will likely finish around the upper boundaries of their respective ranges each year. The debt of the domestic nonfinancial sectors is expected to remain near the middle of its range this year and next. The Committee will continue to monitor the behavior of the monetary aggregates and domestic nonfinancial debt—as well as a wide range of other data—for information about economic and financial developments.

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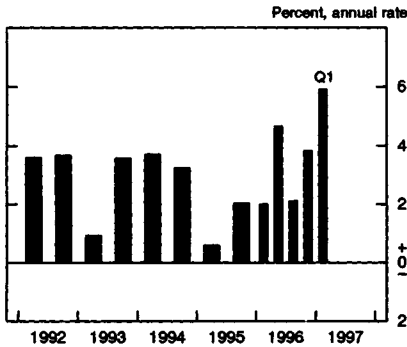
Section 2: Economic and Financial Developments in 1997

The economy has continued to perform exceptionally well this year. Real gross domestic product surged almost 6 percent at an annual rate in the first quarter of 1997, and available data point to a healthy, though smaller, increase in the second quarter. Financial conditions remained supportive of spending. Despite a modest tightening of money market conditions by the System, most interest rates were little changed or declined a bit on net during the first half of the year, and equity prices surged ahead. With relatively few exceptions, credit remained readily available from both intermediaries and financial markets on generally favorable terms. The rapid increases in output led to a further tightening of labor markets in the first six months of 1997, and labor costs accelerated a little from the pace of a year earlier. Price inflation has been subdued, held down in part by declines in energy prices, smaller increases in food prices, and lower prices for non-oil imports that have followed in the wake of the appreciation of the dollar. In addition, intense competition, adequate plant capacity, and ongoing efficiency gains have helped to restrain inflation pressures in the face of rising wages.

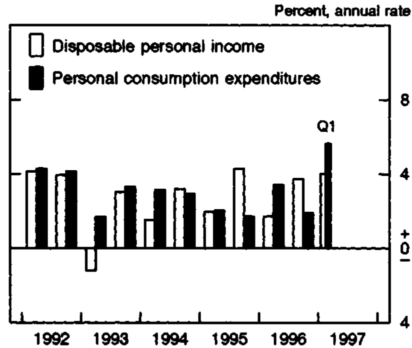
Change in Real GDP



The Household Sector

Spending, Income, and Saving. After posting a sizable increase in 1996, real personal consumption expenditures jumped 5½ percent at an annual rate in the first quarter of 1997. Although the advance in spending slowed thereafter—partly because of unusually cool weather in late spring—underlying fundamentals for the household sector remain favorable to further solid gains; notably, real incomes have continued to rise, and many consumers have benefited from sizable gains in wealth. With this good news in hand, consumers have become extraordinarily upbeat about the economy's prospects. Indexes of consumer sentiment—such as those compiled by the Survey Research Center at the University of Michigan and the Conference Board—have soared to some of the highest readings since the 1960s. Despite this generally healthy picture, some households still face difficulties meeting debt obligations, and delinquency rates for consumer loans have remained at high levels.

Change in Real Income and Consumption



Real outlays for consumer durables surged 18¾ percent (annual rate) in the first quarter of this year but apparently slowed considerably in the second quarter. After changing little, on net, last year, consumer purchases of motor vehicles increased rapidly early in the year, a result of sound fundamentals, a bounceback from the strike-depressed fourth quarter, and enlarged incentives offered by auto makers. In the second quarter, sales were once again held down noticeably by strike-related supply constraints, as well as by some payback from the elevated first-quarter pace. Smoothing through the ups and downs, the underlying pace of demand in the first half of the year likely remained reasonably close to the 15 million unit rate that has prevailed since the second half of 1995. Purchases of durable goods other than motor vehicles also took off in the first quarter; computers and other electronic equipment were an area of notable strength, as house-

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holds took advantage of rapidly falling prices to acquire the latest technology. According to available monthly data, purchases of durables other than motor vehicles and electronic equipment moderated in the second quarter. Although a pause in the growth of spending is not surprising after the strong first quarter, unusually cool spring weather, leading to the postponement of purchases of some seasonal items, may also have contributed to the moderation.

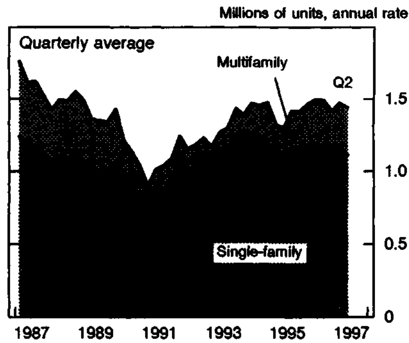
Growth of real spending for nondurables also appears to have slowed considerably from a strong first-quarter pace. Within services, weather conditions held down growth of real outlays for energy services in the first quarter and boosted them in the second. Growth of real outlays for other services—typically the steadiest component of consumption—picked up at the end of 1996 and appears to have stayed ahead of last year's 2½ percent pace in the first half of 1997.

Consumer spending continued to draw support from healthy advances in income this year, as gains in wages and salaries boosted personal disposable income. These gains translated into a 4 percent annual rate advance in real disposable income in the first quarter, after a significant 2¾ percent advance last year. Although month-to-month movements were affected by unevenness in the timing of tax payments, the underlying trend in real disposable income remained strong into the second quarter.

On top of rising incomes, further increases in net worth—primarily related to the soaring stock market—have given many households the financial wherewithal to spend. In light of the very large gains in wealth, the impetus to consumption appears to have been smaller than might have been anticipated on the basis of historical relationships, suggesting that other factors may be offsetting the effect of higher net worth. One such factor could be a greater focus on retirement savings, particularly among the large cohort of the population reaching middle age. Concerns about the adequacy of saving for retirement have likely been heightened by increased public discussion of the financial problems of social security and federal health programs. In addition, debt problems may be restraining the spending of some households.

Residential Investment. The underlying pace of housing activity has remained at a high level this year, even though some indicators suggest that activity has edged off a bit from last year's pace. In the single-family sector, housing starts through June averaged 1.14 million units at an annual rate, a shade below the pace of starts in 1996. Although starts dipped in the second quarter, the decline was from a first-quarter level that, doubtless, was boosted by mild weather. Mortgage rates have zig-zagged moderately this year; the average level has differed little from that in 1996. With mortgage rates low and income growth strong, a relatively large proportion of families has been able to afford the monthly cost of purchasing a home. Home sales have remained strong, helping to keep inventories of unsold new units relatively lean—a favorable factor for prospective building activity. Other indicators of demand remain quite positive. According to the latest survey by the National Association of Homebuilders, builders' ratings of new home sales strengthened in recent months to the highest level since last August. Moreover, consumers' assessments of conditions for homebuying, as reported by the Survey Research Center at the University of Michigan, remained very favorable into July. In addition, the volume of applications for mortgages to purchase homes has moved up recently to a high level.

Private Housing Starts



The pace of multifamily starts has been well maintained. These starts averaged close to 320,000 units at an annual rate from January to June, a little above last year's figure for starts. Even so, the pace of multifamily construction remains well below peaks in the 1970s and 1980s, partly because of changes in the nation's demographic composition as the bulge of renters in the 1980s has moved on to home ownership. Another factor that has restrained multifamily construction is the growing popularity of manufactured housing ("mobile homes"), which provides an alternative to rental housing for some households. In particular, the price of a typical manufactured unit

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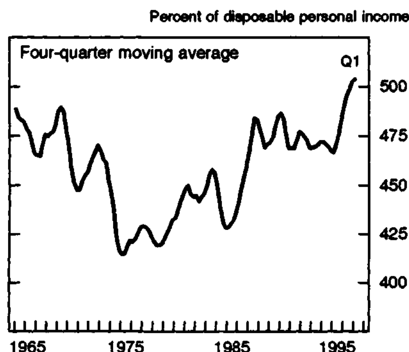
is considerably less than that of a new single-family house, making manufactured homes especially attractive to first-time buyers and to people purchasing second houses or retirement homes. Shipments of these homes trended up through last fall and then flattened out at a relatively high level.

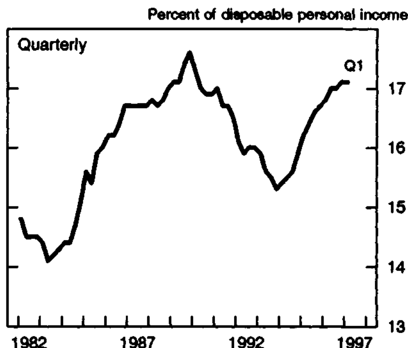
Household Finance. Household balance sheets strengthened in the aggregate during the first half of 1997, but debt-payment problems continued at a high level in several market segments. Indebtedness grew less rapidly than it had in 1996, and further gains in equity markets pushed up the ratio of household net worth to disposable personal income to its highest mark in recent decades. Consumer credit increased at a 6¼ percent annual rate between December 1996 and May 1997, compared with 8¼ percent in 1996. The growth of mortgage debt was somewhat slower in the first quarter than in 1996 and, according to available indicators, probably stayed at roughly the same rate during the second quarter.

Household Net Worth



The estimated ratio of required payments of loan principal and interest to disposable personal income remained high in the first quarter, after climbing rapidly between early 1994 and early 1996 and rising more slowly in the second half of last year. This measure of the debt-service burden of households has nearly returned to the peak reached toward the end of the last business cycle expansion. Adding estimated payments on auto leases to households' scheduled monthly debt payments boosts the ratio a little more than 1 percentage point and places it just above its previous peak.

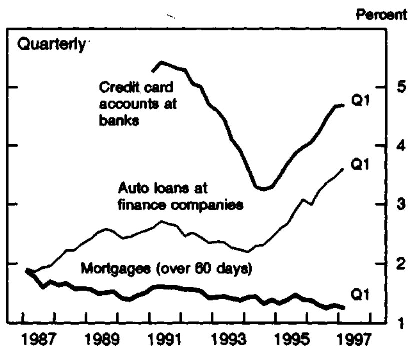
Household Debt-Service Burden



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

Indicators of households' ability to service their debt have been mixed. The delinquency rate for mortgage loans past due sixty days or more is at its lowest level in two decades, but delinquency rates for consumer loans are relatively high. According to data from the Report of Condition and Income filed by banks (the Call Report), the delinquency rate for credit card loans was roughly unchanged in the first quarter of 1997, remaining at its highest value since late 1992, when the economy was in the midst of a sluggish recovery and the unemployment rate was more than 2 percentage points higher than today. For

Delinquency Rates on Household Loans



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

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auto loans at the finance companies affiliated with the major manufacturers, the delinquency rate rose again in the first quarter, continuing the steady run-up in this measure over the past three years.

Anecdotal evidence suggests that the recent increases in consumer credit delinquency rates had been partly anticipated by lenders, reflecting the normal seasoning of loans as well as banks' efforts to stimulate borrowing by making credit more broadly available and automakers' attempts to stimulate sales using the same approach. During the past several years, lenders have aggressively sought business from people who might not have been granted credit previously, in part because of lenders' confidence in new "credit scoring" models that statistically evaluate an individual's creditworthiness. Despite these new tools, banks evidently have been surprised by the extent of the deterioration of their consumer loans and have tightened lending standards as a result. Nearly half the banks responding to the Federal Reserve's May survey on bank lending practices had imposed more stringent standards for new credit card accounts over the preceding three months, with a smaller fraction reining in other consumer loans. About one-third more of the responding banks expected charge-off rates on consumer loans to increase further over the remainder of the year than expected charge-off rates to decrease; many of those expecting an increase cited consumers' growing willingness to declare bankruptcy. Rising delinquency rates have also put pressure on firms specializing in subprime auto loans, with some reporting reduced profits and acute liquidity problems.

According to the most recently available data, personal bankruptcies surged again in the first quarter of the year after rising 30 percent in 1996. The rapid increases of late are partly related to the same increase in financial stress evident in the delinquency statistics, but they may also be tied to more widespread use of bankruptcy as a means of dealing with such stress. Changes in federal bankruptcy law effective at the start of 1995 increased the value of assets that may be protected from liquidation, and there may also be a secular trend toward less stigma being associated with declaring bankruptcy.

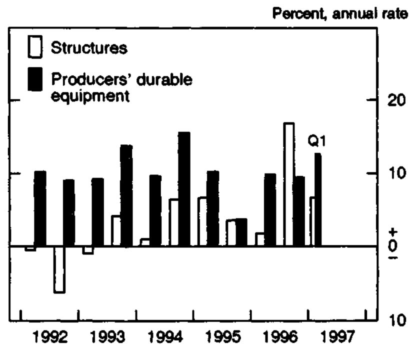
The Business Sector

Investment Expenditures. Following a fifth year of sizable increases in 1996, real business fixed investment rose at an annual rate of 11 percent in the first quarter. The underlying determinants of investment spending remain solid: strong business sales, sizable increases in cash flow, and a favorable cost of capital, especially for high-tech equipment. To be sure, a significant portion of this investment has been required to update and replace depreciated plant and equipment; nevertheless, the current pace of investment implies an appreciable expansion of the capital stock.

Real outlays for producers' durable equipment jumped at an annual rate of 12¾ percent in the first quarter of this year after rising 9¾ percent last year. As in recent years, purchases of computers and other information processing equipment contributed importantly to this gain. The computer sector has been propelled by declining prices of new and more powerful products and by a drive in the business sector to improve efficiency with these latest technological developments. Real purchases of communications equipment also have been robust, boosted by rapidly growing demand for wireless phone services and Internet connections as well as by upgrades to telephone switching and transmission equipment in anticipation of eventual deregulation of local phone markets. In addition, purchases of aircraft by domestic airlines moved higher on net in 1995 and 1996 and—on the basis of orders and production plans of aircraft makers—are expected to rise considerably further this year. For the second quarter, data on orders and shipments of ·ondefense capital goods in April and May imply that healthy increases in equipment investment have continued.

Real business spending for nonresidential structures posted another sizable increase in the first quarter after advancing a hefty 9 percent in 1996. Although the latest data suggest a slowing of the pace

Change in Real Business Fixed Investment



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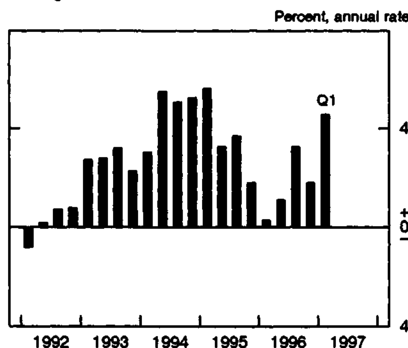
of advance in the second quarter, the economic factors underlying this sector point to continued increases. Vacancy rates have been falling and rents have been improving. Financing for commercial construction reportedly is in abundant supply, especially with substantial amounts of capital flowing to real estate investment trusts (REITs).

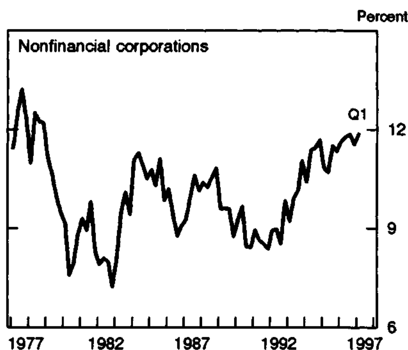
Trends in construction continue to differ among sectors. Increases in office construction were especially robust in recent quarters, as vacancy rates fell for both downtown and suburban properties. With office-based employment expanding, this sector has continued to recover from the severe slump of the late 1980s and early 1990s; even so, the level of construction activity is barely more than half that of the mid-1980s. Construction of other commercial buildings has increased steadily during the past five years, and the gain in the first quarter of this year was sizable. Since the current expansion began, the non-office commercial sector has provided a large contribution to overall construction spending. Industrial construction dropped back in the first quarter after jumping at the end of last year; the trend for this sector has been relatively flat on balance in recent years.

During 1996, investment in real nonfarm business inventories was modest compared with the growth of sales, and the year ended with lean inventories in many sectors. In the first quarter of this year, businesses moved to rebuild stocks, and inventory investment picked up substantially. Outside of motor vehicles, stocks rose in the first quarter, with particularly sizable increases coming from a continued ramp-up in production of aircraft and from a restocking of petroleum products during a period when prices eased. Nevertheless, with extraordinarily strong sales, inventory–sales ratios still moved down further in the major sectors. Available monthly data suggest that vigorous inventory investment outside of motor vehicles continued through mid-spring, as firms responded to strength in current and prospective sales. For motor vehicles, inventories moved up some in the first quarter of this year, after strike-related reductions in the fourth quarter. In the second quarter, the monthly pattern of motor vehicles stocks was bounced around somewhat by strikes; cutting through the noise, inventories of light vehicles still appear to be in balance.

Change in Real Nonfarm Business Inventories



Before-Tax Profit Share of GDP



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

Corporate Profits and Business Finance. The continued rapid advance of business investment this year has been financed through both strong cash flow and substantial borrowing at relatively favorable terms. Economic profits (book profits after inventory valuation and capital consumption adjustments) in the first quarter were 7¾ percent higher than a year earlier. For the nonfinancial sector, domestic profits were more than 9 percent higher, reaching their highest share of those firms' domestic output in the current expansion. Despite abundant profits, the financing gap for these companies—the excess of capital expenditures (including inventory investment) over internally generated funds—has widened somewhat since the middle of 1996. To fund that gap, and the ongoing net retirement of equity shares, nonfinancial corporations increased their debt 6½ percent at an annual rate in the first quarter, compared with 5¼ percent during 1996.

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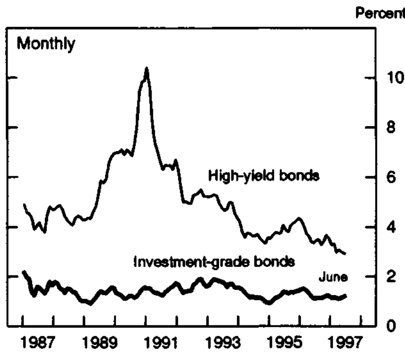
External funding has remained readily available to businesses on favorable terms. The spreads between yields on investment-grade bonds and yields on Treasury securities have stayed low since the beginning of the year, while the spreads on high-yield bonds have declined further to historically narrow levels. Price–earnings ratios are high, implying a low cost of equity financing. Further, banks remain accommodative lenders to businesses. According to the Federal Reserve's most recent survey of business lending, the spreads between loan rates and market rates have held about steady for borrowers of all sizes, with rate spreads for large loans near the lower end of the range seen over the past decade. Moreover, surveys by the National Federation of Independent Business indicate that small businesses have not had difficulty obtaining credit.

Spreads Between Yields on Private and Treasury Securities



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

The plentiful supply of credit probably stems from several factors. Most banks are well positioned to lend: Their profits are strong, rates of return on equity and on assets are high, and capital is ample. In addition, continued substantial inflows into stock and high-yield bond mutual funds suggest that investors may now perceive less risk in these areas or may be more willing to accept risk. In fact, businesses generally are in very good financial condition, with the estimated ratio of operating cash flow to interest expense for the median nonfinancial corporation remaining quite high in the first part of the year. Moreover, delinquency rates for business loans at banks have stayed extremely low, as has the default rate on speculative-grade debt.

The increase in the pace of business borrowing in the first half of 1997 was widespread across sources of finance. Nonfinancial corporations stepped up their borrowing from banks. The outstanding commercial paper of these corporations also increased on net from December through June, after declining a little in 1996. Meanwhile, these businesses' net issuance of long-term bonds in the first half of the year exceeded last year's pace, with speculative-grade offerings accounting for the highest share of gross issuance on record.

At the same time, the pace of gross equity issuance by nonfinancial corporations dropped considerably in the first half of this year. In particular, the market for initial public offerings has been cooler than in 1996, despite some pickup of late; new issues have been priced below the intended range more often than above it, and first-day trading returns have been relatively low. Net equity issuance has been deeply negative again this year, as gross issuance has been more than offset by retirements through share repurchases and mergers. The bulk of merger activity in the 1980s involved share retirements financed by borrowing, but the recent surge—which largely involves friendly intra-industry mergers—has been financed about equally through borrowing and stock swaps. Structuring deals as stock swaps can reduce shareholders' tax liabilities and enable the combined firm to use a more advantageous method of financial accounting. The dollar value of nonfinancial mergers in which the target firm was worth more than a billion dollars set a record in 1996, and merger activity appears to be on a very strong track this year as well.

The Government Sector

Federal. The federal budget deficit has come down considerably in recent years and should register another substantial decline this fiscal year. Over the first eight months of fiscal year 1997—the period October through May—the deficit in the unified budget was $65 billion, down $43 billion from the comparable period of fiscal 1996. The recent reduction in the deficit primarily reflected extremely rapid growth of receipts for the second year in a row, although a continuation of subdued growth in outlays also contributed to the improvement. Given recent developments, the budget deficit as a share

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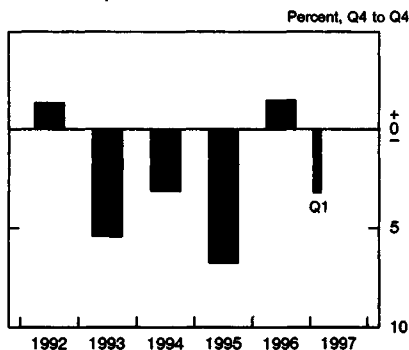
of nominal GDP this fiscal year is likely to be at its lowest level since 1974.

Federal receipts were almost 8½ percent higher in the first eight months of fiscal year 1997 than in the year-earlier period and apparently are on track to outpace the growth of nominal GDP for the fifth year in a row. Individual income tax payments have risen sharply this fiscal year—on top of a hefty increase last year—reflecting strong increases in households' taxable labor and capital income; preliminary data from the Daily Treasury Statement indicate that individual income tax revenues remained strong in June. Moreover, corporate tax payments posted another sizable advance through May of this fiscal year.

Federal outlays during the first eight months of the fiscal year rose 3½ percent in nominal terms from the comparable period last year. Although this increase is up from the restrained rate of growth in fiscal 1996—which was held down by the government shutdown—spending growth remained subdued across most catgories. Outlays for income security programs rose modestly in the first eight months of the fiscal year, partly as a result of the continued strong economy, and spending on the major health programs grew somewhat more slowly than their average pace in recent years. Although still restrained, outlays for defense have ticked up this fiscal year after trending down for several years.

Change in Real Federal Expenditures on Consumption and Investment



Note. Value for 1997:Q1 is a quarterly percent change at an annual rate.

As for the part of federal spending that is included directly in GDP, real federal expenditures on consumption and gross investment declined 3¼ percent in the first quarter of 1997, a shade more than the average rate of decline in recent years. An increase in real nondefense spending was more than offset by a decline in real defense outlays.

The substantial drop in the unified budget deficit reduced federal borrowing in the first half of 1997 compared with the first half of 1996. The Treasury responded to the smaller-than-expected borrowing need by reducing sales of bills; this traditional strategy of allowing borrowing swings to be absorbed primarily by variation in bill issuance enables the Treasury to have predictable coupon auctions and to issue sufficient quantities of coupon securities to maintain their liquidity. The result this past spring was an unusually large net redemption of bills, which pushed yields on short-term bills down relative to yields on other Treasury securities and on short-term private paper.

The issuance of inflation-indexed securities at several maturities has been a major innovation in federal debt management this year. The Treasury sold indexed ten-year notes in January and April and added five-year notes earlier this month. A small number of agency and other borrowers issued their own inflation-indexed debt immediately after the first Treasury auction, and the Chicago Board of Trade recently introduced futures and options contracts based on inflation-indexed securities. As one would expect at this stage, however, the market for indexed debt has not yet fully matured: Trading volume as a share of the outstanding amount is much smaller than for nominal debt, and a market for stripped securities has yet to emerge.

State and Local. The fiscal condition of state and local governments has remained positive over the past year, as the surplus of receipts over current expenditures has been stable at a relatively high level. Strong growth in sales and incomes has led to robust growth in revenues, despite numerous small tax cuts, and many states have held the line on spending in the past several years. Additionally, the welfare reform legislation passed in August 1996, while presenting long-term challenges to state and local governments, actually has eased fiscal pressures in recent quarters: Block grants to states are based largely on 1992–94 grant levels, but caseloads more recently have been falling. Overall, at the state level, accumulated surpluses—current surpluses plus those from past years—were on track to end fiscal year 1997 at a

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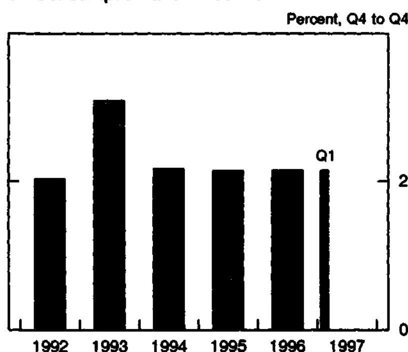
Change in Real State and Local Expenditures on Consumption and Investment

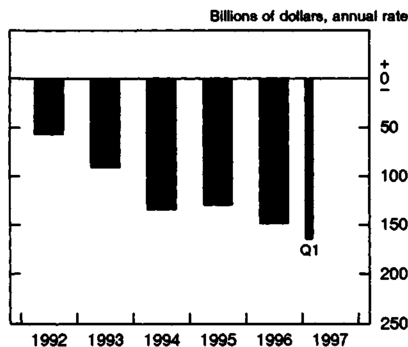


Note. Value for 1997:Q1 is a quarterly percent change at an annual rate.

healthy level, according to a survey by the National Association of State Budget Officers taken shortly before the end of most states' fiscal years.

Real expenditures for consumption and gross investment by state and local governments increased moderately in the first quarter of this year, about the same as the pace of advance in the past two years. For construction, the average level of real outlays during the first five months of the year was a little higher than in the fourth quarter. Hiring by state and local governments over the first half of the year was somewhat above last year's pace, with most of the increase at the local level.

U.S. Current Account

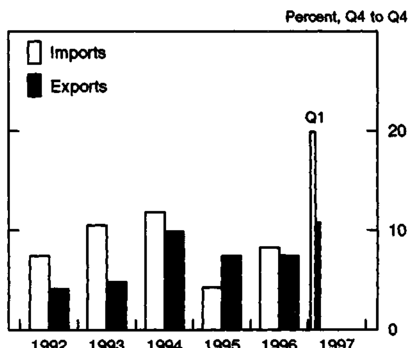


The pace of gross issuance of state and local debt was roughly the same in the first half of the year as in 1996. Net issuance turned up noticeably, however, as retirements of debt that had been pre-refunded in the early 1990s waned.

The External Sector

Trade and the Current Account. The nominal deficit on trade in goods and services was $116 billion at an annual rate in the first quarter, somewhat larger than the $105 billion in the fourth quarter of last year. The current account deficit of $164 billion (annual rate) in the first quarter exceeded the $148 billion deficit for 1996 as a whole because of the widening of the trade deficit and further declines in net investment income. In April and May, the trade deficit was slightly narrower than in the first quarter.

Change in Real Imports and Exports of Goods and Services



Note. Value for 1997:Q1 is a quarterly percent change at an annual rate.

The quantity of U.S. imports of goods and services surged in the first quarter at an annual rate of about 20 percent. Continued strength in the pace of U.S. economic activity largely accounted for the rapid growth, but a rebound in automotive imports from Canada from their strike-depressed fourth-quarter level boosted imports as well. Preliminary data for April and May suggest that strong real import growth continued. Non-oil import prices fell through the second quarter, extending the generally downward trend that began in mid-1995.

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The quantity of U.S. exports of goods and services expanded at an annual rate a bit above 10 percent in the first quarter, about the same rapid pace as during the second half of last year. Growth of output in our major trading partners, particularly the industrial countries, helped to sustain the growth of exports, as did increased deliveries of civilian aircraft. Exports to western Europe and to Canada grew strongly while those to the Asian developing countries declined somewhat. Preliminary data for April and May suggest that real exports rose moderately.

Capital Flows. Large gross capital inflows and outflows continued during the first quarter of 1997, reflecting the continued trend toward globalization of financial and product markets. Both foreign direct investment in the United States and U.S. direct investment abroad were very strong, swelled by mergers and acquisitions.

Private foreign net purchases of U.S. securities amounted to $85 billion in the first quarter, down somewhat from the very high figure in the previous quarter but still above the record pace for 1996 as a whole. Net purchases of U.S. Treasury securities were particularly robust. Private foreigners also showed increased interest in the U.S. stock market in the first quarter of 1997. U.S. net purchases of foreign securities amounted to $15 billion in the first quarter, down from the strong pace of 1996. Private foreigners continued to add to their holdings of U.S. paper currency in the first quarter, but at a rate substantially below earlier peaks.

Foreign official assets in the United States, which rose a record $122 billion in 1996, increased another $28 billion in the first quarter of 1997. Apart from the oil-producing countries, which benefited from high oil prices, significant increases in holdings were associated with efforts by some emerging-market countries to temper the impact of large private capital inflows on their economies. Information for April and May suggests that official inflows have abated.

Foreign Economies. Economic activity in the major foreign industrial countries has generally strengthened so far this year from the pace in the second half of last year. In Japan, real GDP accelerated to a 6½ percent annual growth rate in the first quarter, boosted by extremely strong growth of consumer spending ahead of an increase in the consumption tax on April 1. Activity appears to have fallen in the second quarter, but continued improvement in business sentiment suggests that the current weakness is only temporary. In Canada, growth of real output increased to 3½ percent at an annual rate in the first quarter. Final domestic demand more than accounted for this expansion, as business investment, consumption, and residential construction all provided significant contributions. Indicators suggest that output growth remained healthy in the second quarter.

Economic activity has remained vigorous so far this year in the United Kingdom and appears to have strengthened in Germany and France. In the first quarter, U.K. real GDP grew at an annual rate of 3½ percent as domestic demand, particularly investment, accelerated from its already strong pace in the fourth quarter. Strong household consumption spending supported demand in the second quarter. Weak demand for exports, associated with the appreciation of the pound since mid-1996, and some tightening of monetary conditions should moderate growth in the current quarter. In Germany, economic expansion revived in the first quarter and appears to have firmed in the second quarter. After growing very little in the fourth quarter of last year, German real GDP rose at an annual rate of 1¾ percent in the first quarter, led by government consumption, equipment investment, and exports. Manufacturing orders and indicators of business sentiment suggest additional gains in the second quarter. French real GDP grew only three-quarters percent at an annual rate in the first quarter, as declines in investment offset strong export growth, but data on manufacturing output and consumption suggest a pick up in activity during the second quarter.

In most major Latin American countries, real output growth remained vigorous. In Mexico, real economic expansion slowed some in the first quarter from its very rapid pace in the second half of last year but remained robust. The industrial sector continued to be the source of strength, while the service sector lagged. A pickup in import growth has resulted in a narrowing of the trade surplus; through May, the trade balance of $1¾ billion was about half the size it was in the same period last year. In Argentina, continued healthy economic growth in the first quarter has brought real GDP back to its level before the recession induced by the Mexican crisis of 1995. In Brazil, real output declined in the first quarter after three quarters of strong expansion.

Economic growth in our major Asian trading partners other than Japan slowed a bit on average in the first quarter but appears to have rebounded in the second quarter. Nationwide labor strikes in Korea

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affected many of the country's key export industries and were partly responsible for weakness in first-quarter output and a ballooning of the current account deficit. Data for April and May show recovery in industrial production, and the trade balance improved in the second quarter. Real output growth in Taiwan remains strong so far this year, though not quite so vigorous as during the second half of 1996. In China, real GDP continues to expand at an annual rate of nearly 10 percent, about the same brisk pace as last year.

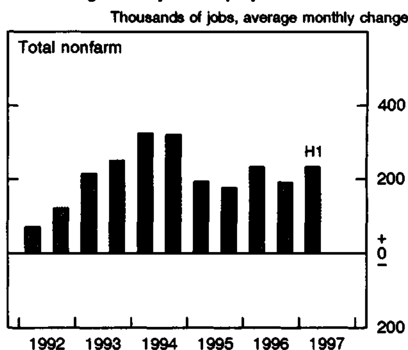
Despite the pickup in growth, considerable excess capacity remains in the major foreign industrial countries. As a consequence, inflation has generally remained quiescent. The increase in the Japanese consumption tax lifted the twelve-month change in the consumer price index to about 1½ percent, but elevation of the inflation rate should be temporary. CPI inflation remains less than 2 percent in Germany, France, Canada, and Italy. Only in the United Kingdom, where output growth has resulted in tight labor markets and consumer prices are rising at an annual rate of more than 2½ percent, are inflation pressures currently a concern.

In most major countries in Latin America, inflation either is falling or is already low. Mexican inflation continues to improve: The monthly inflation rate was below 1 percent in May and June, the lowest monthly rates since the 1994 devaluation. In Argentina, consumer prices were essentially flat through the second quarter after almost no increase last year. Brazilian inflation has declined to historically low rates. In contrast, Venezuelan inflation, though it has come down from its 1996 rate of more than 100 percent per year, remains near 50 percent. Consumer price inflation remains generally low in Asia, including in China, where it fell to less than 3 percent in the twelve months through May.

The Labor Market

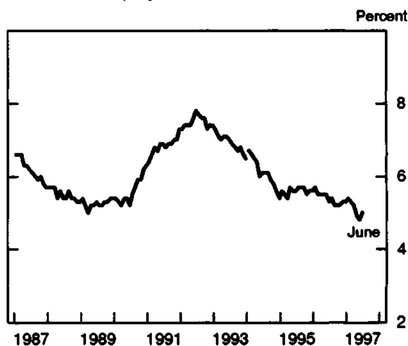
Payroll employment continued to expand solidly during the first half of 1997. The growth in nonfarm payrolls averaged about 230,000 per month; this figure may overstate slightly the underlying rate of employment growth in the first half because technical factors boosted payroll figures in April. The strength in labor demand drew additional people into the job market, raising the labor force participation rate to historical highs during the first half. Nevertheless, the civilian unemployment rate moved down to 4.9 percent, on average, in the second quarter.

Net Change in Payroll Employment



Employment gains in the private service-producing sector, in which nearly two-thirds of all nonfarm workers are employed, accounted for much of the expansion in payrolls through June of this year. Within this sector, higher employment in services, transportation, and retail trade contributed importantly to the gain. After advancing substantially for several years, payrolls in the personnel supply industry—a category that includes temporary help agencies—actually turned down in the second quarter; anecdotal reports suggest that some temporary help firms are having difficulty finding workers, especially for highly skilled and technical positions.

Civilian Unemployment Rate



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

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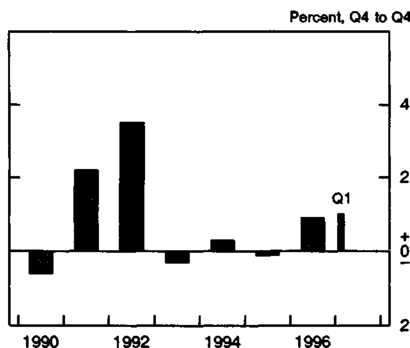
Employment gains were also posted in the goods-producing sector. In the construction industry, payrolls increased substantially between December and June. Factory employment moved somewhat higher in the first part of the year after declining a little during 1996, and manufacturing overtime hours remained at a high level. Producers of durable goods increased employment further between December and June, while makers of nondurable goods continued to reduce payrolls. Since the end of 1994, factory employment and total hours worked in manufacturing have changed little. Even so, manufacturers have boosted output considerably over this period, primarily through ongoing improvements in worker productivity.

Although productivity for the broader nonfarm business sector rose substantially in the first quarter, it was just 1 percent above its value a year earlier. Moreover, output per hour changed little from the end of 1992 to the last quarter of 1995. The average rate of measured productivity growth in the 1990s is still somewhat below that of the 1980s and is even further below the average gains realized in the twenty-five years after World War II. The slower reported productivity growth during this expansion could partly reflect measurement problems. Productivity is the ratio of real output to hours worked, and official productivity indexes rely on a measure of real output based on expenditures. In theory, a matching measure of real output should be derivable by summing labor and capital inputs on the "income side" of the national accounts. However, the income-side measure of real output has increased considerably faster than the expenditure-side measure in recent years, raising the possibility that productivity growth has been somewhat better than reported in the official indexes.

Change in Output per Hour, Nonfarm Business Sector



Note. Value for 1997:Q1 is the percent change from 1996:Q1 to 1997:Q1.

Measurement difficulties may also affect estimates of the longer-term trajectory of productivity growth. In particular, if inflation were overstated by official measures—as a considerable amount of recent research suggests it is—then real output growth would be understated. This understatement would arise because too much inflation would be removed from nominal output growth in the calculation of real output growth. Indeed, productivity growth for nonfinancial corporations—a sector for which output growth arguably is measured more accurately than in broader sectors—has been more rapid than for nonfarm business overall. In particular, productivity for nonfinancial corporations increased at an average annual pace of about 1½ percent between 1990 and 1996, while productivity in the nonfarm business sector rose a little less than 1 percent per year over the same period. This difference—which implies very weak measured productivity growth outside of the nonfinancial corporate sector—raises the possibility that overall productivity growth is stronger than indicated by official indexes for nonfarm business.[1] Of course, a critical—and still unanswered—question is the extent to which any understatement of productivity growth has become larger over time. If productivity growth were more rapid than indicated by official statistics, then the economy's capacity to produce goods and services would be increasing faster than indicated by current official statistics. But if the amount of mismeasurement has not increased over time, then the economy's productive capacity also increased more rapidly in earlier years than shown by published measures. In this case, the official statistics on productivity growth—though perhaps understated—would not give a misleading impression about changes in productivity trends.

After changing little, on net, since the late 1980s, the labor force participation rate turned up early last year; it reached a record high 67.3 percent in March of this year and remained at an elevated 67.1 percent in the second quarter. Better employment opportunities have drawn additional people into the workforce. Although the recent welfare reform

1. More detail is provided in a paper by Lawrence Slifman and Carol Corrado, "Decomposition of Productivity and Unit Costs," Board of Governors of the Federal Reserve System, November 18, 1996.

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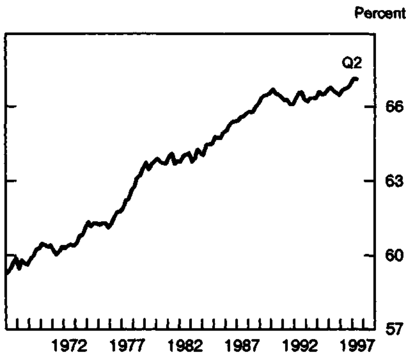
Labor Force Participation Rate

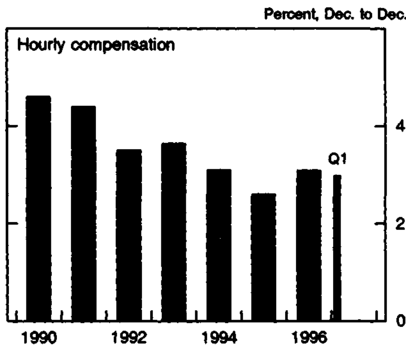


Note. Data before 1994 have been adjusted for the redesign of the household survey.

legislation probably has not yet had a large effect on aggregate labor force dynamics, it may generate an additional, albeit small, boost to labor force participation rates over the next few years. Since the beginning of 1996, the increases in the labor force associated with a higher participation rate have eased pressures on labor markets, as additional workers have stepped in to satisfy continuing strong demand for labor. Nevertheless, hiring was sufficiently brisk during the first half of this year to pull the unemployment rate down about one-quarter percentage point between December and June.

Just as the low unemployment rate points to tightness in labor markets, anecdotal reports from many regions and industries mention the difficulties firms are having hiring workers, especially workers with specialized skills. With this tightness, labor compensation costs have accelerated slightly. Although hourly labor costs, as measured by the employment cost index (ECI), increased only 2.5 percent at an annual rate during the first three months of this year, they were up 3.0 percent over the twelve months ended in March, compared with 2.7 percent over the preceding twelve months. These increases are smaller than might have been expected based on historical relationships, perhaps partly reflecting persistent worker concerns about job security. In addition, modest increases in employer-paid benefits have partly offset faster increases in wages and salaries in the past couple of years. With smaller increases in health care costs than earlier in the decade, shifts of employees into managed care plans, and requirements that employees assume a greater share of health care costs, employer costs for health-related benefits have been well contained. However, growth in employer health care costs may be in the process of bottoming out, as reports of rising premiums for health insurance have become more common. Moreover, the wages and salaries component of the ECI has continued to accelerate, rising 3.4 percent during the twelve months ending in March 1997, about one-quarter percentage point faster than during the previous twelve months and roughly half a percentage point faster than in 1994 and 1995.

Change in Employment Cost Index



Note. Data are for private industry, excluding farm and household workers. The value for 1997:Q1 is measured from March 1996 to March 1997.

Prices

The underlying trend of price inflation has remained favorable this year. In particular, the CPI excluding food and energy—often referred to as the "core" CPI—increased at an annual rate of 2½ percent over the first two quarters of the year, about the same pace as in 1996. The overall CPI registered a smaller increase than the core CPI during the first half of this year. Both the overall CPI and the core CPI have been affected by a series of technical changes implemented by the Bureau of Labor Statistics over the past two and one-half years to obtain a more accurate measure of price changes. If not for these changes, increases in the CPI since 1994 would be marginally larger.

Other measures of prices also suggest that favorable inflation trends continued into 1997. Measured from the first quarter of last year to the first quarter of this year, the chain price index for personal consumption expenditures excluding food and energy rose

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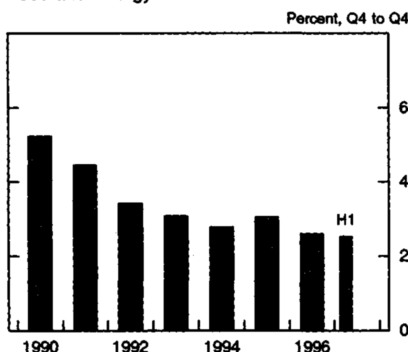
Change in Consumer Prices Excluding Food and Energy

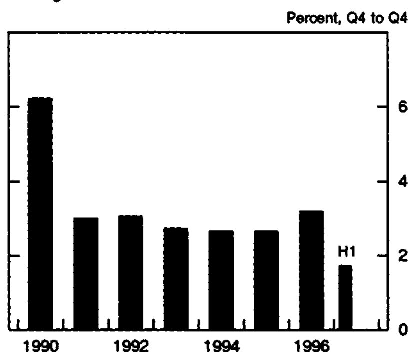


Note. Consumer price index for all urban consumers. Value for 1997:H1 is the percent change from 1996:Q4 to 1997:Q2 at an annual rate.

2 percent, the same as in the four-quarter period a year earlier.[2] Similarly, the chain price index for overall GDP—which covers prices of all goods and services produced in the United States—and the chain measure for gross domestic purchases—which covers prices of all goods purchased in the United States—increased the same amount over the year ending in the first quarter of 1997 as during the previous four quarters.

All of these price measures indicate that inflation remains muted, despite high levels of resource utilization. Several factors have contributed to the recent favorable performance of price inflation. Energy prices have declined this year. Non-oil import prices also have fallen significantly, reducing input costs for some domestic companies and likely restraining the prices charged by domestic businesses that compete with foreign producers. Besides being restrained by some price competition from imported materials and supplies, prices of manufactured goods at earlier stages of processing have been held in check by an expansion of industrial capacity that has been rapid enough to restrain increases in utilization rates over the past year. Also, to the extent that firms have succeeded in their efforts to realize large efficiency gains and reduce unit costs, upward pressure on prices may be reduced. Finally, an extended period of relatively low and steady inflation has reinforced a belief among households and businesses that the trend of inflation should remain muted, and consequently helped to hold down inflation expectations.

Change in Consumer Prices



Note. Consumer price index for all urban consumers. Value for 1997:H1 is the percent change from 1996:Q4 to 1997:Q2 at an annual rate.

Developments in the food and energy sectors were favorable to consumers in the first half of 1997. Consumer energy prices declined in the first half of the year as the price of crude oil dropped back following last year's run-up. In 1996, the price of crude oil was boosted by refinery disruptions, uncertainty about the timing of Iraqi oil sales, and unusual weather patterns that increased energy demand for heating and cooling. As these factors receded this year, crude oil prices fell. Although the downward trend was interrupted by some transitory spikes in prices—as in May when tensions in the Middle East flared up—the price of crude is now roughly back to the range that prevailed before last year's run-up. Since December, gasoline prices have tumbled more than 16 percent at an annual rate, and heating oil prices have fallen significantly. Natural gas prices also fell as stocks, which had dwindled over the winter, were replenished. Reflecting the declines in fuel prices, the CPI for energy fell about 9 percent at an annual rate between December 1996 and June 1997.

Consumer food prices increased at an annual rate of only about 1 percent in the first half of the year.

2. The price measure for personal consumption expenditures (PCE) is closely related to the CPI because components of the CPI are key inputs in the construction of the PCE price measure. Nevertheless, the PCE price measure has the advantage that by using chain weighting rather than fixed weights it avoids some of the substitution bias that affects the CPI.

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Alternative Measures of Price Change
Percent

Price measure	1995:Q1 to 1996:Q1	1996:Q1 to 1997:Q1
Fixed weight		
Consumer price index	2.7	2.9
Excluding food and energy	2.9	2.5
Chain type		
Personal consumption expenditures	2.0	2.5
Excluding food and energy	2.0	2.0
Gross domestic purchases	2.2	2.2
Gross domestic product	2.2	2.2
Deflator		
Gross domestic product	2.1	1.8

Note. Changes are based on quarterly averages.

Although coffee prices jumped, the prices of many other food items were flat or edged lower. Most notably, declines in grain prices that began in mid-1996 have been working their way to the retail level and have held down prices for a variety of grain-dependent foods, such as beef, poultry, and dairy products. Prices of foods that depend more heavily on labor costs have been rising modestly this year.

Consumer prices for goods other than food and energy rose a restrained three-quarters percent at an annual rate between December and June of this year, a touch below last year's pace. Declining prices for non-oil imports helped contain prices of goods in the CPI in the first half of the year, in part by constraining U.S. businesses in competition with importers. For example, prices of new and used passenger cars declined in the first six months of the year, and prices of light trucks were essentially flat. Also, prices of house furnishings were about unchanged, on balance, in the first half of the year, although apparel prices moved up after declining in recent years.

The CPI for non-energy services rose about 3 percent at an annual rate between December and June, a touch below last year's pace. After rising markedly last year, airfares declined, on net, in the first half of this year. Fares fell substantially early in the year when the excise tax on tickets expired, and even with the reimposition of the tax in March, ticket prices were still lower in June than in December. Increases in prices of medical services also continued to slow somewhat this year.[3] In addition, the CPI for auto finance fell in May and June as automakers sweetened incentives. In contrast, price increases in the first half of the year picked up in some other areas; shelter prices rose a bit more rapidly than last year, as did tuition and prices for personal care services.

Credit and the Monetary Aggregates

Credit and Depository Intermediation. The total debt of domestic nonfinancial sectors increased at an annual rate of about 4¾ percent from the fourth quarter of 1996 through May of this year, placing the aggregate near the middle of the range for 1997 established by the FOMC. This pace is more than half a percentage point below that for 1996, reflecting significantly slower growth of borrowing by the federal government. The total debt of the other sectors has risen at a roughly constant pace over the past few years, even though the growth rate of nominal output has been increasing.

3. In January 1997, the Bureau of Labor Statistics introduced a new measure of the prices of hospital services—which account for roughly one-third of the CPI for medical services—and this new measure should, over time, provide a more accurate gauge of price movements in this area.

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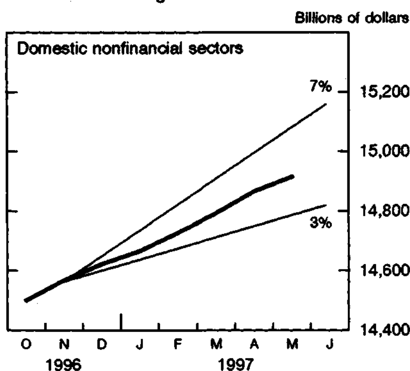
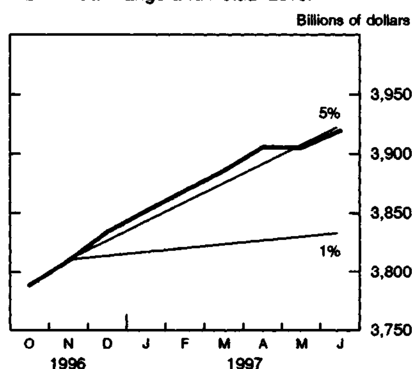
Debt: Annual Range and Actual Level



Credit on the books of depository institutions rose more rapidly than total debt in the first half of 1997, indicating that their share of total debt outstanding increased. Credit growth at thrift institutions eased late last year and early this year after increasing moderately in the first three quarters of 1996. However, commercial bank credit grew at a brisk pace in the first half of the year, with both securities and loans increasing more rapidly than they did last year. Real estate lending at banks rose about 9 percent at an annual rate between the fourth quarter of 1996 and June of this year, compared with 4 percent in 1996. In contrast, outstanding home mortgages at thrift institutions grew little in the first part of the year after a large run-up in 1996. Home equity credit lines from banks expanded especially rapidly in the spring, as some banks promoted these loans as a substitute for consumer loans. The growth of consumer loans at banks (including loans that were securitized as well as loans still on banks' books) fell from about 11 percent in 1996 to 3¼ percent at an annual rate between the fourth quarter of 1996 and June of this year.

The Monetary Aggregates. Growth of the monetary aggregates during the first half of 1997 was similar to growth in 1996. Between the fourth quarter of last year and June, M2 expanded at an annual rate of almost 5 percent; as the Committee had anticipated, the aggregate was running close to the upper bound of its growth cone, which had been chosen to be consistent with price stability. The behavior of M2 over this period can be reasonably well explained by changes in nominal GDP and interest rates, using historical velocity relationships. In the first quarter, the velocity of M2 (defined as the ratio of nominal GDP to M2) increased a little more than might have been anticipated from its recent relationship to the opportunity cost of holding M2—the interest earnings forgone by owning M2 assets rather than market instruments such as Treasury bills. M2 may have been held down a bit by savers' preferences for equity market funds, for which inflows were quite strong. Growth of M2 was much slower in the second quarter than in the first quarter (4¼ percent compared with 6 percent at an annual rate), consistent with the slowing of the economy and almost unchanged M2 opportunity cost. The monthly pattern of M2 growth in the second quarter was heavily influenced by unusually high individual non-withheld tax payments. M2 surged in April, as households apparently accumulated additional liquid balances in order to make the larger tax payments, and was about unchanged on a seasonally adjusted basis in May as payments cleared and balances returned to normal.

M2: Annual Range and Actual Level



The correspondence between changes in M2 velocity and in opportunity cost during recent years may represent a return to the roughly stable relationship observed for several decades until 1990—albeit at a higher level of velocity. The relationship was disturbed in the early 1990s by households' apparent decisions to shift funds out of lower-yielding deposits into higher-yielding stock and bond mutual funds. On one hand, the "credit crunch" at banks and the resolution of troubled thrifts curbed the eagerness of these institutions to attract retail deposits, holding down the rates of return offered on brokered deposits and similar accounts relative to the average

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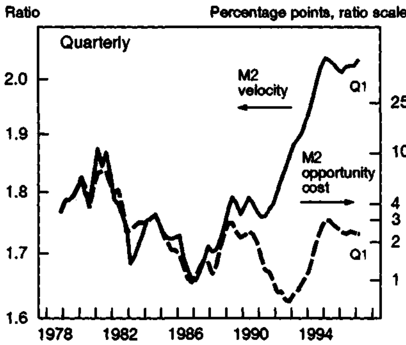
deposit rates used in constructing measures of opportunity cost. At the same time, the appeal of longer-term assets was enhanced temporarily by the steeply sloped yield curve and more permanently by the greater variety and lower cost of mutual fund products available to investors. More recently, robust inflows into stock funds apparently have substituted to only a limited extent for holdings of M2 assets, and M2 velocity and opportunity cost have again been moving roughly together since mid-1994, although velocity has continued to drift up slightly. However, the period of renewed stability in the behavior of M2—three years—is still fairly short, and whether the stability will persist is unclear. Variations in opportunity cost and income growth during this period have been rather small, leaving considerable doubt about how M2 would respond to more significant changes in the financial and economic environment.

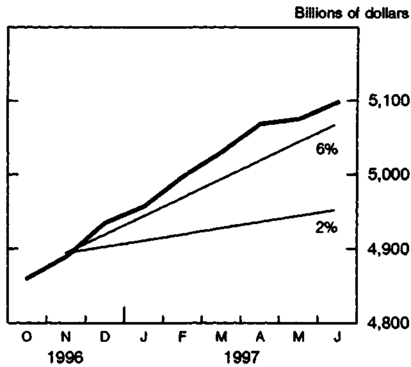
M2 Velocity and the Opportunity Cost of Holding M2



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

M3 rose about 7 percent at an annual rate between the fourth quarter of 1996 and June of this year. This pace is a little faster than last year's and again left M3 above the upper end of its growth cone, which, like the growth cone for M2, was set to be consistent with price stability. Large time deposits, which are not included in M2, continued to increase much more rapidly than other deposits. Banks have been funding their asset growth disproportionately through wholesale deposits, leaving interest rates on retail deposits further below market rates than they have

M3: Annual Range and Actual Level



been historically. Growth of institution-only money market funds eased just a little from last year's torrid pace, as the role of these funds in corporate cash management continued to increase.

M1 contracted at a 2½ percent annual rate between the fourth quarter of 1996 and June of this year. Growth of this aggregate was again depressed by the spread of so-called sweep programs, whereby balances in transactions accounts, which are subject to reserve requirements, are "swept" into savings accounts, which are not. Sweep programs benefit depositories by reducing their required holdings of reserves, which earn no interest. At the same time, they do not restrict depositors' access to their funds for transactions purposes, because the funds are swept back into transactions accounts when needed. Until late last year, most retail sweep programs were limited to NOW accounts, but demand-deposit sweeps have expanded markedly since then. Adjusted for the estimated total of balances swept owing to the introduction of new sweep programs, M1 expanded at a 4¾ percent annual rate between the fourth quarter of 1996 and June 1997, a little below its sweep-adjusted growth rate in 1996.

The drop in the amount of deposits held in transactions accounts in the first half of 1997 caused required reserves to fall about 10 percent at an annual rate, close to the rate of decline last year. Nonetheless, the monetary base has expanded at a moderate pace so far in 1997, because the runoff in required reserves has been more than offset—as it was also last year—by an increase in the demand for currency. Currency growth has been a little higher this year than last, as the effects of strong domestic spending more than

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Growth of Money and Debt
Percent

Period		M1	M2	M3	Domestic nonfinancial debt
Annual[1]					
1987		6.3	4.2	5.8	10.0
1988		4.3	5.7	6.3	9.0
1989		0.5	5.2	4.0	7.9
1990		4.1	4.1	1.8	6.9
1991		7.9	3.1	1.2	4.6
1992		14.4	1.8	0.6	4.7
1993		10.6	1.3	1.1	5.2
1994		2.5	0.6	1.7	5.2
1995		–1.6	4.0	6.2	5.5
1996		–4.6	4.7	6.8	5.4
Quarterly (annual rate)[2]					
1997	Q1	–0.7	6.1	8.2	4.5
	Q2	–5.4	4.3	6.8	n.a.
Year-to-date[3]					
1997		–2.6	4.9	7.1	4.8

1. From average for fourth quarter of preceding year to average for fourth quarter of year indicated.
2. From average for preceding quarter to average for quarter indicated.
3. From average for fourth quarter of 1996 to average for June (May in the case of domestic nonfinancial debt).

offset a slight drop in net shipments of U.S. currency abroad in the first four months of the year.

Further reductions in required reserves have the potential to diminish the Federal Reserve's ability to control the federal funds rate closely on a day-to-day basis. Traditionally, the daily demand for balances at the Federal Reserve largely reflected banks' needs for required reserves, which are fairly predictable. As a result, the Federal Reserve has generally been able to supply the quantity of balances that satisfies this demand at the intended funds rate. Moreover, reserve requirements are specified in terms of an average level of balances over a two-week period, so if the funds rate on a particular day moves above the level expected to prevail on ensuing days, banks can trim their balances and thereby relieve some of the upward pressure on the funds rate. If required reserves were to fall quite low, the demand for balances would become more linked to banks' desire to avoid overnight overdrafts when conducting transactions through their accounts at Reserve Banks. Demand from this source is more variable than is requirement-related demand, and it also cannot be substituted across days; both factors would tend, all else equal, to increase the volatility of the federal funds rate.

The decline in required reserves over the past several years has not created serious problems in the federal funds market, but funds-rate volatility has risen a little, and the risk of much greater volatility would increase if required reserves were to fall substantially further. One factor mitigating an increase in funds-rate volatility has been an increase in required clearing balances. These balances, which banks can precommit to hold on a two-week average basis, earn credits that banks use to pay for Fed-

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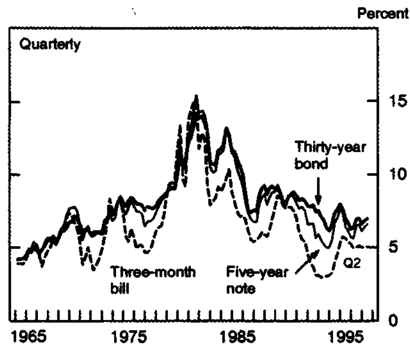
eral Reserve priced services. Like required reserve balances, required clearing balances are predictable by the Federal Reserve and can be substituted across days within the two-week maintenance period. Funds-rate volatility has also been damped by banks' improved management of their balances at Reserve Banks, which in part reflects the improved real-time access to account information now provided by the Federal Reserve. Whether these factors could continue to restrain funds-rate volatility if required reserve balances were to become much smaller is as yet unclear. Also unclear is whether a moderate increase in funds-rate volatility would have any serious adverse consequences for interest rates farther out on the yield curve or for the macroeconomy. The Federal Reserve continues to monitor the situation closely.

Interest Rates, Equity Prices, and Exchange Rates

Interest Rates. Interest rates on Treasury securities were little changed or declined a bit, on balance, between the end of 1996 and mid-July. Yields rose substantially in the first quarter as evidence mounted that the robust economic activity observed in the closing months of 1996 had continued into 1997. By the time of the March FOMC meeting, most participants in financial markets were anticipating some tightening of monetary policy, and rates moved little when the increase in the intended federal funds rate was announced. Beginning in late April, key data pointed to continued low inflation and a slowing of economic growth in the second quarter, and interest rates retraced their earlier advance.

Selected Treasury Rates



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

The yield on the inflation-indexed ten-year Treasury note was little changed between mid-April and mid-July, suggesting that at least part of the roughly 60-basis-point drop in the nominal ten-year yield over that period reflected a reduction in expected inflation or in uncertainty about future inflation, or both. Yet, relative movements in these two yields should be interpreted carefully, as the market's experience in trading indexed debt is relatively brief, making its prices potentially vulnerable to small shifts in market sentiment. Moreover, the Treasury announced this spring a reduction in the frequency of nominal ten-year note auctions, perhaps putting downward pressure on their nominal yields, and some investors may have paid renewed attention to upcoming technical adjustments to the CPI, which will reduce measured inflation. Survey-based measures of expected inflation showed little change in the second quarter.

The interest rate on the three-month Treasury bill was held down in recent months by the reduced supply of bills associated with the smaller federal deficit. Between mid-March and mid-July, the spread between the federal funds rate and the three-month yield averaged about 15 basis points above the average spread in 1996. Interest rates on private short-term instruments increased a little in the second quarter after the small System tightening in March.

Equity Prices. Equity markets have advanced dramatically again this year. Through mid-July, most broad measures of U.S. stock prices had climbed between 20 percent and 25 percent since year-end. Stocks began the year strongly, with the major indexes reaching then-record levels in late January or February. Significant selloffs ensued, partly occasioned by the backup in interest rates, and by early April the NASDAQ index was well below its year-end mark and the S&P 500 composite index was barely above its. Equity prices began rebounding in late April, however, soon pushing these indexes to new highs. Stock prices have been somewhat more volatile this year than last.

The run-up in stock prices in the spring was bolstered by unexpectedly strong corporate profits for the first quarter. Still, the ratio of prices in the S&P 500 to consensus estimates of earnings over the coming twelve months has risen further from levels that were already unusually high. Changes in this ratio have often been inversely related to changes in long-term Treasury yields, but this year's stock price

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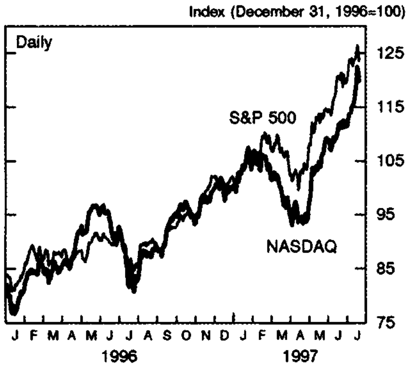
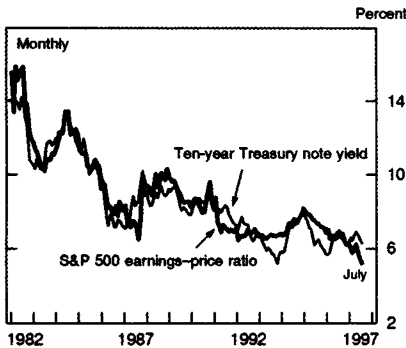
Major Stock Price Indexes



Note. Last observations are for July 18, 1997.

gains were not matched by a significant net decline in interest rates. As a result, the yield on ten-year Treasury notes now exceeds the ratio of twelve-month-ahead earnings to prices by the largest amount since 1991, when earnings were depressed by the economic slowdown. One important factor behind the increase in stock prices this year appears to be a further rise in analysts' reported expectations of earnings growth over the next three to five years. The average of these expectations has risen fairly steadily since early 1995 and currently stands at a level not seen since the steep recession of the early 1980s, when earnings were expected to bounce back from levels that were quite low.

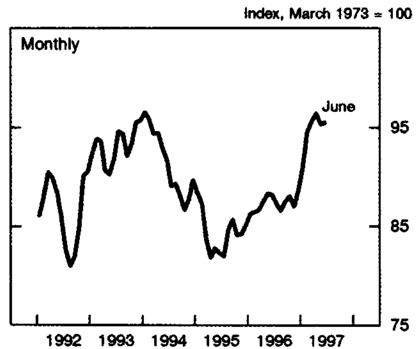
Equity Valuation and Long-Term Interest Rate



Note. Earnings–price ratio is based on the I/B/E/S International, Inc., consensus estimate of earnings over the coming twelve months. All observations reflect prices at mid-month.

Exchange Rates. The weighted average foreign exchange value of the dollar in terms of the other G-10 currencies rose sharply in the first quarter from its level in December and has moved up somewhat further since then. On balance, the nominal dollar is more than 10 percent above its level at the end of December. A broader measure of the dollar that includes currencies from additional U.S. trading partners and adjusts for changes in relative consumer prices shows appreciation of about 7 percent. After rising nearly 10 percent in terms of the Japanese yen to a recent peak in late April, the dollar retreated; it is currently about unchanged from its value in terms of yen at the end of December. In contrast, the dollar has risen about 17 percent in terms of the German mark since the end of last year.

Weighted Average Exchange Value of the U.S. Dollar



Note. Nominal value in terms of the currencies of the other G-10 countries. Weights are based on the 1972–76 global trade of each of the ten countries.

Early in the year, data showing continued strengthening of U.S. economic activity surprised market participants, raised their expectations of some tightening of U.S. monetary policy, and contributed to upward pressure on the dollar. In light of the FOMC action in late March and the tendency for subsequent economic indicators to suggest a slowing of the growth of U.S. real output, pressure for dollar appreciation abated. While robust economic activity in the United States generated a rise in U.S. long-term interest rates through April, market uncertainty about the strength of output growth in several foreign industrial countries led to little change, on balance, in aver-

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age long-term (ten-year) rates in other G-10 countries. Since then, U.S. rates have returned to near year-end levels, while rates abroad have moved down. Accordingly, the long-term interest differential, on balance, has shifted further in favor of dollar assets since December, consistent with the net appreciation of the dollar this year.

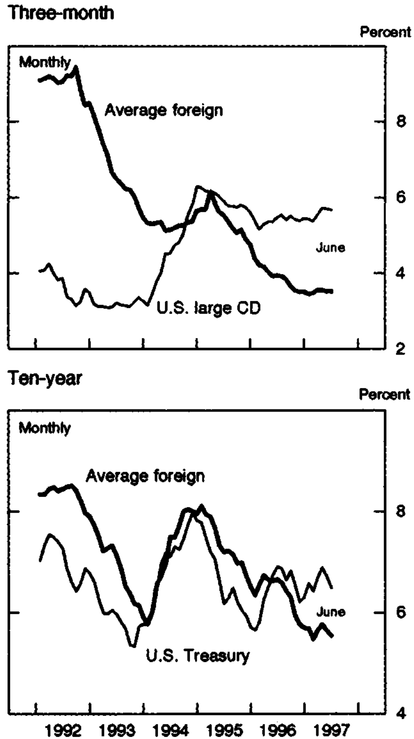
Despite indications of further recovery of output in Japan, the dollar rose against the yen early in the year as planned fiscal policy in Japan appeared to be more restrictive than had been expected, and Japanese long-term interest rates declined in response. Statements by G-7 officials at their meeting in Berlin in February and on subsequent occasions suggested some concern that the dollar's strength and the yen's weakness not become excessive. The dollar moved back down in terms of the yen in May and has since fluctuated narrowly. The yen has been supported by data showing a widening of Japanese external surpluses and by a partial retracing by Japanese long-term rates of their earlier decline, as indicators have suggested that the fiscal measures may not be as contractionary as previously expected.

The dollar also rose sharply early in the year in terms of the German mark and other continental European currencies. Market participants have been disappointed that the pace of economic activity has not strengthened further in continental European countries. In addition, uncertainties about the prospects for European Monetary Union, including the possibility of delay and the question of which countries will be in the first group proceeding to Stage Three, have resulted in fluctuations in the mark and, on balance, appear to have strengthened the dollar. German long-term interest rates have declined somewhat on balance this year.

Short-term market interest rates in most of the major foreign industrial countries have changed little on average since the end of last year. Rates in the United Kingdom have risen somewhat as the new government increased the official lending rate one-quarter percentage point in May and the Bank of England raised it by the same amount in June and again in July. Short-term rates in Italy and Switzerland have eased. Stock prices have risen sharply so far this year in the major foreign industrial countries, particularly in continental Europe.

The dollar has changed little on balance in terms of the Mexican peso since December, as improved investor sentiment toward Mexico, reflected in narrowing yield spreads between Mexican and U.S. dollar-denominated bonds, has supported the peso.

U.S. and Foreign Interest Rates



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

The trend in Mexican inflation has declined this year; nevertheless, the excess of Mexican inflation over U.S. inflation implies about a 7 percent real appreciation of the peso since December.

Since mid-May, financial pressures in Thailand, which caused authorities there to raise interest rates and have led to depreciation of the currency, have spilled over to influence financial markets in some of our Asian trading partners, particularly the Philippines and Malaysia. Interest rates in both of these countries rose sharply. Philippine officials relaxed their informal peg of the peso in terms of the dollar, and the currency declined significantly; the Malaysian ringgit and Indonesian rupiah have also depreciated.

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