

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

COMMITTEE ON BANKING AND
FINANCIAL SERVICES

U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED SIXTH CONGRESS

FIRST SESSION

—
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CONTENTS

	Page
Hearing held on:	
February 24, 1999	1
Appendix:	
February 24, 1999	43

WITNESS

WEDNESDAY, FEBRUARY 24, 1999

Greenspan, Hon. Alan, Chairman, Board of Governors, Federal Reserve System	6
--	---

APPENDIX

Prepared statements:	
Leach, Hon. James A.	44
Barr, Hon. Bob	46
Mascara, Hon. Frank R.	48
Greenspan, Hon. Alan	50

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

Greenspan, Hon. Alan:	
Monetary Policy Report to the Congress Pursuant to the Full Employment and Balanced Growth Act of 1978, dated February 23, 1999	81
Written response to questions from Hon. James A. Leach	69
Written response to questions from Hon. Barbara Lee	77
Written response to questions from Hon. Doug Ose	80

CONDUCT OF MONETARY POLICY

WEDNESDAY, FEBRUARY 24, 1999

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON BANKING AND FINANCIAL SERVICES,
Washington, DC.

The committee met, pursuant to call, at 10:05 a.m., in room 2128, Rayburn House Office Building, Hon. James A. Leach, [chairman of the committee], presiding.

Present: Chairman Leach; Representatives McCollum, Roukema, Bachus, Castle, Campbell, Royce, Manzullo, Ryan, Ose, Sweeney, Biggert, Terry, Toomey, LaFalce, Vento, Frank, Waters, C. Maloney of New York, Watt, Bentsen, J. Maloney of Connecticut, Lee, Goode, Mascara, Inslee, Jones, Capuano and Sanders.

Chairman LEACH. The hearing will come to order.

The committee 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, we welcome you back to the committee. It has long been my view that no committee has a greater oversight obligation than this committee, with its jurisdiction over the Federal Reserve Board and its conduct of monetary policy.

In order that all Members may have an opportunity to examine the Chairman, it is the intent of the Chair to allocate opening statements to the Chairman and Ranking Member of the full committee, as well as the full Subcommittee on Domestic and International Monetary Policy. All other opening statements will be included for the record.

In this regard, it has come to my attention that the semiannual report on the conduct of monetary policy and the state of the economy is one of many such reports scheduled to terminate at the end of the year under a 1995 statute. I would like to assure Members of the committee that we are working closely with House leadership to rectify this issue on a timely basis. But whether or not there continues to be a legislative mandate for regular congressional review of the Fed's conduct of monetary policy, it would be the committee's intent to require the Chairman to report regularly on the state of economy and the Federal Reserve policies to sustain economic growth and promote the fullest credible employment of the American work force.

The combination of a more disciplined fiscal policy promulgated by Congress and prudential stewardship of monetary policy by the Federal Reserve has produced the longest peacetime expansion in modern U.S. history. The facts speak for themselves. The unem-

ployment rate is at a 29-year low, inflation is at a 33-year low, inflationary pressures appear subdued, and the Federal budget surplus is growing.

In this reinforcing cycle, low inflation and low real interest rates have produced real wage increases for the American people. It is a circumstance which has remarkably caused the ability of this Congress to deal with issues like Social Security to become much more manageable.

In this context, let me just stress that as Chairman of the committee of oversight over monetary policy, I take as the highest obligation the necessity of maintaining the independence of the Federal Reserve System, which I consider to be the 20th Century's most innovative institutional addition to the science of government at the national level.

Let me just request unanimous consent to put a fuller statement in the record and also ask unanimous consent for other Members to revise and extend their remarks and put fuller statements in the record.

[The prepared statement of Hon. James A. Leach can be found on page 44 in the appendix.]

Mr. LaFalce.

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

Chairman Greenspan, we are delighted to have you with us again today. When you have a job description, I am sure the very first few words will say, "Testify before Congress with some frequency." Then you will put a smiley face, because that is clearly the most pleasurable aspect of your job, I am sure. We surely will work together with the Chairman in order to ensure that the law says that you must perform this joyous task with great frequency.

Mr. Chairman, as you often noted, the United States economy is doing quite, quite well; and Chairman Leach ticked off some of the indicators which reveal that. Surely this is due in considerable part to a reduction in the Federal deficit; surely it is due in considerable part to the fact that the Federal Reserve and the Treasury Department have effectively managed exposure of the United States economy to the financial and economic crises and difficulties going on internationally.

Right now I am most concerned about the international economy and how monetary policy can and will be used to balance domestic and international priorities. Our economy might yet be affected by the past, present, and future international problems, and problems abroad are adversely affecting certain sectors of our domestic economy which averages often mask.

In addition, foreign capital flows to the United States have financed our current account deficit without allowing the problems normally associated with such a deficit. I am concerned about what the prospects are for a possible drying up of those capital flows, what could cause it, if there is anything on the horizon that might do that, and what would the consequences be, and what responses would be available to us, either through fiscal or monetary policy.

Moreover, clearly the problems of a global economy are not over. East Asia is not recovering as quickly as we would like. Japan remains reluctant to adopt adequate policies to bring itself both out of recession and to resolve its bad bank debt problem. The situation

in Latin America is murky. The European monetary union is brand new. And according to some information I saw recently, even Germany suffered a negative real growth in GDP in the last quarter.

There are some other issues of concern I hope we can address this morning. I believe it is your position that the economy may have grown too fast in the last quarter and that it could signal potential inflation. Some individuals are concerned that the Fed might, in contemplation of this, be considering increasing interest rates in the future, and yet this obviously would have its downside, too, especially because of the huge amount of consumer debt.

Others believe the Federal Reserve is going to rely on the bond market to raise rates. I am interested in your thoughts on that, what are the prospects for that, and what your attitude toward that is.

I am also concerned about what the role of the Fed and the Treasury is in foreign exchange markets. The position is that there is no intervention, and that our trading partners are not manipulating exchange rates to enhance their trading position with us. Yet our domestic interest rates relative to interest rates abroad clearly affect international trade and capital flows, and I am interested in your comments on that.

Most especially we have almost as much trade with Canada and Mexico, our two border countries, as we do the rest of the world. They are now our top two countries, and we have seen a real devaluation in the currencies of both of those countries. Both are either at or near their historic lows.

This has significance for the totality of our domestic economy, but it has special significance for border communities on the north, from the State of Washington up through New York to Maine. And of course on the entirety of our southern border there has been greater devaluation and volatility with the peso by far than with the looney.

I am very interested in what the prospects might be for future stability in that currency relationship and what the importance of that might be, too.

These are just some of the myriad of questions that I am hoping you will be able to address as you proceed this morning. Thank you very much.

Chairman LEACH. Thank you, John.

Mr. Bachus.

Mr. BACHUS. Welcome, Chairman Greenspan.

Most Americans realize that the economy is doing quite well. I don't think you can turn on the TV set, listen to the radio, without realizing that we have an exceptional economy. But as good as it is, I am not sure that most Americans or that most of us even realize how exceptional it is in certain respects.

When you look at the record, at the hard numbers, it becomes apparent that the United States is enjoying a period of almost unparalleled economic prosperity. Some Wall Street pundits have described this as a "Goldilocks" economy, and that invites skepticism when you use euphoric terms like that. I am sure it sort of bothers you. It is somewhat troubling. But I would say that if there ever has been a Goldilocks economy, it is now. It is difficult to really know why it is so good.

The porridge in the "Goldilocks" fable was neither—it was not too hot and it was not too cold. I think that is what the economists refer to when they refer to a "Goldilocks" economy. But in fact, this economy—I think what they mean is it is hot where it should be hot and it is cold where it should be cold. I think they are referring to that.

What I mean by that is, as you know, we throw these figures around, but they are really astounding, and that our gross domestic product grew last year at slightly over 4 percent. In the last quarter of last year it grew at about 6 percent. Yet we had an inflation rate of about 1.5 percent last year, which is an astounding combination. Economists tell us that that just cannot go on.

The other thing I think is exceptional about this economy is how it has reached down to the workers that are most vulnerable. I noticed that Senator Sarbanes—I had read an article in the *New York Times* where it said that the current economic expansion has been a terrific boon to workers, especially those at the bottom of the pay ladder who have had the most trouble getting and keeping jobs, especially good ones. I had that in my remarks, and then I noticed that he complimented you for it.

But I want to again compliment you and for your leadership in being a part of creating such an economy.

I would just end by saying that last year we created 2.8 million jobs, 2.8 million jobs in the economy. January figures are in, and the economy created 245,000 additional jobs in January, so this is an exceptional story.

I will conclude by saying this, that when it can't get any better—that is what people keep saying, unfortunately, it can't get any better. I think the stock market is pricing in a Nirvana ad infinitum. They are pricing in that it is going to get better, it is great, it is going to keep getting better. I know you are concerned about this, but I am not sure what you can do when things are working very well. I am not sure what you can do.

I know there are cold spots. I know our farmers are suffering. I know low commodity prices are causing the domestic oil industry concern. Our exporters, because of the appreciating dollar, are being hurt. But, all in all, I think it has been a very good year. I think your policies at the Federal Reserve have been outstanding, and I compliment you.

Thank you.

Chairman LEACH. Thank you.

I see Ms. Waters is not with us. Please proceed, Mr. Greenspan.

Mr. SANDERS. Point of parliamentary privilege, Mr. Chairman.

Chairman LEACH. Yes, of course.

Mr. SANDERS. I apologize for having come a little bit late, but I thought it was the custom that each Member have a chance to make an opening statement. I think that is a pretty good precedent we should maintain.

Chairman LEACH. First, it is a sometime custom in the committee. Second, opening statements under the rules of the House are the prerogative of the Chair.

One of our problems, and I respectfully appreciate what the gentleman is saying, but we have a 60-Member committee, and under the five-minute rule, with the math on that—and we have a Chair-

man—when we double that, which is the implications of opening statements, we have real difficulty.

Mr. SANDERS. I agree with that, Mr. Chairman.

Chairman LEACH. In any event, what I have tried to do, among other things, is shorten the opening statements to three minutes and parse it out.

I would say, by the way, that because we have had two on our side and one on your side, if the Ranking Member would like to allow a second speaker on his side this morning, I would be very amenable to that.

Mr. LAFALCE. I would certainly request that, Mr. Chairman.

Chairman LEACH. It is up to your discretion to designate who.

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

Chairman LEACH. The gentleman had an inquiry.

Mr. SANDERS. Your point about five minutes for 60 Members is exactly right, but there is no rule it has to be five minutes apiece. You could limit it to a minute or two.

This is an important discussion. Mr. Greenspan is not here every day. I would respectfully request a minute or two minutes, and there may not be a whole lot of folks who would like to talk, but I think that is a good practice.

John.

Mr. LAFALCE. May I ask which Members of the Democratic side would like to speak for a brief period of time? Would you please—

Mrs. JONES. I give my time to my colleague. I would encourage you to give any time you are going to give to me to Mr. Sanders.

Mr. SANDERS. Thank you.

Mr. LAFALCE. How much time do we have allotted, two or three minutes?

Chairman LEACH. What the Chairman had designated in advance was four Members would be allowed to speak for three minutes each, and if you would like to allow Mr. Sanders to speak for three minutes, I am quite amenable.

Mr. LAFALCE. I give Mr. Sanders three minutes, yes.

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

I would just like to say this. In recent times, Mr. Bachus and I, we find ourselves usually in agreement, but I would suggest we have a disagreement this time.

There is no argument that in recent years the economy has in fact been very good, but we should not overdo it in terms of what is going on for the average working person in this country.

The good news is that for the last couple of years, for the first time in decades, we have seen wages go up for lower-income workers and middle-income workers, for the first time. But the fact is that the median family income in 1996 was \$1,000 less than in 1989. The inflation-adjusted earnings of the median workers in 1997 were 3.1 percent lower than in 1989. Over the period from 1989 to 1997 real hourly wages either stagnated or fell for most of the bottom 60 percent of the working population.

So while we can say that in the last few years for the average worker things have been getting better, the reality is that most workers in America today are working longer hours and lower

wages than was the case ten or twenty years ago. If we say this is as good as it is going to be, that is a pretty pessimistic outlook.

More importantly, and this is a point that I want to stress because it is not talked about too much, according to the Economic Policy Institute, the typical married couple family worked 247 more hours per year in 1996 than in 1989. That is more than six or seven weeks worth of additional work. That means all over this country, and I am sure it is in your districts as well as in mine, you see people working two jobs and three jobs.

In the beginning of the 20th Century, workers fought and they said, we want a 40-hour work week; that is what we want.

One hundred years later workers are working 45, 50, 60 hours a week. Wives are working alongside of husbands because we need two breadwinners in the family to pay the bills. So to my friend, Mr. Bachus, I say, yes, we have seen improvements in the last couple of years, and we should be proud of that and continue that effort.

But if we look at what is going on for the average American worker today, in many respects he or she is not where they were twenty years ago. We still have 43 million people without any health insurance. People can't afford the cost of college education. We have the highest rate of childhood poverty in the industrialized world, the greatest gap between the rich and the poor.

So if we sit here and say, "Gee, we are living in utopia, it is not going to get any better than this," boy, I think that would be a very sad and unfortunate statement. That would be my point, Mr. Chairman.

Chairman LEACH. Thank you very much for the representation. Chairman Greenspan.

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

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

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

The American economy over the past year again performed admirably. Despite the challenges presented by severe economic downturns in a number of foreign countries and episodic financial turmoil abroad and at home, our real GDP grew 4 percent for a third straight year. In 1998, 2.75 million jobs were created on net, bringing the total increase in payrolls to more than 18 million during the current economic expansion, which late last year became the longest in U.S. peacetime history.

Unemployment edged down further to a 4¼ percent rate, the lowest since 1970. And despite taut labor markets, inflation also fell to its lowest rate in many decades by some broad measures, although a portion of this decline owed to decreases in oil, commodity, and other import prices that are unlikely to be repeated. Hourly labor compensation adjusted for inflation posted further impressive gains. Real compensation gains have been supported by robust advances in labor productivity, which in turn have partly reflected heavy investment in plant and equipment, often embodying innovative technologies.

Can this favorable performance be sustained? In many respects the fundamental underpinnings of the recent U.S. economic performance are strong. Flexible markets and the shift to surplus on the books of the Federal Government are facilitating the buildup in cutting-edge capital stock. That buildup, in turn, is spawning rapid advances in productivity that are helping to keep inflation well behaved. New technologies and the optimism of consumers and investors are supporting asset prices and sustaining spending.

But, after eight years of economic expansion, the economy appears stretched in a number of dimensions, implying considerable upside and downside risks to the economic outlook. The robust increase of production has been using up our Nation's spare labor resources, suggesting that recent *strong growth in spending* cannot continue without a pickup in inflation unless labor productivity growth increases significantly further.

Equity prices are high enough to raise questions about whether shares are overvalued. The debt of the household and business sectors has mounted, as has the external debt of the country as a whole, reflecting the deepening current account deficit. We remain vulnerable to rapidly changing conditions overseas, which, as we saw last summer, can be transmitted to the United States markets quickly and traumatically.

In light of all of these risks, monetary policy must be ready to move quickly in either direction, should we perceive imbalances and distortions developing that could undermine the economic expansion.

The Federal Open Market Committee conducted monetary policy last year with the aim of sustaining the remarkable combination of economic expansion and low inflation. In the wake of the Russian crisis last August and subsequent difficulties in other emerging market economies, investors perceived that the uncertainties in financial markets had broadened appreciably, and as a consequence they became decidedly more risk averse. As a result, quality spreads escalated dramatically, especially for lower-rated issuers. Many financial markets turned illiquid, with wider bid-asked spreads and heightened price volatility, and issuance was disrupted in some private securities markets.

To cushion the domestic economy from the impact of the increasing weakness in foreign economies and the less accommodative conditions in U.S. financial markets, the FOMC, beginning in late September, undertook three policy easings, reducing the Federal funds rate from 5½ percent to 4¾ percent.

Our economy has weathered the disturbances with remarkable resilience, though some yield and bid-asked spreads still reflect a hesitancy on the part of market participants to take on risk.

The Federal Reserve must continue to evaluate, among other issues, whether the full extent of the policy easings undertaken last fall to address the seizing-up of financial markets remains appropriate as those disturbances abate.

To date, domestic demand and hence employment and output have remained vigorous. At the same time, no evidence of any upturn in inflation has as yet surfaced. The U.S. economy's performance should remain solid this year, though likely with a slower

pace of economic expansion and a slightly higher rate of overall inflation than last year.

The stocks of business equipment, housing, and household durable goods have been growing rapidly to quite high levels relative to business sales or household incomes during the past few years, and some slowing in the growth of spending on these items seems a reasonable prospect. Moreover, part of the rapid increase in spending, especially in the household sector, has resulted from the surge in wealth associated with the run-up in equity prices that is unlikely to be repeated, and the purchasing power of income and wealth has been enhanced by declines in oil and other import prices, which also are unlikely to occur this year.

Assuming that aggregate demand decelerates, underlying inflation pressures, as captured by core price measures, in all likelihood will not intensify significantly in the year ahead, though the Federal Reserve will need to monitor developments carefully. We perceive stable prices as optimum for economic growth. Both inflation and deflation raise volatility and risks that thwart maximum economic growth.

The economic outlook involves several risks. The continuing downside risk posed by possible economic and financial instability around the world was highlighted earlier this year by the events in Brazil. Although financial contagion elsewhere has been limited to date, more significant knock-on effects in financial markets and in the economies of Brazil's important trading partners, including the United States, are still possible. Moreover, the economies of several of our key industrial trading partners have shown evidence of weakness which, if it deepens, could further depress demands for our exports.

Another downside risk involves a potential correction to stock prices. Such a decline would increase the cost of equity capital, slowing the growth of capital spending. It would also tend to restrain consumption spending through its effect on household net worth.

But on the upside, our economy has proven surprisingly robust in recent years. More rapid increases in capital spending, productivity, real wages, and asset prices have combined to boost economic growth far more and far longer than many of us would have anticipated.

This "virtuous cycle" has been able to persist because the behavior of inflation also has been surprisingly favorable, remaining well contained at levels of utilization of labor that in the past would have produced accelerating prices. That they have not done so in recent years has been the result of a combination of special one-time factors holding down prices that I have already mentioned and more lasting changes in the processes determining inflation.

In the current economic setting, businesses sense that they have lost pricing power and generally have been unwilling to raise wages any faster than they could support at current price levels. Firms have evidently concluded that if they try to increase their prices, their competitors will not follow, and they will lose market share and profits.

Given the loss of pricing power, it is not surprising that individual employers resist pay increases. But why has pricing power of

late been so delimited? Monetary policy certainly has played a role in constraining the rise in the general level of prices and damping inflation expectations over the 1980's and 1990's. But our current discretionary monetary policy has difficulty anchoring the price level over time in the same way that the gold standard did in the last century.

Enhanced opportunities for productive capital investment to hold down costs also may have helped to damp inflation. Through the 1970's and 1980's, firms apparently found it easier and more profitable to seek relief from rising nominal labor costs through price increases than through cost-reducing capital investments. Price relief evidently has not been available in recent years, but relief from cost pressures has. The newer technologies have made capital investment distinctly more profitable, enabling firms to substitute capital for labor far more productively than they would have a decade or two ago.

The surge in investment not only has restrained costs, it has also increased industrial capacity faster than factory output has risen. The resulting slack in product markets has put greater competitive pressures on businesses to hold down prices, despite taut labor markets.

The role of technology in damping inflation is manifest not only in its effects on U.S. productivity and costs, but also through international trade, where technological investments have progressively broken down barriers to cross-border trade. The enhanced competition in tradeable goods has enabled excess capacity previously bottled up in one country to augment worldwide supply and exert restraints on prices in all countries' markets.

Although the pace of productivity increase has picked up in recent years, the extraordinary strength of demand has meant that the substitution of capital for labor has not prevented us from rapidly depleting the pool of available workers.

The number of people willing to work can be usefully defined as the unemployed component of the labor force plus those not actively seeking work, and thus not counted in the labor force, but who, nonetheless, say they would like a job if they could get one. This pool of potential workers aged 16 to 64 currently numbers about 10 million, or just 5¾ percent of that group's population, the lowest such percentage on record, which begins in 1970, and 2½ percentage points below its average over that period.

The number of potential workers has fallen since the mid-1990's at a rate of a bit under 1 million annually. We cannot judge with precision how much further this level can decline without sparking ever-greater upward pressures on wages and prices. But should labor market conditions continue to tighten, there has to be some point at which the rise in nominal wages will start increasingly outpacing the gains in labor productivity, and prices inevitably will begin to accelerate.

Before closing, Mr. Chairman, I would like to address an issue that has been receiving increasing attention, the 20th Century date change. While no one can say that the rollover to the year 2000 will be trouble free, I am impressed by the efforts to date to address the problem in the banking and financial system.

For our part, the Federal Reserve System has now about completed remediation and testing of its mission-critical applications. We opened a test facility in June at which more than 6,000 depository institutions to date have conducted tests of their Y2K compliant systems, and we are well along in our risk mitigation and contingency planning activities.

As a precautionary measure, the Federal Reserve has acted to increase the currency in inventory by about one-third, to approximately \$200 billion in late 1999, and has other contingency arrangements available if needed.

The banking industry is also working hard, and with evident success, to prepare for the event. By the end of the first quarter, every institution in the industry will have been subject to two rounds of on-site Y2K examinations. The overwhelming majority of the industry has made impressive progress in their remediation, testing, and contingency planning efforts.

Americans can justifiably feel proud of their recent economic achievements. Competitive markets, with open trade both domestically and internationally, have kept our production efficient and on the expanding frontier of technological innovation. The determination of Americans to improve their skills and knowledge has allowed workers to be even more productive, elevating their real earnings. Macroeconomic policies have provided a favorable setting for the public to take greatest advantage of opportunities to improve its economic well-being.

The restrained fiscal policy of the Administration and the Congress has engendered the welcome advent of a unified budget surplus, freeing up funds for capital investment. A continuation of responsible fiscal and, we trust, monetary policies should afford Americans the opportunity to make considerable further economic progress over time.

Mr. Chairman, I have excerpted from my prepared remarks and would request that the latter be included for the record.

[The prepared statement of Hon. Alan Greenspan can be found on page 50 in the appendix.]

Chairman LEACH. Without objection, of course.

Mr. Greenspan, I want to just begin with a question, asking you to put some macroeconomic meaning to the political discussions of the day. By that, it seems to me that we have a lot of divisive political rhetoric between the political parties, but there is surprisingly not as much distinction in the end effect of policies advocated.

For example, generally speaking, as you look at the surplus which Republicans claim disproportionate credit for, the Republicans want to either save the surplus or use it for tax cuts. The Democratic Party in large measure wants to dedicate to Social Security 60 percent, which the Republicans also have endorsed, and advance a bit IRAs and increase a little bit domestic spending, and Republicans would increase a little bit military spending.

But isn't it true that, macroeconomically, the notion of putting 60 percent aside for Social Security is the equivalent of reducing the deficit, and then expanding IRAs is the equivalent of a tax cut? And that when you are really looking at the differences between the parties, it is a very small percentage of the presumed surplus

and how to allocate it in the years ahead. Is that a valid way of looking at this issue?

Mr. GREENSPAN. I think so, Mr. Chairman. There seems to be a general conclusion, and a proper one, that allowing part of the surplus, indeed, a significant part of the surplus, to run will maintain a level of national savings in this country which is crucial.

The one thing that is economically unquestioned is that we are about to have in the early part of the 21st Century a very major increase in the proportion of retirees to working people. Unless we wish to have difficulty in allocating the then gross domestic product between workers and retirees and an increasingly friction-based argument, it is crucially important for us to accelerate the building of our capital stock and its efficiency so that there will be more than adequate goods and services for retirees when they retire, the big Baby Boom retirees, and of course continued rising standards of living for our working people. That means that we need to have adequate savings to do that.

My sense of the political rhetoric of late is that there is a growing awareness of that, and I agree with you, that it does seem to cut across parties.

Chairman LEACH. My final question relates to commodity prices. As you know, worldwide, developing countries are seeing certain difficulties because of low commodity prices. Internally in this country the agricultural economy is reeling in very major ways. Do you have any advice on how to bolster the Midwestern farm economy and address this issue?

Mr. GREENSPAN. One of the problems with the Midwest farm economy is it is an extraordinarily productive segment of our economy, and the production for export has, of course, been a very crucial aspect over the generations of our farm system. It is difficult to measure exactly how effective the weakness in Asia has been on our farm exports, but my recollection is that our exports of agricultural commodities to Japan, which is one of our very largest customers, has gone down very dramatically. Needless to say, the rest of Asia is also weakened quite considerably.

When you take out a substantial chunk of demand on American agricultural resources, the fact that prices have gone down is, I would suspect, by no means a great surprise. Prices of wheat and soybeans, corn, are all down quite significantly. Hogs, until very recently, as you know better than anybody, underwent an extraordinarily sharp contraction in price.

My own judgment is that short of a significant building back of export demand it is going to be difficult to work our way through this particular problem; and, obviously, we have also had difficulties, which I think Mr. LaFalce was referring to earlier, in the sense that, for example, on the wheat front, our two major competitors are Australia and Canada, both of whom are major commodity producers who have had the same problems and whose currencies vis-a-vis the American dollar have weakened considerably, with the obvious implications relevant to competition in the world markets for some of our major grain products.

So all in all, if one looks across the spectrum of what the problems are, they just fall very directly in the area of deficient export

demand, and that is substantially attributable to the very sharp contraction in the demand for American farm products from Asia.

Chairman LEACH. Thank you.

Mr. LaFalce.

Mr. LAFALCE. Thank you very much.

Mr. Chairman, I raised a number of issues in my opening statement. If you recall some of them, I will let you address them directly. If not, I will reiterate some. Do you recall some of the points I raised?

Mr. GREENSPAN. You raised a number of interesting points. Which would you like me to respond to?

Mr. LAFALCE. All right. Let's deal with the question of what I perceive as the reluctance on the part of the Fed to raise interest rates, a disposition not to decrease them, I could be wrong in that impression, and a reliance on the part of the Fed for the bond market to increase rates.

Mr. GREENSPAN. Again, we don't endeavor to try to manipulate the bond market to act as a proxy for Federal Reserve action. The major reason is we wouldn't know how, because it is just not something that we are capable of doing without major secondary distortions and unexpected feedbacks on the economy.

What we do in monetary policy, as I have mentioned before this committee on many occasions in the past, is endeavor to respond to the full complex of events; both real, meaning goods and services; and financial; and employ monetary policy in a sense to endeavor to affect the marginal changes that are going on in the financial system.

Obviously, we can't fully control the economy and have no interest in doing so, but we do impact upon the financial system, and that does affect aggregative demand. But to say, as a number of people have said, that we control the bond market and that therefore we have the capacity to employ not only the Federal funds rate, which we do have full control over, and the bond market, which we do not, and that we use these in some combination is just contrary to the facts.

Mr. LAFALCE. Let me switch now to the exchange rate relationship that exists internationally, and most especially with our two major trading partners. We have an increasingly shrinking—or I shouldn't say shrinking, but an interrelated global economy. If this is to continue with some predictability and sustainability, it seems to me that there must be stability within the exchange rate relationship, more so in the future than we have seen in the past.

We have seen significant depreciation in the Canadian dollar and much greater depreciation in the Mexican peso, as just two examples, since we entered into our trade agreements about a decade ago with the Canadian-American FTA and, earlier this decade, the NAFTA.

As part of your dealings in the global scene with this new global economic architecture, what are we discussing that could achieve greater future currency stability?

Mr. GREENSPAN. Mr. LaFalce, as I have testified before this committee previously, starting in the early part of the 1990's there was a very dramatic increase in the amount of cross-border finance. That is, I used to characterize it as the new financial system,

which in many respects is not inappropriate, in the sense that there are really quite major differences which result very largely from technological changes which have proliferated in the early 1990's that have had a very dramatic effect on the nature and the number of different types of financial products, which, by unbundling risk, have increasingly served consumers and businesses in a more effective manner.

The consequence of this is that we are dealing with a far more potentially volatile set of movements of finance, and this is an issue which clearly both we and the Treasury, as well as our other colleagues in the international financial arena, have addressed increasingly and in more detail as we have learned, essentially by doing, what this new international financial structure is and how it functions.

We have drawn certain conclusions. One, it would be desirable, were it possible, to have much more stable exchange rates than we have seen. I don't think anybody seriously questions that. But, obviously, volatility in exchange rates creates risks. It creates all sorts of negative implications with respect to all types of investments.

The question is, how do you do that? We have concluded that the means that have been used in the past, that is, so-called sterilized intervention, just does not work. It may have worked in part a little in the past, but even that is dubious. But every analysis that anybody has done has concluded that that is not the way to do it.

The problem of monetary policy, employing that to affect the exchange rate, will often get you into the position where your exchange rate will be soft when your economy is soft, and the obvious monetary policy reaction would be to increase interest rates to harden the currency, but that would be wholly inappropriate for domestic policy purposes.

Cutting the rest of the detailed argument short, it comes down to the general conclusion that the best way to maintain, in general, stable exchange rates is to maintain a stable international economy, and very basically, a low inflation economy. There is nothing more relevant than stable prices to create stable exchange rates.

We are, nonetheless, examining this whole issue in greater detail. We have continuous discussions with the Treasury and with others in other countries, as I indicated. And this larger group will be coming forward with ideas and particular programs which are directed at the new international financial structure and, very specifically, the type of regulatory structure which is appropriate to that.

One of the issues undoubtedly will be endeavors to make sure that exchange rates, in the context of the total, are as stable as we can make them. But if we try to do it in a manner which is counterproductive, it will have very negative effects on the total system.

Mr. LAFALCE. Thank you, Mr. Chairman. My time has expired, but I would like you to expand either personally or in writing about divisions that may have existed at your recent meeting with the Germans and the French on one hand with respect to some bonds and the position that you and Mr. Rubin took. Maybe we could just have some follow-up personal dialogue.

Chairman LEACH. Mr. McCollum.

Mr. MCCOLLUM. Thank you very much.

Mr. Chairman, I think most of us would agree, I suspect we would get virtually unanimity, that the monetary policy leadership you have provided over the past few months has been excellent. The economy is not only doing well, but despite those treacherous waters that you are foreseeing coming up ahead, the Board has done quite well. The Open Market Committee has done quite well.

But the other half of the matter, which probably leads to as many disturbing consequences for your monetary policy decisions, is the fiscal policy decision the Chairman of the committee alluded to a minute ago.

I found it intriguing last week that the *Wall Street Journal* editorial board chose to engage you in somewhat of an open public dialogue. They suggested criticism because they say that you urged surpluses to be dedicated to reducing Government debt before taxes are cut.

They went on to say some intriguing thoughts about the importance, relative importance, of paying down the debt or not. They suggest that paying down the country's debt would not make the Nation better off, and they suggest that the argument of crowding out, which I have heard a long time since I have been on this committee, by Government spending is not a valid argument.

They go on to suggest that the national debt does not really matter, at least it is a secondary issue to the economy, until it starts to exceed 100 percent of GDP or so. They go on to say what matters is outlays the size of Government relative to the private sector and marginal tax rates, the measures of incentives.

In other words, they say that this is what constitutes the latter three, the engines of economic growth, and that we really shouldn't be focused on fiscal policy and paying down the debt at this time because it doesn't exceed 100 percent of GDP.

How do you respond to that? I found that the most succinct statement on the other side of the question of debt that I have read in a long time, and I thought I would give you the chance to respond.

Mr. GREENSPAN. Thank you, Congressman.

I happen to agree with the general position that the smaller the total of Government both receipts and expenditures are relative to the private sector, the better off we are with respect to economic growth.

The question of what the optimum size of the debt is is a factual question. The issue really, as far as I can see, is that the evidence is fairly convincing that the lower the debt, the lower long-term borrowing costs. It is not as though when you hit 100 percent of the GDP something happens. That particular relationship, as best I can judge, carries all the way down below 100 percent.

So that the question really gets down to, in a period such as we are now in, reducing the debt because we need increased savings. I shouldn't argue that that would not become private savings. It might if you basically cut taxes. I am not sure about that.

But I think the main thrust of the issue is one that we have to increase savings for reasons I mentioned before about the issue of the demographics that are coming up.

But to the extent that we can reduce spending and return that to the taxpayer, I am fully supportive of that, and that is the type of tax cuts that I would like to see. I don't like to see tax cuts which are effectively those which are made available by increasing debt.

And this is where I think there are disagreements, but I must say that in the broad, general thrust of that editorial, I didn't find difficulties with it. But I do think that their notions, very specifically, about the lack of debt reduction having positive effects is not, in my judgment, verified by the facts.

Mr. MCCOLLUM. What you are talking about when you are talking about the debt and the interest on the debt is that huge percentage of our budget that goes to paying the interest. If I recall now, it is somewhere around 30 or 40 percent or so of the entire spending we have to put out right now is on interest on that debt. I assume that is what you are talking about, the interest costs?

Mr. GREENSPAN. No, I was talking about interest rates within the economy. In other words, when you look across the spectrum of countries and within economies, the lower the overall level of public debt, the lower tends to be the level of interest rates. That is clearly the case in Europe, and as best I can judge, it is also the case here.

Mr. MCCOLLUM. It sounds to me what we need is a balanced approach on how we need to get there in some manner which gets there within the framework of your concerns and at the same time keeps the economic engine running. That is always going to be a debate up here.

But you do not oppose tax cuts, it is just which ones they are and when they come?

Mr. GREENSPAN. On the contrary, I have been very supportive of marginal tax cuts. Indeed, as you may recall, I am quite a strong supporter of reducing the capital gains tax and even eliminating it. At the appropriate time, I am very much strongly in favor of tax cuts. It is at this particular time that that would not be my first priority. It is my second priority, as I think I have mentioned to this committee before.

That is, if you can't, for political reasons, hold the surplus in place and reduce the debt, then I would be far more supportive of cutting taxes than increasing spending.

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

Chairman LEACH. Mr. Frank.

Mr. FRANK. Thank you, Mr. Chairman.

It is somewhat unaccustomed, particularly for those of us on this side, to referee the dispute between yourself and the *Wall Street Journal* editorial board. I admire your effort to turn the other cheek. I think it will be unavailing.

But I do take it that there is disagreement. Your first priority right now, your first preference, would be to reduce the debt?

Mr. GREENSPAN. That is correct.

Mr. FRANK. And theirs would be not to worry about the debt until it reaches 100 percent of GDP, but to cut taxes. So there is that disagreement between you and them.

Mr. GREENSPAN. I would assume that is the case.

Mr. FRANK. You assume it?

Mr. GREENSPAN. Because I must admit I read it when it was originally written, but I can't say I can quote you verbatim.

Mr. FRANK. The particular editorial?

Mr. GREENSPAN. Yes.

Mr. FRANK. Did you read it when it was originally written before it was published or after it was published?

Mr. GREENSPAN. I misspoke. My apologies.

Mr. FRANK. But you didn't answer that question.

Mr. GREENSPAN. I will answer it. I read it probably the same time you did.

Mr. FRANK. No, I didn't read it and have no intention of reading it.

Mr. GREENSPAN. I read it when it was published.

Mr. FRANK. I do want to acknowledge, and I think that is actually indicative—I want to acknowledge my appreciation of your willingness over the years to resist people who might have seen you as an ideological confrere and were in fact sometimes angry at you for not giving in.

I think it is enormously to your credit that interest rates were not raised in anticipation of an inflation rate that prevailing doctrine predicted a few years ago. There were people who said if the unemployment rate got as low as it did and growth stayed as high as it did, inflation would be inevitable. I realize that you deserve a great deal of the credit for resisting that, and I think you have been proven correct. Of course, the award for being proven correct is people are mad at you, but you are used to that.

I do want to acknowledge that I think your willingness to, in fact, look at the facts and make these judgments based on the empirical evidence has been very important.

I am particularly struck that, while we mentioned the *Wall Street Journal*, the *New York Times* financial pages also were from time to time disappointed in you for not raising interest rates when the rules said they should have been. Now, without ever acknowledging their error, now they have converted, so I think that is important.

The second thing I want to acknowledge is I appreciate your reference here to even more public announcements. You mention that there will now be sometimes announcements of a change in—I was about to say a change in orientation, but I am reluctant to use that phrase—but a change in general inclination by the Fed, even without a change in actual interest rates.

I am glad you are doing that. I think it validates the fact that your increased openness since 1994, announcing FOMC policy on the same day, has been very useful.

I hope you will agree that one of those who was pushed hardest was our former Chairman, Mr. Gonzalez. He used to argue strongly, and now obviously he had some disagreements with you on some things, but it does seem to me much of what Mr. Gonzalez argued about, an ability for the system to tolerate more openness and more publicity, has in fact proven beneficial. I thought that was important.

The one substantive point I had is, on page 13, I was pleased to note the following, because this is relevant. You say, talking about

shifts in the market environment which have accounted for the lack of inflation, the benign overall price behavior, and you say, "Undoubtedly, other factors have been at work," including the temporary factors, oil prices and other drops, and then, "some more lasting, such as worldwide deregulation and privatization," and this I think is particularly relevant to us today, "and the freeing up of resources previously employed to produce military products that was brought about by the end of the Cold War."

Now I cite that because, obviously, we have a dispute about what amount of military spending we need from a national security standpoint. But in every debate I have been in on military spending in the 19 years I have been here, there were those who argue that we shouldn't cut military spending because it would be bad economically. Indeed, we have some people who are very occasional Keynesians. When military spending comes up, they become very much in favor of the stimulative effects of Government spending.

I take it what you are saying is that dollar for dollar, military products, as you previously said here, have no end use, but are there as insurance—I think that is an analogy that you have used before, and to the extent you could put those same dollars into other areas, maybe education and job training, maybe into transportation, you are dollar for dollar likely to have a better economic effect, and in fact it is less inflationary.

Is that an accurate reference to what you are saying here?

Mr. GREENSPAN. Yes it is, Mr. Frank.

Incidentally, I was referring not only to the United States but the whole Soviet Union and all other related—

Mr. FRANK. I appreciate that. Because as my former colleague, Mr. Kennedy, used to—you may remember when we did international financial institutions—argue that one of the things we ought to be urging on developing nations was a reduction in their military budgets, because it was an unproductive use of their resources. So I take the point as one of general application.

But that is an accurate statement?

Mr. GREENSPAN. It is, indeed.

Mr. FRANK. To the extent that you can reduce military spending, consistent with your security needs, that is going to have a good economic effect?

Mr. GREENSPAN. Yes.

Chairman LEACH. Thank you very much.

Mrs. Roukema.

Mrs. ROUKEMA. Mr. Chairman, I certainly appreciate your response to both Mr. Leach and Mr. McCollum's questions regarding financial matters relative to Social Security paying down the debt, and I am in general agreement with that approach.

I am going to go into a different area of questioning. Could you address the following question, which I believe is very relevant to the U.S. economy. I have noticed the news this week that hit the headlines about the extraordinary, and I mean extraordinarily large, layoffs at Levi Strauss. Are we are dealing here with exporting jobs, literally exporting U.S. jobs overseas?

Do you view this as the beginning of a surge of U.S. job declines and exporting and wage depressions? How do you view it from your

position, whether directly or only indirectly related to monetary policy?

Mr. GREENSPAN. Congresswoman, the nature of the American economy has always been one of what Joseph Schumpeter, a long time ago called "creative destruction"; that is, we continuously churn, in the sense that the capital in lower technologies is gradually moved to higher technologies, and that is indeed the way standards of living grow.

The problem that unfortunately occurs as a sidebar of that is that you find that there are a lot of people who have been in jobs for very long periods of time in industries whose technology is less than the cutting edge relevant to what is new. And even though there are major technological improvements in apparel and in textiles, nonetheless it is the economic forces that are shifting the capital out of those industries into industries at the higher level of technology.

The problem that I think we have with that is not a macro-economic problem. It has been going on for generations. I think that is a problem for how does one address the hardship that is created in these circumstances in a manner which does not distort the desirable moving of assets from one area to another.

I do not think, however, that as you implied in your question, that this particular layoff is a signal that something very significant more is happening.

Mrs. ROUKEMA. You do not?

Mr. GREENSPAN. I do not. And indeed, what you see at this stage is the actual number of people seeking initial claims for unemployment insurance has fallen to very low levels, which suggests that since that is the broadest measure we have, that the layoff rate is really down quite significantly.

Mrs. ROUKEMA. But this Levi Strauss announcement is an indication of a trend in job declines, would you not say so?

Mr. GREENSPAN. No, I wouldn't. I think that is a very specific problem associated with the industry and with the company. And it is to be regretted, but I can't say that I see it as a broadening issue.

Mrs. ROUKEMA. I hope you are right. I am glad to hear that.

Now, let me go back to what I think was Mr. LaFalce's related question regarding the G-7 meeting that you recently returned from. I understand Secretary Rubin was part of that meeting. Tell me, what are your views? Are we, the international community, making progress in the area of financial reform? Is there something that we are going to be able to do for the world's international financial architecture?

And that, of course, is related to last year's IMF funding debate. I don't think we can do the IMF reforms in this short period of time, but give me your perspective on the results of, and progress at, the G-7 meeting.

Mr. GREENSPAN. Yes. As I indicated earlier, we are seeing an evolving new international economy. It is changing very much relevant to what we have seen in the past. We are in the process of learning how it works as we are dealing with it, so it is sort of learning by doing. That is not the most desirable means that one can conceive of.

Fortunately, the international trauma that came out of the Russian default created so much risk aversion in the system that the amount of capital flows, especially to emerging nations, has slowed down; and, indeed, there is some evidence that there is a general temporary slowdown in this huge surge in capital flows, which means that we probably have a little time to be deliberative in making judgments as to how the structure ought to be altered.

The G-7 meeting had very detailed discussions of this. The Bank for International Settlements in Basel is a significant player, as is the IMF and the World Bank. There are innumerable fora which are involved in trying to examine all the various different aspects of this, and I think we are moving forward.

We are not moving forward in a dramatically rapid way, and I am pleased at that, because I don't think that this is either necessary or desirable. But I do believe at the end of the day we will find an appropriate mix of policies which will best address the appropriate supervision and regulation of this new international financial and trade system.

Mrs. ROUKEMA. Thank you, Mr. Greenspan. If you do have further amplification or documentation, we would appreciate it if you could submit it to us in writing.

Mr. GREENSPAN. Certainly.

Mrs. ROUKEMA. Thank you.

Chairman LEACH. Thank you, Ms. Roukema.

Mr. Vento.

Mr. VENTO. Thank you.

Chairman Greenspan, thanks for your appearance this morning and your statement.

In trying to analyze this, obviously, one of the concerns we have in the months ahead is there has been a significant surge in terms of imports, and this could, of course, lead to some sectoral problems.

Obviously, the steel issue comes to mind. We have concerns with that and with some agriculture products. In fact, the market for agricultural exports is really quite down. We are producing a lot more food, so we are seeing the effects of that in my home State, both in iron mining and, for instance, in various types of products—agricultural products—in place.

At the same time, obviously, we would see a tendency in terms of the cuts, the lower prices in terms of some of these commodities, whether it is pork, grain, or steel, there is a tendency to hold down inflation. It is a major benefit that we are receiving right now. Obviously, in the oil sector we have the same circumstance going on. That isn't one that we have to worry about too much in Minnesota, but it is a factor.

Monetary policy could help in terms of providing some stimulus. How do you see that being coordinated down the road in terms of providing that without overheating the economy? That is obviously the dilemma that we face.

Mr. GREENSPAN. Mr. Vento, I think you raise the sort of fundamental dilemma of monetary policy in the sense that if you have an integrated, interrelated economy, such as that which is in the United States, the 50 States, that there can only be one monetary policy. We do not have the capacity to have different policies in dif-

ferent regions which have different difficulties. So what we have is a policy which endeavors to address the total system, and invariably it is not the appropriate policy for individual sectors.

I remember a colleague of mine a number of years ago talking about California. He said, if we didn't have a single currency and a single monetary policy, California would have a different set of policies than the rest of the country. Now, that cannot be done unless you split off parts of the system, and we don't do that because it is highly inefficient.

As far as individual areas are concerned, I think that it is certainly the case that steel imports surged very dramatically and induced fairly pronounced declines in prices. From what we see, those prices are stabilizing, and indeed, orders are coming back a bit now, and the real pressures are easing in the steel industry. Indeed, there have been significant cutbacks in exports to the United States by a number of the countries which have been very large shippers here.

So the system in steel does appear to be stabilizing. I don't know whether or not that has yet filtered back to the Mesabi Range. I suspect not. It takes a while. But the underlying demands are clearly—

Mr. VENTO. I just think that—excuse me, Mr. Chairman, but I just think that we need to respond in terms of maybe with the reductions of interest rates, obviously on a national basis to deal with it.

One of the aspects here in terms of—and I know my colleague from New York, Mr. LaFalce, talked about the instability of currency. But there have been some overtures especially to, in fact, harmonize currency values with the euro. Obviously, Argentina suggested using it as a benchmark. What is your view with regard to that and those particular initiatives? I noticed that the Secretary of the Treasury was less than enthusiastic about this prospect.

Mr. GREENSPAN. Yes, I thought for good reason. You become enthusiastic only when things make sense and are likely to work.

Mr. VENTO. Some of this may be involuntary in terms of what Argentina may do or other countries may do.

Mr. GREENSPAN. Remember, we have no objection whatsoever if Argentina or any other country decides unilaterally to make the U.S. dollar its medium of exchange. We do recognize that if you have a broadened set of regional areas, like, say, the euro for all of Europe, or most of Europe, and the dollar, say, for a goodly part of Latin America and the United States, there is no question that were that to happen you will get a lesser degree of instability in exchange rates.

There are downsides, however. It creates additional pressures. There will be pressures in Europe because they have eliminated the capacity for exchange rate adjustment at their borders when problems are arising. That means that those adjustments are going to occur in different ways.

The same thing would be true in Latin America. There is no question that there is very considerable value in having large currency blocks in that regard, but there are also significant downsides as well. We and the Treasury have been discussing these issues at some length.

As you may know, we were approached by Argentina to consider certain broader aspects of the dollarization program, and there are numbers of discussions that are going on inside the American Government on the appropriate response to this. So it is an interesting aspect, and perhaps an inevitable aspect, of the major changes that are currently underway in the international financial system.

Mr. VENTO. Mr. Chairman, I will be submitting some questions in writing. Thank you.

Chairman LEACH. Thank you.

Mr. Bachus.

Mr. BACHUS. Thank you, Mr. Chairman.

Mr. Greenspan, yesterday when you testified before the Senate they asked you to also comment on financial modernization. As you know, one of the obstacles right now to the financial modernization legislation is this disagreement over holding companies and subsidiaries, and we discussed that the last time you were before the committee.

We respect your opinion very much and respect the opinion of Secretary Rubin, so we are in, I think, an uncomfortable position in that we are continuing to get a mixed message.

I would ask you this. I know that you and the Secretary are friends. I think that would be a fair comment, would it not?

Mr. GREENSPAN. Indeed.

Mr. BACHUS. And you have great respect for each other?

Mr. GREENSPAN. I certainly have great respect for him. I assume and hope he has respect for me.

Mr. BACHUS. He has publicly said that he does. My question is this—and I think you think the President has tremendous intellect. That is so, is it not? President Clinton? This is not a trick question. He is very intelligent?

Mr. GREENSPAN. Yes. I don't think there is any question about that.

Mr. BACHUS. And I know that Secretary Rubin believes that, and I think most Members of Congress agree that he has outstanding intellect. That being said, I know you have great respect for his understanding of economic abilities, too, do you not?

Mr. GREENSPAN. I do.

Mr. BACHUS. Has there been any attempt—you know, the Congress has asked you and Secretary Rubin to meet together. Has there been any attempt for the President to become involved in those discussions?

Mr. GREENSPAN. Not to my knowledge.

Mr. BACHUS. To me it appears only natural that the President would get a three-way conversation between you, Secretary Rubin and the President, because his advice and consent I know is important to you, it is important to Secretary Rubin—that that meeting ought to occur.

Mr. GREENSPAN. Let me say this, Congressman. I think that getting financial modernization is a very important issue, as I testified before this committee a few days ago. I am more than willing to sit down and try to find a way in which we can coordinate these very—this is a very important issue. It really refers to the structure of American banking and finance in the 21st Century. It is not a technical question.

I am more than willing to sit down, as I indicated previously, with Secretary Rubin and anyone else who wishes to participate in the discussions to find a way to meet their requirement, as they stipulated, for broader oversight of the banking system. We are willing, in effect, if it is necessary, to move the bill to give up some of our so-called turf, if you want to do it that way.

But what our major concern is, is that it not be done in the manner in which the Secretary is now proposing it, which effectively would mean that you would get a major move of all of the affiliates of the holding companies which have any assets at all into the subs of the bank where they could get subsidies. And if they were reluctant to do that, I would assume their shareholders would push them, because it was so obviously the right thing to do.

The difficulty is that the reason that that is an issue is that that would make the Comptroller of the Currency the very major player in supervision and regulation. We have no objection to that. It is just that using that particular vehicle to do it strikes me as creating far greater problems for the international and the domestic financial system.

And so that if they want to sit down and talk about the allocation of turf, so to speak, I am more than willing to do that. We don't need turf for all of the things that we are doing. But we do have a responsibility to maintain the systemic stability of our system, and in our judgment moving in the direction of operating subs instead of affiliates of holding companies is a potentially very serious question.

Mr. BACHUS. I appreciate that. And I respect your opinion and I respect Secretary Rubin's, we in Congress do. I am simply saying that you have a President who negotiated a Middle East peace agreement, he has negotiated with some very adverse parties in Northern Ireland, and here we have two of his appointees, and I would just invite or urge the President—I intend to write a letter to him and hope maybe Mr. LaFalce and maybe the Chairman will join with me and ask that you all put your heads together.

Because I feel we would be much more comfortable if a consensus could be formulated. And I know there may be reservations, and I think certainly they would be trying to express those reservations, but at least to make that attempt.

Mr. LAFALCE. Could I respond to that?

First of all, I am very willing to proceed cooperatively with the Chairman and other Members of the committee in order to achieve consensus. And, second, we have heard from the regulators repeatedly on this issue, from the Chairman of the Federal Reserve Board, from the Secretary of the Treasury, from the Chairman of the FDIC, from past chairmen of the FDIC.

It would be desirable if they could come into full agreement, but it is not necessary. What is necessary is for us to decide. I am personally of the opinion that it might be fruitless to pursue the achievement of a consensus among all the other parties outside the Congress. I am more concerned about the Members of this committee and this Congress coming to a consensus as to what is necessary to pass good financial services modernization. There will always be differences of opinion in the outside world.

Thank you.

Mr. BACHUS. I will just respond, and I respect your opinion. I would just simply say that I think that if the Administration as one voice could move toward some consensus—and I would invite the President to become involved, I think particularly when we have two members of his Administration.

I don't discount that these are serious differences, and I happen to believe that Secretary Rubin and yourself are more informed on these issues than the average Member of Congress, and even the average Member of this committee, more so than this committee. And it would certainly be of assistance to us.

We all have great respect for the President's intellect and for his understanding of economic policies. I just—I believe it is time for that meeting to occur.

Thank you.

Chairman LEACH. If the gentleman will yield just briefly, just to put out the historical record. It is the case that we would all like the advice of the Treasury and the Fed coming together. As recently as last Friday representatives of both groups met, and very intelligent people seemed to have a difference in judgment.

Mr. LaFalce is of course right, that in that circumstance in particular we have to reach a judgment. On the other hand, if there were to be a consensus, it would seriously be reviewed. This committee would never give carte blanche to a consensus arrived outside it, but it would certainly have a major impact on the committee.

The Secretary of the Treasury is the President's representative in this. Basically, I view Mr. Greenspan as part of the congressional branch appointed by the President. That is facetious, but technically the Federal Reserve is not quite within the Administration, although certainly the Chairman and the whole board are appointed by the President.

Mr. BACHUS. I am not saying that a consensus is attainable. I am saying it ought to be attempted on something of what I consider to be this great economic importance and national interest.

Chairman LEACH. I couldn't agree more. You have isolated the signal problem. You have also isolated the desire for consensus within the Treasury and the Fed. It may not be exactly achievable, in which case we are going to have to make some difficult judgments, and that sometimes is a circumstance that we are just obligated to do.

Mr. BACHUS. It would be made less difficult. At least I would extend that idea. I plan to write the President. If anyone wants to join me and urge that—and I think the meeting ought to be the three of you all, initially.

Chairman LEACH. Ms. Waters.

Ms. WATERS. Thank you very much.

I would like to thank Mr. Greenspan for coming over and sharing with us this important information on the economy and helping us to understand the direction of this Nation.

As you know, Mr. Greenspan, my continuing issue of capital formation is one that remains, the idea of getting an investment in inner cities so that we could realize some of the benefits of the growing economy is still a concern that I have that I will continue to talk with you about and not today but at another time.

Even though you give some very positive descriptions of our balance of payments problem, I guess deciding that it has helped to hold down inflation, I wonder about our future relative to balance of payments and our ability to export and sell more, and I wonder about places that don't get talked about a lot.

We have an African trade bill. I am told that we are trading partners with Africa, but I never quite understand the relationship of that trade to our economy and whether or not there is something there that we can develop further by way of this African trade bill. I would like to hear just a little bit about that.

But I want to ask you a very controversial question about a country that is 90 miles from our shores where Europeans are developing and selling and appearing to be doing extraordinarily well and a country that needs everything and that has opened up investment opportunities and joint venture opportunities. They are so concerned about their ability to grow their country and to get what they need to do that that they are working with the other Caribbean countries and with the European Union to form a little bloc. I wonder what that will mean if they are able to do that.

I am talking about Cuba. We have an embargo. I don't know what role you played in Helms-Burton, if they asked your opinion at all. But I would like to hear what you think about that.

Mr. GREENSPAN. Well, Congresswoman, the issue of Cuba goes back really to 1959 and 1960, as you know. And the politics, the international confrontations, the history is replete with more things than any of us could write about in 500,000 pages.

The one thing I will say to you is that it is one of the very rare parts of the world where we probably have very little expertise and have given very little thought to; and the issue, as best I can judge, is really fundamentally a practical political one.

I don't think there are great disputes about whether opening up their markets and having democratic elections and having something far closer to what exists among their neighbors as far as societies are concerned. That would be helpful and would clearly engage a goodly part of the American business establishment beyond the global markets. I would think that if the political issues were resolved—and I recognize there are very significant problems—there is very little doubt that, given the situation in Cuba, that one must presume that there is a great deal of potential investment if that were to become a free economy, which it is not.

Ms. WATERS. As opposed to China?

Mr. GREENSPAN. It is tough to make the economic distinctions. The main issues here are fundamentally political. It is the type of thing which central banks ought to stay away from, because I can give you my judgments about what particular aspects of the Chinese economy are doing, or probably even the Cuban economy, but it is so fundamentally political that I really can't address the issue in any useful way that I would feel comfortable with.

Ms. WATERS. And the African trade bill?

Mr. GREENSPAN. The issue of trade is an issue of importance largely because the world is becoming increasingly integrated. That is, the technology has so dramatically altered the nature of the movement of goods and services and, very specifically, the movement of data, ideas and the like, through the huge telecommuni-

cations system, and so there is a real sense in which there is globalization in this world, and it benefits everybody. It has got obvious problems associated with it, but it strikes me as related to long-term policy, and I think most of us should be really endeavoring to find a way to increase trade while at the same time being aware that a lot of people are disrupted, a lot of companies are disrupted.

My major point would be that we should address those individual disruptions and not try to block trade because it creates those disruptions, because trade is such a fundamentally healthy thing for standards of living, for everybody who engages in it.

So I merely want to say that the issues are not trade. Trade is something we should very strongly support. But we should give very significant scrutiny to those who are hurt by trade problems and deal with them and, very specifically, rather than try to prevent the disruptions from happening by preventing trade from happening.

Mr. BACHUS. [Presiding.] Thank you, Mr. Chairman.

Mr. Castle, do you have questions?

Mr. CASTLE. Yes, and this is going to be tough because I have to ask a brief question or two, and I have to ask for a brief answer because we have a vote in about six or seven minutes here.

But when we did the minimum wage a couple of years ago I ended up supporting it. I basically went back and looked at inflation over a period of time and what the minimum wage was, and they were roughly equivalent in terms of what the new minimum wage would be.

Now there is a discussion of a new minimum wage. You probably opined on this before, and maybe I have heard you, but I can't remember the answer. I don't know if you feel that the minimum wage increase at the Federal level has any kind of an inflationary factor in it or not or is it irrelevant to the economy because it only pertains to a small part of the economy and, if so, if there is some way that we should be looking at that and judging it? So that is one question.

Let me ask my second question. I am increasingly concerned about the proliferation of savings plans that we have in this country. I know that this last year the savings rate was down, in spite of—or maybe because of—a strong economy. People perhaps felt they didn't need to save. I don't know. And I think that there has been a wonderful job done with the IRAs, Roth IRAs, and tuition plans, but there are all kinds of income cutoffs, and there seem to be competing plans.

Are we on the right track with respect to our tax-benefited savings plans in this country? Or should we be thinking about some kind of consolidated plans at the \$2000 level, IRAs which have been around a long time? I would like your comments on those two subjects.

Mr. GREENSPAN. First of all, Congressman, the evidence that we have does suggest that there are inflationary impacts from increasing the minimum wage. My main concern is less that than the issue of individuals who become unemployed because of the minimum wage. The evidence as far as we are concerned is fairly conclusive in that regard, and being unemployed when you are a teen-

ager, for example, which is where most of the issue lies, is very detrimental to getting on the first step of getting on the business ladder, getting a job, learning by training, and becoming a productive member of the work force.

In today's environment that is not relevant because there is a huge demand for workers, well in excess of what the supply is, and, hence, the minimum wage is not, as far as I can see, having a specific impact now in that area. My concern is when the economy turns down at some point, and I do think that we are going to find: one, that teenage unemployment will be higher than it would otherwise have been; and two, that there will be inflationary impacts because of that. In other words, when you withdraw labor from the market, the inevitable effect is to increase the price level.

With respect to the second question, I think you are raising a very important issue. There is a big dispute at this stage as to whether this proliferation of savings plans is indeed increasing the savings rates. There are some fairly sophisticated mathematical models which seem to suggest that there may be some positive effect, but, if there is, it is not a very large one and something of a more consolidated nature, something which really gets to the issue of private pension types of organizations, pension plans or savings vehicles, strikes me as probably wise to think about.

Mr. CASTLE. Thank you, Mr. Chairman. I am not going to ask any follow-up questions, except to say that I think that is an area that we really should be focusing on in this country. I have often found a confusion in governmental policy and tax benefit, and these things sometimes don't happen. When it is made simpler it tends to move forward, so I hope we all can make some progress on that.

I yield back the balance of my time.

Mr. BACHUS. Mr. Chairman, I was hoping I could get in the chair here and slip in another question, but Mr. Sanders has stayed.

Mr. SANDERS. Obstinate that I am.

Mr. BACHUS. Mr. Sanders.

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

Ironically, I was going to ask a similar question to what Mr. Castle asked over on the minimum wage.

Some of us see the positive signs in the current economy in that real wages for low-income workers have finally gone up after many years of stagnation and decline. I am surprised, therefore, about your response to Mr. Castle. Because one of the positive things—some people would argue that one of the reasons that wages for low-income workers have gone up is an increase in the minimum wage, and you and others argued that two years ago when we raised the minimum wage from \$4.25 to \$5.15 there would be massive unemployment among workers. Unemployment is now at a record low.

So my question is, I gather you still oppose raising—the President would like to raise the minimum wage by a buck over a two-year period. Many would like it to go higher. Are you still opposed to raising the minimum wage?

Mr. GREENSPAN. I still think it is a bad idea, because, as I said to Mr. Castle, you don't see the effects when you have a huge demand for labor. The real crucial way to test whether it is a desirable thing to have is when the economy is slack.

As far as I can judge from the data that we tend to find quite compelling is that teenage unemployment does go up with the minimum wage. If that is in fact the case, I think it is a disservice to the people.

Mr. SANDERS. Unemployment now is almost at a record, and we have raised the minimum wage.

Mr. GREENSPAN. You won't see it today. I agree with that.

Mr. SANDERS. Let me ask you this question. If you are concerned about wage increases developing an inflationary spiral, how do you feel about CEOs of large corporations now making 200 times what their workers are making and getting huge golden handshakes and all this kind of stuff? Does that concern you?

Mr. GREENSPAN. If their shareholders are willing to do it, they are wasting their money in many respects, and I find a lot of that stuff frankly—I find a lot of what is being paid to individual CEOs not directed to the value that they are producing for their shareholders who are paying the bill.

Mr. SANDERS. Be that as it may, when we talk about inflation, then you may be right or may not. But what we are seeing, CEOs now make 200 times what workers make. You are expressing a concern of raising the minimum wage of over \$5.15 an hour, but I would hope you would see that same concern about CEOs getting golden handshakes with tens and tens of millions of dollars.

Mr. GREENSPAN. In both cases I am arguing that the Government should not be involved. I am being consistent in that respect.

Mr. SANDERS. Let me ask you another question, the global economy. Some people would argue, including *Business Week*, the *New York Times*, the World Bank, many others, that IMF policy in Mexico, Asia, Russia, and Brazil has largely failed over the last several years. Are you prepared to join such institutions as *Business Week* in urging a rethinking of the fundamental tenets of the IMF in terms of austerity programs, capital flow, and so forth?

Business Week, in a recent editorial, said, and I quote: "The austerity policies of the IMF and the U.S. Treasury aren't part of the solution, they are part of the problem." I believe the World Bank said something similar. There is increased discussion that basic IMF philosophy has failed. Are you calling for changes in basic IMF policy?

Mr. GREENSPAN. Let me just say that we are having conversations, as we always do, on issues of the structure of international financial institutions with the Treasury. We are the relevant agencies in this regard, or the ones who are most directly involved. The Secretary is the senior member of our representation with the IMF. I am the alternate delegate. We are the two who are effectively interfacing with that.

I don't think it is appropriate for me to be discussing what it is we discuss or the like. I think it is appropriate for us to be thinking about these issues; and, obviously, we are.

Mr. SANDERS. I am not hearing you vigorously defending current IMF policies.

Mr. GREENSPAN. You are not going to see me defend a number of things which are part of joint discussions with the Treasury, and there are certain things that I think when we are ready to announce something, I think you will hear an announcement, if there

are such views. I don't want to discuss what goes on in these joint meetings. I think it probably would not be productive.

Mr. SANDERS. Lastly, a brief question.

I mentioned earlier that a recent report indicated that the typical married couple in the United States is currently working 247 more hours in 1996 than in 1989. Now, tell me, when we talk about the economic boom and the economy being so great, I know that in my State it is not uncommon for people to be working 50, 60, sometimes 70 hours a week.

At the beginning of the century, as you will remember, I know you are a historian, workers said, "We want a 40-hour work week. We don't want to work 50 or 60 hours." One hundred years have come and gone, new technology, and people are working huge hours.

What do you think? How can we lower the work week so people have more time for their kids, can relax, not be so stressed out?

Mr. GREENSPAN. One of the interesting things, Congressman, is the fact that there was a very dramatic and protracted decline in the average work week for a number of years, and it stopped. And there is an interesting issue which I don't know, the issue as to the extent to which people do that voluntarily.

You are saying in effect, and I am sure you are quite correct in this regard, that in certain instances people have been working more hours because they needed to. But I have always a suspicion that there is a desire to be working; in other words, that there are enough areas of our economy where people could very easily be working fewer hours and having more leisure time and are choosing not to.

Now I don't know what the mix is, but I think it is a very interesting sociological, as well as economic, question.

Mr. SANDERS. I would tend to agree with you, but you are certainly not denying that in many instances people are working longer hours and their wives are working, who might otherwise prefer to stay home with the children, not out of—not as something they want, but as something that they have to do?

Mr. GREENSPAN. I am sure that is true.

Mr. SANDERS. I would just ask you, Mr. Chairman, that when we talk about there being a booming economy, let us not forget that a lot of folks are not booming and they are working 50 and 60 hours a week.

Mr. GREENSPAN. There is a significant part of our work force who are not doing well and haven't been doing well for quite a long period of time. I don't deny that at all.

Mr. SANDERS. Thank you, Mr. Chairman.

Chairman LEACH. [presiding.] Thank you, Mr. Sanders.

Dr. Paul.

Dr. PAUL. Thank you, Mr. Chairman.

Mr. Greenspan, a lot of economists look to the price of gold as an indicator and as a monetary tool. It has been reported that you might even look at the price of gold on occasion.

Last summer on a couple of occasions here when you were talking before the committees on securities and on derivatives you mentioned something that was interesting. You said that central

banks stand ready to sell gold in increasing quantities should the price rise, which I thought was rather interesting.

Then I followed up with a letter to you to ask you whether or not our central bank might not be involved in something like that, in the gold market. And you did answer me and stated that since the 1930's the Federal Reserve has had no authority to be involved with the gold markets.

I am quite confident that the Treasury has authority to be in gold markets, but you stated that the Federal Reserve did not. But this contradicts some reports that have been made by some Federal Reserve officials that said that the New York Fed was very much involved in the London gold pool from 1961 to 1971. But your answer implied that the Fed has never been involved since the 1930's, which I think is interesting.

The reason why this could be of importance is that we do know that our Treasury was supporting a fixed price of gold at \$35 an ounce in the 1960's, so therefore the price of gold of \$35 an ounce was totally useless in predicting what might happen and what did happen in the 1970's. So if central banks stand ready to lease and sell gold in increasing amounts should the price rise, we are more or less, you know, in a time when the gold price is probably so-called fixed; and we do know that the evidence is there that central banks do loan gold, they sell gold. So could it be that the price of gold today is less valuable to the economists, who think that gold could help us, in thinking that maybe we are in a period of time comparable to what we had in the 1960's?

Mr. GREENSPAN. I think the price of gold has, over the decades, been a generally usable indicator of what the level of inflation has been. Obviously, during the period of an active gold standard, which was really prior to World War I, the price level pretty much locked itself in to the gold price. In fact, by definition it did.

The issue of buying and selling gold as the price changes is indeed exactly what we used to do. We used to, at a certain thing called the gold points, which was the price of gold plus the transportation cost differentials, we, that is, the United States Treasury, stood ready to buy and sell gold at a spread, as indeed all other participants in the gold standard did. So in that regard that was exactly what was happening.

But, needless to say, since we have gone off the gold standard, and especially since 1973, there has been basically a general float of the dollar vis-a-vis gold, which means that the gold price is like another commodity's price.

Nonetheless, like a lot of commodity prices, and perhaps better than most, it has been useful, in my judgment, in trying to get some sense of what inflationary pressures have evolved in this country.

Dr. PAUL. Even if the central banks, who are the major holders of gold, are willing to sell gold in order to manipulate the price or hold the price at a certain level? We are not on a gold standard, so what would the motivation be?

Mr. GREENSPAN. They are not doing it for purposes of fixing the gold price. They are looking for it to reduce their stock of gold when they have sold on the grounds that: one, it costs to store the gold; and, two, it didn't obtain any interest. So they perceived it to be

a poor asset to hold. But the purpose was not to manipulate the price of gold.

Dr. PAUL. Another quick question on another subject, on Argentina. You stated earlier that you have been studying this and will answer the question about whether Argentina can use the dollar as their currency. It has been reported that there was a consideration, and I surely hope this is not true, that the Federal Reserve could become the lender of last resort, and they would have access to the discount window.

Along that line, how does it work when a foreign country dollarizes and they expand their credit through fractional reserve banking? Does that put an obligation on us and can that interfere with the dollar's value?

Mr. GREENSPAN. That is a good question, Congressman. The answer is no. We view monetary policy in the United States as for the United States. We have no interest in, nor does the Treasury, of being a lender of last resort outside the United States.

Dr. PAUL. Outside the IMF?

Mr. GREENSPAN. The issue of whether or not another country wishes to use the American dollar as its medium of exchange is theirs to make. They can do it unilaterally. Panama did. Liberia did. If they choose to do that, that is their sovereign right to do that. But we have no obligation in that regard.

Clearly, we do sense some obligation with respect to our Latin American colleagues for the same reason that we have had relationships with all of our trading partners. Their interests do concern us, and we would like them to be prosperous. To the extent that we are helpful in trade negotiations or other negotiations, that is fine. But lender of last resort, no.

Chairman LEACH. Thank you, Dr. Paul.

Mr. Ryan.

Mr. RYAN. Thank you.

Mr. Greenspan, I would like to ask you to comment on a few things, but first I would like to go off of that last question. Are you suggesting that you prefer unilateral dollarization for a country like Argentina versus giving an arrangement that gives them access to the Fed window? You are not advocating a treaty with Argentina to grant them access to the Fed window, you are suggesting that a unilateral dollarization is preferable from our point of view?

Mr. GREENSPAN. Access to the Fed window I think is nothing either we nor our colleagues at the Treasury think is a good idea. Indeed, we would oppose it.

Dr. PAUL. Thank you. That is very informative. Thank you.

I would like to pull back, broadly speaking, and I would like you to comment on a few things, namely, the worldwide call for new currency regimes, both in broad currency unions and in individual currency regimes. Do you believe that is preferable, to advocate more currency unions, such as the euro, for areas such as Latin America?

And in individual nations, what is your preferable currency regime, generally speaking, a peg, a float, a currency board, or unilateral dollarization?

Mr. GREENSPAN. The change in the international financial structure has re-raised all of these issues and put them really up front, whereas they had not been before. There is very considerable debating in the academic community and indeed among central bankers on all of these questions.

The euro is going to be a very interesting experiment. It is going to teach us an awful lot about how those systems work when you start from scratch. It has not been tested yet. Obviously, it is going to take years before there have been really significant tests in that system.

We all have a lot of general views as to what the appropriate currency regimes are. At the moment, most people I would suspect say that floating is perhaps the least worst of all of the various different—

Mr. RYAN. Do you share that point of view?

Mr. GREENSPAN. I generally do. In other words, I would prefer to have a stable rates structure. I don't think it is feasible. If you can't have it and you have a very major set of financial flows, you are creating all sorts of problems in trying to fix rates, as indeed many of the emerging nations have exhibited in the last two or two-and-a-half years.

I think currency boards work on occasion, under certain circumstances. I think crawling pegs, so to speak, I find not particularly useful. But we are going to know a lot about all of these things I would say in the next two or three years, because we are getting to the point where the amount of knowledge we are about to obtain on how all of this works is increasing very markedly.

Mr. RYAN. Do you believe that we as a member of the G-7 should encourage other countries such as Russia to legalize the use of other currencies within their markets?

Mr. GREENSPAN. It is really their judgment. If you are asking me whether or not they would be helped by an external currency such as the euro, for example, if they made it work, the answer is unquestionably, yes.

It is regrettable at this particular point, but their financial system is in a high degree of instability. If they could find a way to make the euro their currency with all of the implications it has, which are really far more than most people realize—it is not only the political problems, but a very significant number of economic and central banking problems that would be involved—if they could make it work, by definition they would be a far more stable and far more productive economy. But it is not a simple issue of going from here to there.

Mr. RYAN. One more quick question. Could you comment directly on the deflationary signals we are being sent specifically through gold? The CRB commodity index is at its 24-year low. Do these indications tell you—how do they affect your judgment as far as judging inflation on the horizon, given these deflationary signals at home and abroad?

Mr. GREENSPAN. They are one of the indications. In other words, clearly the general decline or weakness in commodities of every different type has been really quite apparent. It is telling something broader than what each individual commodity is telling you.

Having said that, it is important also to remember that commodities are an ever-decreasing part of our economies. That is, high-tech and more impalpable types of economic products are becoming ever-increasingly more important, so you have to recognize that there is a very limited role for commodities as a price indicator, but it is a useful role. But I would not want to make it as the fundamental determinant, because it cannot be.

Mr. RYAN. Because of this change in relationship, are you suggesting that the impact of these commodity indicators on your decisionmaking is changing? Is it lessening with regard to these other indicators?

Mr. GREENSPAN. I would think so over the years, largely because the share of commodities in the total economy has been declining. But they still offer very useful indications for one very important reason. These prices are available not only daily, but hourly, and you get sometimes indications of what broader changes are well before the official data are available. So, in that regard, there is a timeliness about them which makes them more useful than the just general weights that one would have in that regard.

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

Chairman LEACH. Thank you, Mr. Ryan.

Mrs. Maloney.

Mrs. MALONEY. Thank you, Mr. Chairman.

It is always a pleasure to welcome one of the outstanding citizens from the great State of New York.

Mr. GREENSPAN. Thank you.

Mrs. MALONEY. I have heard you say many times, and the President say many times, that we are moving towards a world economy. Throughout your remarks you talk about the problems of the rest of the world. Roughly a third of the rest of the world is experiencing a recession.

I would like to know, Mr. Greenspan, what would be the effect of raising interest rates on these countries, and how much do you take into consideration the influence on world markets when you are formulating monetary policy in the United States?

I read in *The Washington Post* this weekend that you have to read so much more now, since you are not just following the American economy, you are following the world economy. I think it is a stunning statement on the health of our own economy that so much of the world is having financial difficulties, yet we have not experienced it in our own country. My question is, how much of an emphasis do you now place in your decisions on monetary policy, and what would be the effect of raising interest rates on roughly one-third of the world that is suffering this recession?

Mr. GREENSPAN. Our interest rates or theirs?

Mrs. MALONEY. Ours.

Mr. GREENSPAN. OK. What we do, Mrs. Maloney, is to endeavor to understand how the world at large is impacting on us. And that is becoming ever-increasingly more complex; and, as a consequence of that, I think that we need to spend a good deal more time, as indeed I am, in trying to understand what is going on out there.

As I said to one of your colleagues earlier, we are learning while we are doing. In other words, we don't have simple textbooks at this stage which suggest exactly how the world works the way we

sort of thought we did 30 years ago. That means we are functioning in a manner where we need ever-increasing detail and understanding of the various different cross-currents to get a sense of how it is going to impact on the United States.

Our central focus on policy is the United States. I don't deny that we take considerations of what is going in the rest of the world as important, because it does impact us. And to the extent that it impacts us, we essentially obviously consider it. Whether we lower or raise interest rates, the essential focus is our long-term goal, which is maximum sustainable economic growth in the United States. And to the extent that we succeed in that, that is the best we can do for any of our trading partners. Because to the extent that they rely on our markets, if we are doing well, they are doing well.

I would never want to be concerned about how our individual policies impact everybody else, because we would never be able to get a sensible policy for the United States, and I think that would not be appropriate for us. Indeed, as I read the statutes which give us the authorities that enable us to function as a central bank, it is the United States, and solely the United States, which must be the focus of our policies.

Mrs. MALONEY. In reading the reactions to your comments yesterday in *Bloomberg* and the *Wall Street Journal* and others, some of them interpreted your comments as "it might be good, it might be bad." The bond markets, as you know, fell. Is that the message you were trying to send, the reaction of the markets?

Mr. GREENSPAN. I try, with my colleagues, to say what we want to say, and I am speaking for the Board, not for myself, when I come before this committee, especially in our formal presentations under the Humphrey-Hawkins Act. I don't want to go beyond that. Whether or not people interpret what we are saying the way we thought they would interpret it, I would say some do, some don't. That has just always been the case.

I find more often than not that there are diametrically opposite interpretations of what I say, which probably means we have succeeded.

Mrs. MALONEY. Thank you.

If I could ask one brief question that builds on your former question, Mr. Chairman?

Chairman LEACH. I might come back.

Mr. Royce.

Mr. ROYCE. Thank you, Mr. Chairman.

Secretary Greenspan, I remember that some four years ago you testified before the committee. I think we were still running \$200 billion budget deficits at that time. You said that if we could slow the rate of Government spending and bring the budget into balance, that interest rates would probably fall by 2 full percentage points at least. Since that time, interest rates have fallen by 3 percentage points in terms of the long-term Treasury rate.

Another comment you had made was that the ideal capital gains rate in terms of economic growth was zero; and, indeed, as we lowered the capital gains rate to 20 percent, we have now seen actually an increase in economic growth and additional revenues come in.

So we have a situation now over the last three years where we have seen the greatest economic growth that we have seen for some time—unemployment at a 30-year low, the Federal budget surplus is growing.

I wondered if you would rank the factors, maybe five factors, that contributed to this. One would be balancing the budget, presumably. Another might be the capital gains tax cut. Another would be globalization and that effect, the information revolution, and credible monetary policies.

Which of these do you think, in ranking order, would be most important in terms of establishing this 4 percent economic growth a year, and can we sustain it?

Mr. GREENSPAN. I would say the number one is clearly the fall in the rate of inflation. Because what we have observed over the years is that as the inflation rate moves toward price stability, that the volatility and risk premium associated with inflation falls. That is a very positive contribution.

Technology has also been a crucial issue. That is the result of synergies of previous technologies which are not easy to forecast but which invariably have had a major effect.

I think, but I don't know for sure, that the capital gains tax reduction engendered increased revenues, but what obviously even more increased revenues than that was the fact that, as inflation declined, long-term risk declined, and the markup on long-term earnings rose, which led to a huge increase in asset prices, specifically equity prices. That obviously had a major impact, as best we can judge, on the revenues, which has moved us into a significant surplus on the unified budget at this particular point.

It is very difficult to make judgments of exactly how the capital gains tax impacts on the economy. My major point four years ago, and indeed it is today, is I find it a not particularly useful means of raising revenue. Irrespective of what its impact is, I would say it is not a good way to raise revenue, because it is directly on capital—capital is where we get increasing standards of living.

Mr. ROYCE. Let me ask you about one of the worries that I have. Let me ask you how you react to the concern that the savings rate arguably would have to continue to go lower since the other drags on the economy such as the rising trade deficit and slowing global demand means that growth here depends on continued consumer spending. How do you react to that?

Mr. GREENSPAN. I think you are raising the basic issue a number of people have raised; namely, that the spreading out, the decline in the private savings rate and the continuation of very strong capital investment is stretching the financial funding system, and something has to give, and indeed, something will give at one point or another. It is hard to know exactly how it is going to rebalance.

Our judgment, and it is a judgment which we recognize has uncertainties associated with it, is that the level of consumption growth, which has been extraordinarily strong, will slow down. Indeed, that is the essential content of my prepared remarks.

We believe also that the dramatic expansion and capital investment will slow down to a more long-term sustainable path, and that will close the gap between private savings and investment.

The presumption is that public savings, largely through the surplus in the unified budget account, will continue. That offsets this gap in large part, as indeed does the current account deficit. But—then that has to all close and balance. That is true by just the nature of the fact that savings must equal investment at all times in our economy.

Something will give. Something will eventually change the pattern. But there are a number of different ways that that can happen.

Mr. ROYCE. Thank you, Chairman Greenspan.

Thank you, Mr. Chairman.

Chairman LEACH. Thank you, Mr. Chairman and Mr. Royce.

Mr. Bentsen.

Mr. BENTSEN. Thank you, Mr. Chairman.

Chairman Greenspan, I have about three questions I would like to get to you. The first is maybe more of a statement based upon some earlier comments of both the Chairman and then Mr. McCollum with respect to the *Wall Street Journal*, and I didn't read the opinion piece that was discussed.

But looking at the Fed's February 23rd Monetary Report, I think the answer that you gave, and I just want to verify this, you wouldn't support borrowing to pay for tax cuts or new spending, for that matter, is that correct? Do you think that is an inefficient use of resources?

Mr. GREENSPAN. I think that, in line with the statements I have made before this committee on many occasions in the past, I believe that we would be far better off with lower levels of spending and lower levels of taxes.

I do think that having a budget deficit is not a good idea, and having lower debt is a good idea as far as long-term economic growth is concerned. I don't know whether that responds to your question.

Mr. BENTSEN. But spending surplus on tax cuts or new spending in lieu of paying down publicly-held debt does have a cost associated with it, the carrying cost of that debt, correct?

Mr. GREENSPAN. Yes.

Mr. BENTSEN. And you would be opposed to that?

Mr. GREENSPAN. Under most circumstances, I am usually in favor of reducing taxes, as I am reducing Government expenditures.

In today's environment, where we have the economy going flat out at this particular point and we have a substantial unified budget surplus, from an economic policy point of view I envisage the best thing that we can do at this particular stage is to allow that surplus to run.

What that means, of course, is that the debt to the public declines, interest costs on that debt decline and, in my judgment, that contributes to lower long-term interest rates.

Mr. BENTSEN. Your report also—and I am going to have one other question I want to try to get in. Your report also indicates that social insurance tax receipts as a source of Federal revenue increased by 6 percent in step with growth and wages and salaries. That is as a result of increased profit, I would assume. In part that

is helping raise personal income. I think that is what you are saying in your statement.

Is that also a reflection—or is it too early to tell if that is a reflection of increasing the gross national savings rate by booking the surplus and paying down the debt?

Mr. GREENSPAN. No, I think it is more likely at this stage the result of the fairly dramatic increases in productivity which have been occurring in large part, as I indicated in my prepared remarks, as a consequence of the rate of return on new investments rising. So that, as productivity rises, as nominal wages and salaries rise, you pick up increased Social Security taxes and other types of taxes on the wage base.

Mr. BENTSEN. In the long run, that should be helpful to the trust funds, though, correct?

Mr. GREENSPAN. Yes, of course.

Mr. BENTSEN. Let me ask, and I hope you get to testify before the committee on the budget. It may be that we go ahead and mark up a budget without this, with only one set of hearings. But because there are a number of—I would like to talk to you in more detail about the President's proposal at the appropriate time, but I am not going to bring that up here.

Let me talk about another issue with respect to the oil economy. In your report, a lot of times you state what the level of imports is with respect to oil. I didn't find it, but I may have skipped over it.

Previously, we have seen imports rising to the 50 percent level of consumption. I would assume that it is greater than that now with the world oil glut. We have discussed this before, but I would like to raise it again.

You also state in your testimony, I believe, that a decline in oil prices, which are at the lowest level in a 25-year span, I think, and particularly at the retail level, was unlikely to recur.

So I guess you are projecting—and I have a two-part question. I guess you are projecting that you think oil prices and, thus, gas prices, will start a trend back up, although we haven't seen any evidence of that so far.

Second of all, as we get to the 60 percent, or whatever the level of imports is, and we see not just a decline in production in the United States, but an elimination of production capability through more rigs going off-line, the capping of marginal wells, where the recovery cost goes up quite dramatically to bring those capital items back into line, are we looking at the possibility of a transfer of wealth in our oil production capabilities outside the United States, and is that something we should be more concerned about than the usual concern of competitive or comparative advantage in means of production?

Mr. GREENSPAN. We are merely reflecting in the oil price essentially what the futures markets are showing. In other words, West Texas Intermediate, as you know, is selling at a premium in the far distant months, and that is the best guess that we can make at this particular point.

But as you have experienced more than most anyone around here, those prices fluctuate, because it is very tough to get a good fix on the balance of world crude oil supply and demand because

there are so many players; not only producers, but huge numbers of consumers all over the world. It is a major international commodity.

The issue of how we deal with our resources, the clear problem that we have, obviously, is that the cost of producing crude in the Middle East, specifically in Saudi Arabia, is very significantly below our marginal costs, even among our best wells and our best fields.

We have to make the judgment, and I guess we do it by implication, about what we wish to do about that. And the general judgment is that we are allowing the market to do what the markets do, namely, allocate resources to various different places of production.

The consequence of that has been, as you point out, a fairly significant contraction in strip oil production in the United States, which continues. The rigs in operation have fallen very significantly, and basically because the incentives to find new oil or gas, for that matter, at these prices is clearly far less than it has been.

It is pretty easy to define what the nature of the problem is. It is another issue altogether to get a rational national policy to address it, or whether a national policy is even appropriate. I think that is an issue which has always engaged the Congress as long as I remember, and I suspect that will continue to be the case.

Mr. BENTSEN. You are not willing to give an opinion as to whether or not there ought to be a national policy, or what that might be? With respect to oil and gas?

Mr. GREENSPAN. Frankly, Congressman, I lived through too many national oil policies which didn't work all that well that my enthusiasm is less than terrific.

Mr. BENTSEN. Thank you.

Thank you, Mr. Chairman.

Chairman LEACH. My apologies to Mr. Goode, but Mr. Watt was here at the beginning of the hearing. Let me just say the order will be Mr. Watt, Mr. Goode, and then we will come to Mr. Sherman.

Mr. Watt.

Mr. WATT. Thank you, Mr. Chairman. I have three areas that I would like to get Mr. Greenspan's comment on.

First of all, 10 or 15 years ago we heard a lot of comment and concern about the balance of trade, and there seems to be, as we have moved toward a world economy, less and less concern about that, less and less discussion of it, at least. I wonder if you might comment briefly on the growing deficit, trade deficit balance and the impact, either good or bad or indifferent.

Second, there is a proposal on the table that the President addressed in his State of the Union Address to increase the minimum wage. I would like to get your opinion about what, if any, impact that would have on the continuing movement in the economy.

Third, obviously, given historical patterns, we can't continue to go on like the economy has been going. I am wondering what impact you see if there is a slowdown in the economy for the last hired in this employment cycle and typically the most vulnerable people who are probably the least skilled and more likely to lose their jobs if there is a slowdown.

If you could comment briefly on those three things, it would help me to evaluate all the perspectives and probably help me to have some more intelligent discussions with my constituents when I go back home, also.

Mr. GREENSPAN. Well, Mr. Watt, I think you raised really an interesting question, because I think you are right, that the concerns about trade are less than they were 15 years ago. My suspicion is that there is a greater acceptance that we are living in a world economy and that trade is a crucial element in that.

It is possibly also the case that there is an increasing acceptance of the fact that—what most economists think is demonstrable—namely, that standards of living do really rise with the division of labor and trade that goes with it.

The issue of the trade deficit, which is rising, is a complex question at this particular stage because there are two issues that are really relevant here. One is that the trade balance and its financing—one of the characteristics of this trade balance or the trade deficit is that it is in part engendered by the fact that there has been a fairly strong demand for U.S. dollars, especially drawn into the United States to supplement what has been meager domestic savings.

If you have a lot of foreign savings coming into the United States, it necessarily means that you are also having a current account deficit, and that it is hard to know how the whole system is directly being put together because we only see the end result of that.

But we are very much aware and spend a good deal of time focusing on this interaction to understand how our economy is behaving and, therefore, what is the appropriate monetary policy.

With respect to the minimum wage, I will repeat what I mentioned to your colleagues who have asked similar questions. My concern with the minimum wage is that the evidence that we have seen over the years very clearly indicates that young teenagers are the ones whose employment seems to be significantly impacted by that. It wouldn't be in today's environment. The demand for labor is so strong that anybody who wants a job has a very considerable chance in getting it, and I doubt very much if the minimum wage is having an important impact.

I am concerned, however, the next time the economy softens, because not only would a higher minimum wage tend to price out of the market the number of teenagers who want to get on the lower rungs of the ladder of learning how to get into the business world, get on-the-job training and the like, but knocking them off the ladder is not very helpful.

Which gets to your third issue, which is one that I think we all struggle with with respect to hiring policies and who gets laid off when the economy weakens. That clearly is not a problem today. On the contrary, what we have seen is a fairly dramatic increase of employment of those with less than high school educations; that we are seeing for the first time significant absorption of a lot of people who were not capable of getting on the lower rung of the ladder and work their way up who are now being able to do that.

I would be concerned that the next time the economy weakens that it is going to reverse, which is one of the reasons why we be-

lieve that it is very important to keep this economy going as long as we can in the context of stability. Because, clearly, the longer time people have to get on-the-job training, the more likely they are to be continued to be employed when the economy inevitably slows down, and that is inevitably going to be the case.

So it is a set of tough decisions, but policy has never been easy. It has gotten likely to be less easy because of the new complexities with which we are dealing.

Mr. WATT. Thank you, Mr. Chairman.

Chairman LEACH. Thank you, Mr. Watt.

Mr. Goode.

Mr. GOODE. Thank you, Mr. Chairman.

Much has been said about the economy being good, and my area is one of the weaker areas. The seniors are all concerned, or many are concerned, about their Social Security checks. I know that you stated that you would not be in favor of the Social Security revenues being invested in common stocks. Is that right?

Mr. GREENSPAN. Yes.

Mr. GOODE. How about investing in corporate bonds, AA and AAA? Would you still have a similar reservation?

Mr. GREENSPAN. My major concern, Congressman, is that unless you increase national savings in the process, to the extent that you increase the rate of return on Social Security investments you decrease the rate of return exactly the same amount in the private sector, where people's savings are largely for retirement as well.

So in the broadest sense, merely shifting who invests in what will change what each individual pool is earning, but it is by no means clear that it increases the total amount of monies available for retirement of our population when it goes to retirement age.

So my main concern with all of this type of discussion is that somehow it appears as though there is a free lunch here. There is not. If it actually increased national savings in the process, then it is a different issue. But I can find no reason that is of a positive nature to change the pattern of Social Security investments, because it can only be by switching the investments with the elements in the private sector, which essentially are also for the purpose of creating retirement income. I think it gives a sense of well-being to the Social Security Trust Fund which is unreal, and I think that is a mistake as far as national policy is concerned.

Mr. GOODE. To follow up, then, would your answer be similar if we switched the bonds for the future from non-negotiable in the Social Security Trust Fund to negotiable and if you made your check for your 6.2 employee and your 6.2 employer tax payable to the Social Security fund instead of the U.S. Treasury, like it is now?

Mr. GREENSPAN. I am not sure about the last, which I am not familiar with, but I will say that whether or not you are holding marketable securities or special issues doesn't matter in the slightest. It is the same security.

Mr. GOODE. Which would you—do you think—I know a lot of the seniors in my area would feel safer if the check for the Social Security taxes was made payable to the U.S. Social Security fund and there was a real fund instead of the U.S. Treasury.

Mr. GREENSPAN. I think there is no doubt that there is an important question here about whether the trust fund should be split off

from the budget. I think there is a good argument to be made of really taking Social Security off-budget. We do it in a mechanical sense now, but when you negotiate with respect to the issue of what expenditures are and taxes are, you think wholly in terms of the unified budget, or almost wholly in terms of it. All of the agreements, all the deals, all the caps and the pay-goes, they are all unified budget.

If you took Social Security fully off-budget, made it a special trust fund, even investing in U.S. Treasury securities, and dealt with the on-budget issue, I think we would get a higher rate of savings in this country. That in my judgment is crucial.

Mr. GOODE. That would be good?

Mr. GREENSPAN. Yes, indeed.

Chairman LEACH. Thank you, Mr. Goode.

Mr. Sherman.

Mr. SHERMAN. Thank you, Mr. Chairman.

I have a brief amount of time. I would like to comment on a couple of the exchanges, and then ask the question I came to ask.

I know that Mr. Watt asked about the trade imbalance. I would point out that during this there has been a tendency to always blame America for the trade imbalance. First, we were told our products were no good, and then our autos got better.

Then we were told our Federal Government was no good because we were fiscally irresponsible, and there was a direct correlation between the budget deficit and the trade deficit, and now we are the most fiscally responsible Government in the developed world.

I think ultimately our trade imbalance is, in large part, the responsibility of our trade negotiators, who have taken the position that we would like the honor of defending the world for free and are willing to make major trade concessions in order to obtain that honor.

But rather than ask the Chairman to address that, I am going to have the honor of asking those same questions to the Secretary of State Albright tomorrow.

I do also want to comment on the exchange with Mr. Goode. I know that the Chairman has been a supporter of a capital gains tax reduction or elimination, and I would say in my 15 years of experience as a tax lawyer and CPA no one ever was influenced by me on the spending-saving decision. They are influenced by the tax law and their tax advisors, only on what to invest, in the decision.

For us to give the rich major tax incentives to move their money from debt instruments to equity instruments because that is allegedly important for the economy, but then to say that it does not help the economy when the Social Security Trust Fund does the same thing is somewhat baffling.

I tend to think that nothing we do, at least with the clientele I serve, the upper income that could afford my fees, will influence the trade-spend decision. First, they bought the Rolls-Royce; then they drove it to my office and told me how much money they had to invest.

But what I want to turn to is Mrs. Maloney's questions about the effect that the Fed's decisions have internationally, because I think when the history of the latter part of this decade are written, there are two possible histories.

One will be the "Age of Greenspan," a discussion of how America finally found fiscal discipline and created long-term low inflationary growth. The other will be a history that America fiddled around with its domestic economy while ignoring the fact that Russia was disintegrating.

I grew up in the 1960's when the bumper stickers, along with the peace sign, said that "One nuclear bomb could ruin your whole day." In the language of this committee, I would say that "One thermonuclear explosion can adversely impact your entire fiscal quarter."

Obviously, the primary focus of the Fed has to be non-inflationary growth for the U.S. economy, but reasonable minds have differed by as much as 50 basis points on what the right course is. Within that reasonable range, the question is, is there anything that U.S. monetary policy could do to reduce the likelihood that Russia will continue to disintegrate? Would a reduction in American interest rates allow the Russian government to survive, which is important for the Russian people, but to continue to control its nuclear weapons?

If so, would the Fed view that as an important goal, or will we have the first non-inflationary period of growth of 10, 15 years interrupted sometime next decade when we find out that several hundred nuclear weapons have leaked out of Russia and that a few of them had exploded in American cities?

Mr. GREENSPAN. It is not conceivable to me that anything that we in the Federal Reserve could do in either raising or lowering interest rates would have any material effect on the Russian financial system. They have very serious problems, as you know, and they are struggling with them.

At the usual G-7 meeting over the weekend, a group of us in Frankfurt met with our Soviet colleagues, or rather, our Russian colleagues, and it was a very interesting discussion. Very interesting discussions were going on.

Mr. SHERMAN. I think we are all acutely aware of the issue of the existence of nuclear warheads in an economic environment which is deteriorating, and the maintenance of the system to make sure that those systems are in sound order is not cheap. They have a very large system. They have very large requirements; and they have, as everyone has indicated, a very difficult problem.

To the extent that they have difficult problems, you don't think 25 or 50 points on world interest rates—their problems are so extreme that it is not at the margin, where it pencils out—it is not that kind of decision?

Mr. GREENSPAN. No, it is not. It may have been three or four years ago when they were actually coming back. The price of oil declining actually really did a great deal of damage to their economic recovery. But now I would say that the issues are far more fundamental and essentially things which they are going to have to themselves get resolved.

Mr. SHERMAN. Thank you, Mr. Chairman.

Chairman LEACH. Thank you very much. We have had our last round.

The gentleman from California would like to ask one brief follow-on question. I have, of course, asked about the price of corn, Mr.

Bentsen the price of oil. I assume your concern is artichokes and eggplants out there.

Mr. ROYCE. Thank you, Mr. Chairman. Those will be submitted for the record.

One last question. History has not had happy results with central governments investing taxpayer dollars into the market. Italy in the 1930's comes to mind. But one of the experiments we have seen over the last few years, maybe 18 years ago, was written getting its taxpayers through a choice in the individual social security accounts system, a choice in investing some of their savings for their retirement into the marketplace. The choice, the decision not being made by the Federal Government, but instead being made under constraints that it be in some AAA bonds and blue chip stocks, that this be controlled by some means by the Government. But, nevertheless, that then arguably helped handle an anemic savings rate. Some of the states did this because their own social security systems were changing as a result of demographic changes in the population, Chile and England being two.

What would your thoughts be, theoretically, on, as we move forward on this debate on Social Security, allowing some element of choice to the individual to make such investments in blue chip stocks and bonds of sound investments?

Mr. GREENSPAN. The crucial determinant is whether or not the process increases the national savings rate. I have always argued that if you move funds into private either defined contribution or defined benefit plans, that the requirement that they be fully funded, or at least the defined benefit would be fully funded, in my judgment would make it easier to get a higher savings rate, and that therefore I support it for that reason.

I think that there are a lot of arguments that I have heard for private investments which I don't find persuasive. But the issue of full funding is to me a crucial one, and a higher savings rate would be implicit in that. I have always supported that, supported a significant part of Social Security moving into the private sector for precisely that reason.

Mr. ROYCE. Arguably over the next 20 years this could help change the negative savings rate into a positive rate? I know we have seen that in some countries.

Mr. GREENSPAN. I would think so. I would think that, in fact, that is precisely what I am saying would happen, and I would hope it would be, in fact, the case.

Mr. ROYCE. Thank you, Mr. Greenspan.

Thank you, Mr. Chairman.

Chairman LEACH. Thank you.

Mr. Chairman, I have several more questions, but I really think we appreciate your coming, and this would be a good time to bring this to an end. We appreciate your perspective, and we thank you and your staff for your assistance on a host of issues.

Is there anything you want to say in conclusion?

Mr. GREENSPAN. No, thank you very much. I think it has been a most interesting session today.

Chairman LEACH. Thank you. The hearing is adjourned.

[Whereupon, at 12:48 p.m., the hearing was adjourned.]

A P P E N D I X

February 24, 1999



CURRENCY

Committee on Banking and Financial Services

James A. Leach, Chairman

For Immediate Release:
Wednesday, February 24, 1999

Contact: David Runkel or Andrew Parmentier
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Statement by Representative James A. Leach
Chairman, Committee on Banking and Financial Services
Humphrey-Hawkins Hearing with Testimony from Alan Greenspan

The Committee 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 Banking Committee. It has long been my view that no Committee has a greater oversight obligation than this Committee with its jurisdiction over the Federal Reserve Board and its conduct of monetary policy. In order that all Members may have an opportunity to question Chairman Greenspan, it is the intention of the Chair to limit opening statements to the Chairman and Ranking Member of the full committee as well as the Subcommittee on Domestic and International Monetary Policy. All other opening statements will be included for the record.

In this regard, it has come to my attention that the semiannual report on the conduct of monetary policy and the state of the economy is one among many such reports scheduled to terminate at the end of this year under a 1995 statute. I would like to assure Members of this Committee that we are working closely with the House leadership to rectify this issue on a timely basis. But, whether or not there continues to be a legislative mandate for regular Congressional review of the Fed's conduct of monetary policy, it would be the Committee's intent to require the Chairman of the Board of Governors to report regularly on the state of the economy and the Federal Reserve's policies to sustain economic growth and promote the fullest credible employment of the American work force.

The combination of a more disciplined fiscal policy promulgated by Congress and the prudential stewardship of monetary policy by the Federal Reserve Board has produced the longest peacetime expansion in modern U.S. history. The facts speak for themselves: the unemployment rate is at a 29-year low, inflation is at a 33-year low, inflationary pressures appear subdued, and the federal budget surplus is growing. In this reinforcing cycle, low inflation and low real interest rates have produced rising real wages for the American people. This circumstance, particularly the fact that the federal budget has moved from a deficit to surplus position, means that issues like future shortfalls in Social Security can be credibly addressed without massive wrenches in the economy.

In this context let me just stress that as Chairman of the Committee of oversight over monetary policy that I take as the highest of obligations the necessity of maintaining the independence of the Federal Reserve System, which I consider to be the 20th century's most innovative institutional addition to the science of government at the national level.

There are, of course, areas of concern such as the decline in personal savings, potential decline in US business investment, the size of the U.S. current account deficit, and the wildcard of the Y2K computer problem and its potential effect on the economy.

From a Midwestern agricultural perspective, there is particular concern brought about by falling commodity prices in soybeans and hogs, together with recessions or depressions in many U.S. agricultural export markets. These conditions, working together, are wreaking havoc on the livelihood of America's family farmers. The government must be, it seems to this Member, more active in developing and expanding exports markets. At the same time, banks in the agriculture heartland of America are obligated to provide credit extensions where possible to help farmers preserve their livelihood.

In this global context, the world economy remains extraordinarily dependent on U.S. growth for leadership. The American economy stunned most forecasters by producing growth close to 4% during 1998 despite a large expansion of the trade deficit, exceptional volatility in financial markets, and some erosion of corporate profits. Despite Monetary Union, Europe appears likely to record only modest growth during 1999. Across the Pacific, Japan continues to suffer from a complex array of crises that may make it difficult to achieve recovery in the near future. Meanwhile, much of the developing world is suffering directly or indirectly from the effects of the emerging market crisis that began in the summer of 1997.

There are no assured remedies for stabilizing today's global financial markets, but it is self evident that the U.S. should not abandon leadership of international financial institutions. Cooperation with our friends and allies on strategies to advance sustainable economic growth is a critical ingredient of advancing global economic growth and stability. New prudential approaches to international economic problem-solving on issues like contagion, moral hazard, and private sector burden-sharing and allegations to the rule of law need to be developed before the global trend toward democracy and open markets is placed in serious jeopardy.

It appears that there is some progress toward a "new financial architecture," albeit on an incremental as opposed to systemic basis.

During the last Congress the Banking Committee sought to work cooperatively with the Administration and the Federal Reserve on national interest issues such as international financial reform and replenishment of the IMF. New Members should be aware that during the 105th Congress this Committee laid the groundwork for a much more active and continuous oversight of the IMF, especially with regard to progress on international financial reform.

In this regard, however, last November's dubiously conceived assistance package for Brazil and a looming new crisis in Russia raise a number of difficult questions. One relates to the evolution of the IMF as a defacto lender of last resort. Another relates to exchange rate regimes and whether it was sound policy for the U.S. to champion the defense of a Brazilian exchange rate regime, widely regarded as untenable, with public money. With respect to Russia, which is on the precipice of defaulting on its external obligations, the issue is even more stark: will the West require credible anti-corruption and fiscal reforms before it extends new IMF loans or not? This Member is prepared to be generous in assisting the Russian people attempt an historic transition from communism to democracy, but if assistance simply amounts to the transfer of public funds to pad private pockets no legitimate case can be made for aiding any country.

To conclude, this Committee is looking to Chairman Greenspan for guidance on these difficult questions. As always, we are delighted to have you with us and look forward to a lively discussion.

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House Banking Committee
Humphrey-Hawkins Hearing
Wednesday, February 24, 1999

Mr. Chairman, thank you for the opportunity to submit this statement for the record on Chairman Greenspan's monetary policy report on the state of our economy. Once again, our economy seems to be growing. After eight consecutive years of economic expansion, and contrary to the predictions of many economic experts, our national output continues to grow in a climate free of debilitating inflation.

If the Federal Reserve can continue to keep a tight collar on inflation through its judicious control of the money stock, there is no reason why future economic growth should not emulate recent growth; why future employment opportunities should not continue to be available to all who want to work at decent wages; and why investments in the stock market should not continue to provide double-digit rates of return.

The economic projections for this year are encouraging and seem to indicate housing activity will continue to spearhead the gains in domestic demand. If business investment of the recent past can continue unabated into the future without the shackles of increased government regulation (the "hidden" tax) or of increased explicit taxation such as profits taxes and capital gains taxes, Congress will have done well to encourage economic growth and to secure the nation's future.

One issue of some concern to the future of our economy is that of tax cuts. Broad, across-the-board tax cuts on individual incomes will help to return hard earned money back to the working families who earned it. Last year, Republicans fought to pass H.R. 4579, a bill which proposed to reduce individual taxes by an estimated \$80 billion over five years. H.R. 4579, also provided a tax reduction for married couples, to reduce the so-called "marriage tax penalty." H.R. 4579 also extended a number of temporary tax

benefits that had recently expired or that were due to expire ("extenders"). In addition, H.R. 4579 provided several tax benefits for savings, investing, education, and small businesses. Finally, H.R. 4579 contained little in the way of revenue-raising offsets; its cuts would be funded out of expected budget surpluses.

Sadly, President Clinton's threat to veto H.R. 4579 killed all efforts to further invigorate the American economy and to provide more and better opportunities to the tax burdened and hard working citizens of our country. It is my hope this baton will be taken up, and carried across the finish line in the 106th Congress.

**Opening Statement of Rep. Frank Mascara
Before the Committee on Banking and Financial Institutions
Receiving Testimony from Federal Reserve Chairman Alan Greenspan
February 24, 1999**

Thank you Mr. Chairman for appearing before our Committee today. I believe your biannual appearances here are very helpful to the members on this Committee, as well as to the country at large.

It is very reassuring to hear about the strength of our nation's economy. I am concerned, however, about the status of our trade imbalance and the effects of illegal foreign trade in my area.

While the national economy is performing well, the effects of illegal steel imports is hurting the economy of Southwestern Pennsylvania. In direct violation of international trade law, subsidized steel is being sold below profit in the United States at the expense of the American steelworker.

I sense that while the President and others in the administration would like to deal with the unfair trade practices of our trading partners from around the world, they are fearful of doing so concerned about international financial instability.

Mr. Chairman, given the strength of our economy, and the need for certain foreign countries to trade with the United States to lift themselves out of recession, doesn't it make sense for the U.S. to press for trade fairness now, particularly in the case of the steel industry?

Shouldn't we be negotiating from a position of strength when foreign countries suffering from recession urgently need export markets. Do you not believe we should demand fairness from our trading partners who so desperately need access to our markets, particularly in the case of the steel industry?

Mr. Chairman, I commend your effectiveness in helping to guide our economy to its present status of unprecedented growth. I just hope that this economic success does not come at the expense of the American steelworker.

Questions for Chairman Greenspan:

1. Mr. Chairman, given the strength of our economy, and the need for certain foreign countries to trade with the United States to lift themselves out of recession, doesn't it make sense for the U.S. to press for trade fairness now, particularly in the case of the steel industry?
2. Mr. Chairman, Shouldn't we be negotiating from a position of strength when foreign countries suffering from recession urgently need export markets?

Statement of

Alan Greenspan

Chairman

Board of Governors of the Federal Reserve System

before the

Committee on Banking and Financial Services

House of Representatives

February 24, 1999

Mr. Chairman and members of the Committee, I appreciate the opportunity to present the Federal Reserve's semi-annual report on monetary policy.

The U.S. economy over the past year again performed admirably. Despite the challenges presented by severe economic downturns in a number of foreign countries and episodic financial turmoil abroad and at home, our real GDP grew about 4 percent for a third straight year. In 1998, 2-3/4 million jobs were created on net, bringing the total increase in payrolls to more than 18 million during the current economic expansion, which late last year became the longest in U.S. peacetime history. Unemployment edged down further to a 4-1/4 percent rate, the lowest since 1970.

And despite taut labor markets, inflation also fell to its lowest rate in many decades by some broad measures, although a portion of this decline owed to decreases in oil, commodity, and other import prices that are unlikely to be repeated. Hourly labor compensation adjusted for inflation posted further impressive gains. Real compensation gains have been supported by robust advances in labor productivity, which in turn have partly reflected heavy investment in plant and equipment, often embodying innovative technologies.

Can this favorable performance be sustained? In many respects the fundamental underpinnings of the recent U.S. economic performance are strong. Flexible markets and the shift to surplus on the books of the federal government are facilitating the build-up in cutting-edge capital stock. That build-up in turn is spawning rapid advances in productivity that are helping to keep inflation well behaved. The new technologies and the optimism of consumers and investors are supporting asset prices and sustaining spending.

But, after eight years of economic expansion, the economy appears stretched in a number of dimensions, implying considerable upside and downside risks to the economic outlook. The

robust increase of production has been using up our nation's spare labor resources, suggesting that recent strong growth in spending cannot continue without a pickup in inflation unless labor productivity growth increases significantly further. Equity prices are high enough to raise questions about whether shares are overvalued. The debt of the household and business sectors has mounted, as has the external debt of the country as a whole, reflecting the deepening current account deficit. We remain vulnerable to rapidly changing conditions overseas, which, as we saw last summer, can be transmitted to U.S. markets quickly and traumatically. I will be commenting on many of these issues as I review the developments of the past year and the prospects going forward. In light of all these risks, monetary policy must be ready to move quickly in either direction should we perceive imbalances and distortions developing that could undermine the economic expansion.

Recent Developments

A hallmark of our economic performance over the past year was the continuing sharp expansion of business investment spending. Competitive global markets and persisting technological advances both spurred the business drive to become more efficient and induced the price declines for many types of new equipment that made capital spending more attractive.

Business success in enhancing productivity and the expectation of still further, perhaps accelerated, advances buoyed public optimism about profit prospects, which contributed to another sizable boost in equity prices. Rising household wealth along with strong growth in real income, related to better pay, slower inflation, and expanding job opportunities, boosted consumption at the fastest clip in a decade and a half. The gains in income and wealth last year,

along with a further decrease in mortgage rates, also prompted considerable activity in the housing sector.

The impressive performance of the private sector was reflected in a continued improvement in the federal budget. Burgeoning receipts, along with continuing restraint on federal spending, produced the first unified budget surplus in thirty years, allowing the Treasury to begin to pay down the federal debt held by the public. This shift in the federal government's fiscal position has fostered an increase in overall national saving as a share of GDP to 17-1/4 percent from the 14-1/2 percent low reached in 1993. This rise in national saving has helped to hold down real interest rates and to facilitate the financing of the boom in private investment spending.

Foreign savers have provided an additional source of funds for vigorous domestic investment. The counterpart of our high and rising current account deficit has been ever faster increases in the net indebtedness of U.S. residents to foreigners. The rapid widening of the current account deficit has some disquieting aspects, especially when viewed in a longer-term context. Foreigners presumably will not want to raise indefinitely the share of their portfolios in claims on the United States. Should the sustainability of the buildup of our foreign indebtedness come into question, the exchange value of the dollar may well decline, imparting pressures on prices in the United States.

In the recent economic environment, however, the widening of the trade and current account deficits had some beneficial aspects. It provided a safety valve for strong U.S. domestic demand, thereby helping to restrain pressures on U.S. resources. It also cushioned, to some extent, economic weakness in our trading partners.

Moreover, decreasing import prices, which partly came from the appreciation of the dollar through mid-summer, contributed to low overall U.S. inflation, as did ample manufacturing capacity in the United States and lower prices for oil and other commodities stemming from the weak activity abroad. The marked drop in energy prices significantly contributed to the subdued, less than 1 percent, increase in the price index for total personal consumption expenditures during 1998. In addition, supported by rapid accumulation of more efficient capital, the growth of labor productivity picked up last year, allowing nominal labor compensation to post another sizable gain without putting added upward pressure on costs and prices. I shall return to an analysis of the extraordinary performance of inflation later in my remarks.

The Federal Open Market Committee conducted monetary policy last year with the aim of sustaining the remarkable combination of economic expansion and low inflation. At its meetings from March to July, the inflation risks accompanying the continued strength of domestic demand and the tightening of labor markets necessitated that the FOMC place itself on heightened inflation alert. Although the FOMC kept the nominal federal funds rate unchanged, it allowed the real funds rate to rise with continuing declines in inflation and, presumably, inflation expectations. In August, the FOMC returned to an unbiased policy predilection in response to the adverse implications for the U.S. outlook of worsening conditions in foreign economies and in global financial markets, including our own.

Shortly thereafter, a further deterioration in financial market conditions began to pose a more serious threat to economic stability. In the wake of the Russian crisis and subsequent difficulties in other emerging-market economies, investors perceived that the uncertainties in financial markets had broadened appreciably and as a consequence they became decidedly more

risk averse. Safe-haven demands for U.S. Treasury securities intensified at the expense of private debt securities. As a result, quality spreads escalated dramatically, especially for lower-rated issuers. Many financial markets turned illiquid, with wider bid-asked spreads and heightened price volatility, and issuance was disrupted in some private securities markets. Even the liquidity in the market for seasoned issues of U.S. Treasury securities dried up, as investors shifted toward the more actively traded, recently issued securities and dealers pared inventories, fearing that heightened price volatility posed an unacceptable risk to their capital.

Responding to losses in foreign financial markets and to pressures from counterparties, highly leveraged investors began to unwind their positions, which further weighed on market conditions. As credit became less available to business borrowers in capital markets, their demands were redirected to commercial banks, which reacted to the enlarged borrowing, and more uncertain business prospects, by tightening their standards and terms on such lending.

To cushion the domestic economy from the impact of the increasing weakness in foreign economies and the less accommodative conditions in U.S. financial markets, the FOMC, beginning in late September, undertook three policy easings. By mid-November, the FOMC had reduced the federal funds rate from 5-1/2 percent to 4-3/4 percent. These actions were taken to rebalance the risks to the outlook, and, in the event, the markets have recovered appreciably. Our economy has weathered the disturbances with remarkable resilience, though some yield and bid-asked spreads still reflect a hesitancy on the part of market participants to take on risk. The Federal Reserve must continue to evaluate, among other issues, whether the full extent of the policy easings undertaken last fall to address the seizing-up of financial markets remains appropriate as those disturbances abate.

To date, domestic demand and hence employment and output have remained vigorous. Real GDP is estimated to have risen at an annual rate exceeding 5-1/2 percent in the fourth quarter of last year. Although some slowing from this torrid pace is most likely in the first quarter, labor markets remain exceptionally tight and the economy evidently retains a great deal of underlying momentum despite the global economic problems and the still-visible remnants of the earlier financial turmoil in the United States. At the same time, no evidence of any upturn in inflation has, as yet, surfaced.

Abroad, the situation is mixed. In some East Asian countries that, in recent years, experienced a loss of investor confidence, a severe currency depreciation, and a deep recession, early signs of stabilization and economic recovery have appeared. This is particularly the case for Korea and Thailand. Authorities in those countries, in the context of IMF stabilization programs, early on established appropriate macroeconomic policies and undertook significant structural reforms to buttress the banking system and repair the finances of the corporate sector. As investor confidence has returned, exchange rates have risen and interest rates have fallen. With persistence and follow-through on reforms, the future of those economies has promise.

The situations in some other emerging market economies are not as encouraging. The Russian government's decision in mid-August to suspend payments on its domestic debt and devalue the ruble took markets by surprise. Investor flight exacerbated the collapse of prices in Russian financial markets and led to a sharp depreciation of the ruble. The earlier decline in output gathered momentum, and by late in the year inflation had moved up to a triple-digit annual rate. Russia's stabilization program with the IMF has been on hold since the financial crisis hit, and the economic outlook there remains troubling.

The Russian financial crisis immediately spilled over to some other countries, hitting Latin America especially hard. Countering downward pressure on the exchange values of the affected currencies, interest rates moved sharply higher, especially in Brazil. As a consequence of the high interest rates and growing economic uncertainty, Brazil's economic activity took a turn for the worse. Higher interest rates also had negative consequences for the fiscal outlook, as much of Brazil's substantial domestic debt effectively carries floating interest rates. With budget reform legislation encountering various setbacks, market confidence waned further and capital outflows from Brazil continued, drawing down foreign currency reserves. Ultimately, the decision was taken to allow the *real* to float, and it subsequently depreciated sharply.

Brazilian authorities must walk a very narrow, difficult path of restoring confidence and keeping inflation contained with monetary policy while dealing with serious fiscal imbalances. Although the situation in Brazil remains uncertain, there has been limited contagion to other countries thus far. Apparently, the slow onset of the crisis has enabled many parties with Brazilian exposures to hedge those positions or allow them to run off. With the net exposure smaller, and increasingly held by those who both recognized the heightened risk and were willing to bear it, some of the elements that might have contributed to further contagion may have been significantly reduced.

The Economic Outlook

These recent domestic and international developments provide the backdrop for U.S. economic prospects. Our economy's performance should remain solid this year, though likely with a slower pace of economic expansion and a slightly higher rate of overall inflation than last year. The stocks of business equipment, housing, and household durable goods have been

growing rapidly to quite high levels relative to business sales or household incomes during the past few years, and some slowing in the growth of spending on these items seems a reasonable prospect. Moreover, part of the rapid increase in spending, especially in the household sector, has resulted from the surge in wealth associated with a runup in equity prices that is unlikely to be repeated. And the purchasing power of income and wealth has been enhanced by declines in oil and other import prices, which also are unlikely to recur this year. Assuming that aggregate demand decelerates, underlying inflation pressures, as captured by core price measures, in all likelihood will not intensify significantly in the year ahead, though the Federal Reserve will need to monitor developments carefully. We perceive stable prices as optimum for economic growth. Both inflation and deflation raise volatility and risks that thwart maximum economic growth.

Most Governors and Reserve Bank Presidents foresee that economic growth this year will slow to a 2-1/2 to 3 percent rate. Such growth would keep the unemployment rate about unchanged. The central tendency of the Governors' and Presidents' predictions of CPI inflation is 2 to 2-1/2 percent. This level represents a pickup from last year, when energy prices were falling, but it is in the vicinity of core CPI inflation over the last couple of years.

This outlook involves several risks. The continuing downside risk posed by possible economic and financial instability around the world was highlighted earlier this year by the events in Brazil. Although financial contagion elsewhere has been limited to date, more significant knock-on effects in financial markets and in the economies of Brazil's important trading partners, including the United States, are still possible. Moreover, the economies of several of our key industrial trading partners have shown evidence of weakness, which if it deepens could further depress demands for our exports.

Another downside risk is that growth in capital spending, especially among manufacturers, could weaken appreciably if pressures on domestic profit margins mount and capacity utilization drops further. And it remains to be seen whether corporate earnings will disappoint investors, even if the slowing of economic growth is only moderate. Investors appear to have incorporated into current equity price levels both robust profit expectations and low compensation for risk. As the economy slows to a more sustainable pace as expected, profit forecasts could be pared back, which together with a greater sense of vulnerability in business prospects could damp appetites for equities. A downward correction to stock prices, and an associated increase in the cost of equity capital, could compound a slowdown in the growth of capital spending. In addition, a stock market decline would tend to restrain consumption spending through its effect on household net worth.

But on the upside, our economy has proven surprisingly robust in recent years. More rapid increases in capital spending, productivity, real wages, and asset prices have combined to boost economic growth far more and far longer than many of us would have anticipated.

This "virtuous cycle" has been able to persist because the behavior of inflation also has been surprisingly favorable, remaining well contained at levels of utilization of labor that in the past would have produced accelerating prices. That it has not done so in recent years has been the result of a combination of special one-time factors holding down prices and more lasting changes in the processes determining inflation.

Among the temporary factors, the sizable declines in the prices of oil, other internationally traded commodities, and other imports contributed directly to holding down inflation last year, and also indirectly by reducing inflation expectations. But these prices are not likely to fall

further, and they could begin to rise as some Asian economies revive and the effects of the net depreciation of the dollar since mid-summer are felt more strongly.

At the same time, however, recent experience does seem to suggest that the economy has become less inflation prone than in the past, so that the chances of an inflationary breakout arguably are, at least for now, less than they would have been under similar conditions in earlier cycles.

Several years ago I suggested that worker insecurity might be an important reason for unusually damped inflation. From the early 1990s through 1996, survey results indicated that workers were becoming much more concerned about being laid off. Workers' underlying fear of technology-driven job obsolescence, and hence willingness to stress job security over wage increases, appeared to have suppressed labor cost pressures despite a reduced unemployment rate. More recently, that effect seems to have diminished in part. So while job loss fears probably contributed to wage and price suppression through 1996, it does not appear that a further heightening of worker insecurity about employment prospects can explain the more recent improved behavior of inflation.

Instead, a variety of evidence, anecdotal and otherwise, suggests that the source of recent restrained inflation may be emanating more from employers than from employees. In the current economic setting, businesses sense that they have lost pricing power and generally have been unwilling to raise wages any faster than they can support at current price levels. Firms have evidently concluded that if they try to increase their prices, their competitors will not follow, and they will lose market share and profits.

Given the loss of pricing power, it is not surprising that individual employers resist pay increases. But why has pricing power of late been so delimited. Monetary policy certainly has played a role in constraining the rise in the general level of prices and damping inflation expectations over the 1980s and 1990s. But our current discretionary monetary policy has difficulty anchoring the price level over time in the same way that the gold standard did in the last century.

Enhanced opportunities for productive capital investment to hold down costs also may have helped to damp inflation. Through the 1970s and 1980s, firms apparently found it easier and more profitable to seek relief from rising nominal labor costs through price increases than through cost-reducing capital investments. Price relief evidently has not been available in recent years. But relief from cost pressures has. The newer technologies have made capital investment distinctly more profitable, enabling firms to substitute capital for labor far more productively than they would have a decade or two ago.

Starting in 1993, capital investment, especially in high-tech equipment, rose sharply beyond normal cyclical experience, apparently the result of expected increases in rates of return on the new investment. Had the profit expectations not been realized, one would have anticipated outlays to fall back. Instead, their growth accelerated through the remainder of the decade.

More direct evidence confirms improved underlying profitability. According to rough estimates, labor and capital productivity has risen significantly during the past five years. It seems likely that the synergies of advances in laser, fiber optic, satellite, and computer technologies with older technologies have enlarged the pool of opportunities to achieve a rate of return above the cost of capital. Moreover, the newer technologies have facilitated a dramatic

foreshortening of the lead times on the delivery of capital equipment over the past decade, presumably allowing businesses to react more expeditiously to an actual or expected rise in nominal compensation costs than, say, they could have in the 1980s. In addition, the surge in investment not only has restrained costs, it has also increased industrial capacity faster than factory output has risen. The resulting slack in product markets has put greater competitive pressure on businesses to hold down prices, despite taut labor markets.

The role of technology in damping inflation is manifest not only in its effects on U.S. productivity and costs, but also through international trade, where technological developments have progressively broken down barriers to cross-border trade. The enhanced competition in tradeable goods has enabled excess capacity previously bottled up in one country to augment worldwide supply and exert restraint on prices in all countries' markets. The resulting price discipline also has constrained nominal wage gains in internationally tradeable goods industries. As workers have attempted to shift to other sectors, gains in nominal wages and increases in prices in nontradeable goods industries have been held down as well.

The process of price containment has potentially become, to some extent, self-reinforcing. Lower inflation in recent years has altered expectations. Workers no longer believe that escalating gains in nominal wages are needed to reap respectable increases in real wages, and their remaining sense of job insecurity is reinforcing this. Since neither firms nor their competitors can count any longer on a general inflationary tendency to validate decisions to raise their own prices, each company feels compelled to concentrate on efforts to hold down costs. The availability of new technology to each company and its rivals affords both the opportunity and the competitive necessity of taking steps to boost productivity.

It is difficult to judge whether these significant shifts in the market environment in which firms function is sufficient to account for our benign overall price behavior during the past half decade. Undoubtedly, other factors have been at work as well, including those temporary factors I mentioned earlier and some more lasting I have not discussed, such as worldwide deregulation and privatization, and the freeing up of resources previously employed to produce military products that was brought about by the end of the cold war. There also may be other contributory forces lurking unseen in the wings that will only become clear in time. Over the longer run, of course, the actions of the central bank determine the degree of overall liquidity and hence rate of inflation. It is up to us to validate the favorable inflation developments of recent years.

Although the pace of productivity increase has picked up in recent years, the extraordinary strength of demand has meant that the substitution of capital for labor has not prevented us from rapidly depleting the pool of available workers. This worker depletion constitutes a critical upside risk to the inflation outlook because it presumably cannot continue for very much longer without putting increasing pressure on labor markets and on costs.

The number of people willing to work can be usefully defined as the unemployed component of the labor force plus those not actively seeking work, and thus not counted in the labor force, but who nonetheless say they would like a job if they could get one. This pool of potential workers aged 16 to 64 currently numbers about 10 million, or just 5-3/4 percent of that group's population--the lowest such percentage on record, which begins in 1970, and 2-1/2 percentage points below its average over that period. The rapid increase in aggregate demand has generated growth of employment in excess of growth in population, causing the number of potential workers to fall since the mid-1990s at a rate of a bit under 1 million annually. We

cannot judge with precision how much further this level can decline without sparking ever greater upward pressures on wages and prices. But, should labor market conditions continue to tighten, there has to be some point at which the rise in nominal wages will start increasingly outpacing the gains in labor productivity, and prices inevitably will begin to accelerate.

Ranges for Money and Credit

At its February meeting, the Committee elected to ratify the provisional ranges for all three aggregates that it had established last July. Specifically, the Committee again has set growth rate ranges over the four quarters of 1999 of 1 to 5 percent for M2, 2 to 6 percent for M3, and 3 to 7 percent for domestic nonfinancial debt. As in previous years, the Committee interpreted the ranges for the broader monetary aggregates as benchmarks for what money growth would be under conditions of price stability and sustainable economic growth, assuming historically typical velocity behavior.

Last year, these monetary aggregates far overshot the upper bounds of their annual ranges. While nominal GDP growth did exceed the rate likely consistent with sustained price stability, the rapid growth of M2 and M3 also reflected outsized declines in their velocities, that is, the ratio of nominal GDP to money. M2 velocity dropped by about 3 percent, while M3 velocity plunged by 5-1/4 percent.

Part of these velocity declines reflected some reduction in the opportunity cost of holding money; interest rates on Treasury securities, which represent an alternative return on non-monetary assets, dropped more than did the average of interest rates on deposits and money market mutual funds in M2, drawing funds into the aggregate. Even so, much of last year's aberrant behavior of broad money velocity cannot readily be explained by conventional determi-

nants. Although growth of the broad aggregates was strong earlier in the year, it accelerated in the fourth quarter after credit markets became turbulent. Perhaps robust money growth late in the year partly reflected a reaction to this turmoil by the public, who began scrambling for safer and more liquid financial assets. Monetary expansion has moderated so far this year, evidently in lagged response to the calming of financial markets in the autumn. Layered on top of these influences, though, the public also may have been reappportioning their savings flows into money balances because the huge runup in stock prices in recent years has resulted in an uncomfortable portion of their net worth in equity.

For the coming year, the broad monetary aggregates could again run high relative to these ranges. To be sure, the decline in the velocities of the broader aggregates this year should abate to some extent, as money demand behavior returns more to normal, and growth in nominal GDP should slow as well, as suggested by the Governors' and Presidents' central tendency. Both factors would restrain broad money expansion relative to last year. Still, the growth of M2 and M3 could well remain outside their price-stability ranges this year. Obviously, considerable uncertainty continues to surround the prospective behavior of monetary velocities and growth rates.

Domestic nonfinancial debt seems more likely than the monetary aggregates to grow within its range for this year. Indeed, domestic nonfinancial debt also could grow more slowly this year than last year's 6-1/4 percent pace, which was in the upper part of its 3 to 7 percent annual range. With the federal budget surplus poised to widen further this year, federal debt should contract even more quickly than last year. And debt in each of the major nonfederal

sectors in all likelihood will decelerate as well from last year's relatively elevated rates, along with the projected slowing of nominal GDP growth.

The FOMC's Disclosure Policy

The FOMC at recent meetings has discussed not only the stance of policy, but also when and how it communicates its views of the evolving economic situation to the public. The FOMC's objective is to release as much information about monetary policy decision making, and as promptly, as is consistent with maintaining an effective deliberative process and avoiding roiling markets unnecessarily. Since early 1994, each change in the target nominal federal funds rate has been announced immediately with a brief rationale for the action. The FOMC resolved at its December meeting to take advantage of an available, but unused policy, originally stated in early 1994, of releasing, on an infrequent basis, a statement immediately after some FOMC meetings at which the stance of monetary policy has not been changed. The Federal Reserve will release such a statement when it wishes to communicate to the public a major shift in its views about the balance of risks or the likely direction of future policy. Such an announcement need not be made after every change in the tilt of the directive. Instead, this option would be reserved for situations in which the consensus of the Committee clearly had shifted significantly, though not by enough to change current policy, and in which the absence of an explanation risked misleading markets about the prospects for monetary policy.

Year 2000 Issues

Before closing, I'd like to address an issue that has been receiving increasing attention--the century date change. While no one can say that the rollover to the year 2000 will be trouble free, I am impressed by the efforts to date to address the problem in the banking and financial

system. For our part, the Federal Reserve System has now completed remediation and testing of 101 of its 103 mission-critical applications, with the remaining two to be replaced by the end of March. We opened a test facility in June at which more than 6000 depository institutions to date have conducted tests of their Y2K compliant systems, and we are well along in our risk mitigation and contingency planning activities. As a precautionary measure, the Federal Reserve has acted to increase the currency in inventory by about one-third to approximately \$200 billion in late 1999 and has other contingency arrangements available if needed. While we do not expect currency demand to increase dramatically, the Federal Reserve believes it is important for the public to have confidence in the availability of cash in advance of the rollover. As a result of these kinds of activities, I can say with assurance that the Federal Reserve will be ready in both its operations and planning activities for the millennium rollover.

The banking industry is also working hard, and with evident success, to prepare for the event. By the end of the first quarter, every institution in the industry will have been subject to two rounds of on-site Y2K examinations. The Federal Reserve, like the other regulators, has found that only a small minority of institutions has fallen behind in their preparations, and those institutions have been targeted for additional follow-up and, as necessary, formal enforcement actions. The overwhelming majority of the industry has made impressive progress in their remediation, testing, and contingency planning efforts.

Concluding Comment

Americans can justifiably feel proud of their recent economic achievements. Competitive markets, with open trade both domestically and internationally, have kept our production efficient and on the expanding frontier of technological innovation. The determination of

Americans to improve their skills and knowledge has allowed workers to be even more productive, elevating their real earnings. Macroeconomic policies have provided a favorable setting for the public to take greatest advantage of opportunities to improve its economic well being. The restrained fiscal policy of the Administration and the Congress has engendered the welcome advent of a unified budget surplus, freeing up funds for capital investment. A continuation of responsible fiscal and, we trust, monetary policies should afford Americans the opportunity to make considerable further economic progress over time.

Chairman Greenspan's responses to written questions from Chairman Leach following February 24, 1999, hearing on the conduct of monetary policy:

Overview

Q.1. In your testimony, you noted that "the Federal Reserve must continue to evaluate, among other issues, whether the full extent of policy easings undertaken last fall to address the seizing-up of financial markets remains appropriate as those disturbances abate." In reaction to this statement, several financial analysts have suggested that an important precedent for considering FOMC policy settings in a post-crisis climate is the Federal Reserve's reaction to the stock market crash of October 1987. Is the comparison between 1987 and the current situation valid? Why or why not?

A.1. The conduct of monetary policy inevitably requires ongoing consideration of the special circumstances prevailing at any point in time and of the confluence of forces that are acting on the economy. More often than not, there are significant differences in the economic environment over time that limit the comparability of the situations faced by policymakers. Consequently, it would be a mistake to draw strong parallels between our current circumstances and those that existed in 1987.

As you know, monetary policy was eased considerably in the wake of the sharp decline of the stock market in October 1987. An important motivation for these easings was the need to provide ample liquidity to ensure the smooth functioning of financial markets in response to serious market dislocations. In addition, the FOMC faced considerable uncertainty about the underlying strength of the economy at the time and the extent of any curtailment in activity that would ensue following the stock market break. The federal funds rate was reduced in several steps between October 1987 and February 1988. By the spring of 1988, with the economy showing signs of marked strength accompanied by a pick up of inflation that threatened to derail the expansion, the FOMC began to tighten policy. Although there are some similarities, recent circumstances differ considerably from those of the 1987-88 period. Most notably, the implications for the U.S. economy of the weakness of foreign economies and the fragility of foreign financial markets--along with the less accommodative conditions in domestic financial markets--were prominent considerations in the easing of policy that occurred this fall. We shall, of course, continue to monitor these developments in setting the course of monetary policy.

Q.2. A recent lead editorial in the Economist warns about the growing danger of deflation. According to the editorial, while G-7 policymakers have enjoyed great success over the last 20 years, reducing inflation to the lowest in half a century at a mere 1%, monetary policy in the industrial economies looks "dangerously tight." The editorial warns that "If the economies of America or Europe were now to take a sudden lurch

downwards, the world might easily experience outright depression, with prices and output falling together, just as they did 70 years ago." Is the Economist right? Please comment.

A.2. The current global economic situation certainly involves some risks. Many economies are experiencing significant restraints on their expansion, stemming in part from spillover effects of the financial developments over the past eighteen months or so that have adversely affected a number of emerging market economies. Although these developments have also affected U.S. markets, our economy remains fundamentally healthy, with weakness in net exports more than offset by strong domestic demand. Indeed, as I noted in my Humphrey-Hawkins testimony, the upside risks to inflation in the United States are not negligible, especially in view of increasingly tight conditions in labor markets. In other western industrial countries, monetary authorities are well aware of the evidence of slackening demand and have adjusted the stance of their monetary policies in response. The situation in Japan, however, remains a significant concern. I am confident that officials in the other G-7 countries are prepared to take the necessary measures to guard against a sharp economic downturn that could develop into world depression.

Q.3. Based on the failure of the Brazilian financial crisis to trigger the all too familiar signs of cross-border contagion, is it fair to say that we are witnessing the beginning of the end of the global currency crisis of the last 19 months?

A.3. Brazil's difficulties over the past several months have, in fact, precipitated some signs of cross-border contagion, but it is true that they have been muted, and, to date, reasonably well contained. Although Brazil has continued to work constructively with the IMF and its creditors, there is much left to do before anyone would want to say that the adjustment process in Brazil is complete, and it would seem to be premature to declare even a limited victory, let alone the beginning of the end of the global currency crisis.

One factor contributing to the relatively subdued cross-border spillovers from Brazil's problems (so far) might be that the crisis was fairly long in developing. Thus, at least some market participants may have had time to take defensive postures and to make adjustments to their investment positions.

The relatively mild reaction on international financial markets to the Brazilian difficulties to date has certainly been welcome, but significant downside risks remain. The U.S. authorities, in cooperation with the IMF and other members of the official international community, will continue to work with the Brazilians, and, at the same time, seek to contain any further cross-border contagion effects.

Q.4. How fragile is the situation in Brazil? Can Brazil establish a new post-real plan anchor for monetary policy without exacerbating its public debt—as some 70% of domestic public debt is linked to short-term interest rates?

A.4. As suggested in the answer to the preceding question, the economic and financial situation in Brazil remains quite fragile. The Brazilian government has revised and strengthened its economic adjustment program with the IMF. Brazilian authorities will need to follow through and implement this program fully, including a primary budget surplus in excess of 3 percent of GDP this year. With the currency having been allowed to float, monetary policy must be aimed at keeping inflation under control. To contain the inflationary effects of the recent sharp depreciation of the real and to regain the confidence of international investors, interest rates must be kept elevated for a time.

In the longer term, assuming Brazil meets its stated goals with respect to the primary surplus, a sustainable fiscal position (declining debt/GDP ratio) can be achieved if the real interest rate (i.e., the nominal rate minus expected inflation) recedes to around 10 percent or less. If inflation is contained and confidence is regained via a steady hand on the tiller of Brazil's economic policies, nominal interest rates should begin to fall as the inflationary effect of the depreciation diminishes over time. The new leadership team at the Central Bank of Brazil is off to a promising start, but the challenges it faces over the period ahead are considerable.

Q.5. In testimony before this Committee last year, you stated in effect that the U.S. needed to support the IMF because it was the best mechanism we have for international financial crisis management. But you also indicated that after the crisis had passed the role of the IMF and our other institutional pillars of the global financial system needed fundamental review. Are you satisfied with the pace and scope of that reform?

A.5. There is an ongoing process in various fora through which the role of the IMF is being assessed. At this time, I am satisfied with the pace and scope of the assessment process, but it will be some time before it is appropriate to make final judgments. The review of the IMF is taking place, even though it may be premature to declare the passing of international financial crises.

Q. 6. The development of electronic commerce seems likely to transform banking and finance as we know it. Without the ability to electronically transfer value through electronic payments, electronic commerce might amount to little more than computerized window shopping. In this context, does the Federal Reserve or any other federal banking agency "regulate" emerging retail electronic payment systems? Please explain.

A.6. Electronic commerce has been growing rapidly. To date, consumers appear to be relying heavily on credit cards to pay for transactions. Other payment instruments for use in electronic commerce are in various stages of development with mixed results so far. The Federal Reserve has encouraged experimentation with new electronic means of payment to meet the needs of the rapidly changing market for electronic commerce, and to *improve the efficiency of the U.S. payment system more generally*. Whether the Federal Reserve or another federal banking agency would have regulatory authority over one or more aspects of an emerging retail payment system would need to be determined on a case-by-case basis in view of the design of the system, its relationship to federally regulated entities, and the subject matter to be regulated. More broadly, no federal banking agency has overall authority with respect to emerging private-sector payments systems, as such, and it is by no means clear that establishing such overall authority at this time would be likely to promote the continuing innovation that will be needed to support the growth of electronic commerce. For the time being, we believe that regulatory efforts with respect to electronic commerce should focus on removing unnecessary impediments to innovation that are frequently based on outmoded technological assumptions.

Q.7. As retail electronic payment systems evolve, nonbanks may become significantly more involved in payment system operations *than they are today*. How would this development affect the Federal Reserve's role as the central bank for settlement of interbank payments? Likewise, how might it affect the efficiency, reliability, and accessibility of payments systems as a whole?

A.7. Nonbanks currently provide a variety of payment and payment-related services to banks, businesses, and consumers. Increased competition between banks and nonbanks in the development and provision of retail payment services, as well as increased cooperation in some instances, appears to have served as a major spur to innovative activity. The result of this activity likely will be to increase the efficiency, reliability, and accessibility of the U.S. payment system over the long term. It is not yet clear how these new developments will affect the role of the Federal Reserve in interbank settlements for retail payments. Although the role of nonbanks in retail payment systems may grow, it is also likely that settlements for systems involving nonbanks will take place through the banking system, possibly on a net basis. These settlements, like many current settlements, are also likely to rely on central bank payment or net settlement services in order to ensure timely and final settlement. In this regard, the need to develop market confidence in new payment systems may cause these systems to be particularly aware of the benefits of efficient and reliable settlement services, such as those provided by the Federal Reserve.

Q.8. Three years ago the G-10 issued a report on the implications of electronic commerce for banking and finance, as well as the conduct of monetary policy. It concluded that the new forms of payments systems and technologies--stored value products, digital cash, and the like--presently posed no threat to the ability of central banks to control the money supply. Is this still your view? Why or why not?

A.8. We continue to believe that electronic money poses little threat to the ability of central banks to conduct monetary policy. In general, central banks conduct monetary policy by affecting conditions in the market for bank reserves and thus influencing short-term interest rates. Significant adverse effects of electronic money on monetary control could come about only if electronic money severely eroded the reserve base or otherwise significantly reduced the ability of central banks to predict the demand for reserves or affect the supply of reserves. The experience with electronic money to date suggests little likelihood that electronic money will become popular enough over the next few years to have a significant effect on conditions in bank reserve markets.

International Financial Issues

Q.9. The advent of the euro as a major new currency has invited a great deal of hype and speculation about the prospects for the currency, as well as its impact on the dollar and international financial markets. In general, how do you assess the current and prospective impact of the euro?

A.9. Since the advent of monetary union in Europe at the beginning of this year, the dollar has appreciated roughly 8 percent against the new euro currency. The dollar's near term appreciation appears to have resulted largely from diminished prospects for growth in continental Europe juxtaposed with continued strong performance of the U.S. economy. Thus, the behavior of the foreign exchange value of the euro since its introduction could be said to have resulted primarily from differences in the phase of economic cycles across countries.

Over the longer term, in light of the similarity in the economic size of the euro area and the United States and in light of the continued development of financial markets in the euro zone, it is likely that the euro will begin to surpass the German mark in terms of its importance in world financial circles. The euro may begin to rival the dollar to some extent as a currency for holding official reserves, invoicing transactions, and other activities typically associated with a currency's international status. However, it is unlikely that the dollar's international currency status would diminish very rapidly, as currency preferences typically are characterized by a good deal of inertia.

Q.10. It appears likely that Japan will set a record for the longest and most severe recession to occur in any industrial country since the Great Depression. The outlook for Japan is poor because it is suffering from overlapping crises in the banking system, corporate profitability, wobbly pension funds, and a growing fiscal deficit which have in turn weakened consumer confidence and caused a rise in personal savings. Given these difficulties, can Japan return to sustainable growth without undertaking bold economic adjustments at odds with its consensus-based society?

A.10. Japanese GDP has now contracted for five consecutive quarters and is down over 5 percent from its most recent peak during the first quarter of 1997. It is evident that the implementation of deep structural reforms will be necessary to increase the efficiency of the Japanese economy and, thus, to pave the way for a return to domestic-demand led growth. High on the list of needed structural reforms are a restructuring of the banking system, freeing up and adding liquidity to the real estate market, reducing the extent of government regulation in many sectors, and making the economy more open to international trade and competition. Such reforms may be politically divisive--and may require a painful period of transition--but they would appear to be the only way to increase the economy's productive capacity in the medium- to long-run.

Q.11. As you know, many Asian officials feel tremendous frustration about the dramatic financial upheavals which have occurred in the region during the past year. Some officials in Hong Kong and Malaysia have blamed collusive activity on the part of hedge funds and investment banks for "speculative" attacks on their currencies. Are you aware of any credible evidence to substantiate the charge that attacks on the Hong Kong dollar last fall were the result of a coordinated attack by speculators?

A.11. When Hong Kong's currency peg came under pressure last August, some Hong Kong authorities attributed the pressure to a so-called "double-play" by speculators who simultaneously shorted the stock market and the currency in the hopes that the currency attack would force interest rates upwards and the stock market down. However, we are not aware of any evidence that speculators (hedge funds or investment banks in particular) acted collusively to make a coordinated attack on the Hong Kong dollar last fall. At times of substantial exchange market pressure, such as Hong Kong experienced last fall, trading volume is usually very large and there are typically a wide range of different types of market participants with often differing interests involved. Under such conditions, groups of market participants may move in similar directions without in any way colluding or deliberately coordinating their actions.

Q.12. I understand that the G-7 recently announced the creation of a new financial and stability forum designed to improve the coordination and monitoring of international financial crises. Can you tell the Committee more about the purpose and structure of the new body?

A.12. The new body--the Financial Stability Forum--will be comprised of representatives from national authorities responsible for financial stability (including finance ministries, central banks, and financial sector supervisory and regulatory authorities), relevant international financial institutions and organizations (the IMF, the World Bank and the OECD), and various international supervisory bodies such as the Basle Committee. Initially, the Forum will be the initiative of the G-7 countries, but over time additional national authorities will be included to broaden participation. The first chairman will be Mr. Andrew Crockett, General Manager of the Bank for International Settlements, for a term of three years. The purpose of the new forum will be to contribute to improved international financial stability and to reduced systemic risk by enhancing international coordination and cooperation among the various official entities and expert groupings that participate in financial market supervision and surveillance.

Q.13. In past testimony before this Committee, you have described excessive reliance on interbank funding as the "Achilles' heel" of the international financial system. Among the proposals to rectify this problem are basing capital requirements for banks on their liabilities as well as assets, or by imposing reserve requirements on interbank liabilities. What is the preferred approach to addressing this problem?

A.13. I continue to believe that we should consider possible measures to impose added discipline on interbank markets to reduce the risk of serious disruptions to financial markets. Indeed, this line of thought has been incorporated into and has gone forward with a general reconsideration of the Basle Accord designed to increase the risk-sensitivity of the capital regulations, as part of a more general effort to improve banks' risk management.

Q.14. As you know, there has been a growing debate about various exchange rate regimes and which in general appear most appropriate. I gather there is a developing consensus that fixed exchange rates, like Argentina and Hong Kong, as well as floating rates, such as that used by the U.S., tend to work relatively well. On the other hand, so called "target zones" or adjustable pegs--like Brazil's ultimately unsuccessful real plan -- may work less well. *Could you reflect on these issues for the Committee?*

- In particular, if adjustable pegs tend not to be sustainable in today's global economy, please explain why it would have been appropriate for the U.S. and IMF to commit billions of dollars in support of such a regime?

A.14. Exchange rate changes provide one mechanism through which economies can adjust to internal and external economic developments. In floating exchange rate arrangements, like that of the United States, exchange rates absorb a share of the adjustments, along with domestic interest rates, prices, incomes, and economic activity. In exchange rate arrangements like those of Argentina and Hong Kong, monetary policy is devoted rigidly to maintaining exchange rate pegs. In essence, these economies have essentially foresworn exchange rate adjustment and, as a consequence, have shifted the full burden of adjustment to domestic interest rates, prices, incomes, and economic activity. Intermediate exchange rate arrangements, like adjustable pegs, permit exchange rates to absorb the burden of adjustment only at the time pegs are adjusted. Because under these regimes the adjustment is often deferred too long, the ultimate adjustment often occurs under duress after a period in which the domestic monetary authorities attempt to defend the peg with sales of foreign currency reserves and high domestic interest rates.

The United States has committed billions of dollars not to support any particular exchange rate regime but to foster a more orderly adjustment of policies in certain countries and to prevent the financial market turbulence centered in those economies from spilling over to the United States and our major trading partners.

Chairman Greenspan's responses to written questions from Representative Barbara Lee following February 24, 1999, hearing on the conduct of monetary policy:

Q.1. As you know, Chairman Greenspan, the banks in our country often respond to any changes the Federal Reserve makes in their monetary policy--when they raise or lower the federal funds rate--by immediately changing the prime rate. That appears to be a politically correct move of well covered changes in interest rates.

However, in the 1990's the banks have not always responded to falling market rates by lowering the prime rate.

The difference between the prime rate and a comparable short term interest rate--the 3-month commercial paper rate--is now nearly 3 percentage points. This big spread has not occurred since 1980 when the prime rate went to near 20 percent.

Millions of consumers who have credit cards, small business owners, and people with variable rate mortgages which are tied to the prime rate are not benefiting from the present lower interest rates.

Experts, such as Professor Robert Auerbach of the LBJ School of Public Affairs who was on the Committee's staff for 11 years, say that the prime rate system of pricing is a form of price discrimination which injures consumers and small business owners.

WHAT IS THE FEDERAL RESERVE DOING ABOUT THIS UNFAIR METHOD OF PRICING LOANS?

WHAT EVIDENCE DO YOU HAVE THAT THE RISK IS GETTING WORSE TO JUSTIFY THE DIFFERENCE NOW?

A.1. The level of the prime rate appears to reflect changes in the nature of prime-based loans. The prime rate is no longer commonly used as the base rate for loans to large, highly creditworthy businesses. Instead, it is more likely to be the base rate for loans to smaller businesses or to households. Because of their relatively small size, these loans may be more costly to make, per dollar loaned, and they also may involve a higher degree of risk. As a result, the prime rate may reflect the higher rates warranted by the loans that now have rates tied to prime. In any case, the prime rate does not appear to be a constraint on competition in the loan market. Some banks--generally smaller ones--establish prime rates that differ from the prevailing prime rate. More importantly, banks can and do compete aggressively on the spreads of loan rates over the prime rate and also on other loan terms. Indeed, rates on prime-based business loans vary over a wide range. In addition, the average amount by which the rates on prime-based loans exceed the prime rate has declined considerably in recent years, from between 1 and 1-1/2 percentage points

in the late 1980s to less than 1/2 percentage point most recently, and so the wider spread of the prime rate over market rates does not necessarily indicate relatively more costly credit. At the same time, the share of business loans extended at rates tied to prime has declined, as the share of middle-market loans tied to market rates has increased.

Q.2. Chairman Greenspan, the news summaries of your testimony yesterday before Senate Banking indicated that you thought lowering interest rates last year might have been a bad idea. Bloomberg news reported:

"Greenspan shook the bond traders by acknowledging there's some question about whether the three rate cuts made late last year remain "appropriate" now that global markets have calmed. He also said there's "no evidence of any upturn in inflation."

Since there is approximately zero domestic inflation it is assumed that your main concern is that stock market prices are higher than can be justified by expected profits.

If this is correct, would the Federal Reserve be justified in tightening monetary policy even if a rise in domestic interest rates might start a domestic downturn and cause an increased drain of capital from countries around the world which are experiencing depression conditions?

A.2. The Federal Reserve eased monetary policy on three occasions last autumn to cushion the domestic economy from the effects of increasing weakness in foreign economies and less accommodative conditions in U.S. financial markets. Our economy *has continued to perform well since the autumn, and financial market uncertainties have ebbed.* Thus, the Federal Reserve, as part of its policymaking process, will need to continue to evaluate whether the easing last fall remains appropriate in light of current conditions. In doing so, the Federal Reserve will have to assess the risks to the expansion. In evaluating these risks and setting monetary policy, the Federal Reserve will endeavor to sustain the current expansion by heading off possible imbalances in either direction that could put continued economic growth at risk. Stock prices enter this process through their effects on spending by households and firms. Any change in the stance of policy will be keyed to the performance of the economy, not the level of equity prices.

Q.3. Chairman Greenspan, you have repeatedly warned over the last couple of years that a tight labor market would drive up prices.

Even though many Americans have prospered in the recent period large segments of the country still suffer from low pay and unemployment.

We don't even know the extent of these unemployment problems because we have not had adequate sampling surveys by the government of the people who are not included in the Labor Department's monthly survey of unemployed because they have no phone or permanent residence.

In formulating the nation's monetary policy and the condition of the labor market, how will you take into account these problems?

What guidelines will you use to determine if the labor market is tight and the Federal Reserve has to resort to a tighter monetary policy to prevent inflation?

A.3. One goal of monetary policy is to maintain the growth of the economy at a sustainable level. The unemployment rate is one piece of information employed to evaluate the likely pressures on the economy's productive potential going forward, but many other variables also contribute to that evaluation. I have testified to the Congress several times on the importance of potential workers not counted in the labor force but available to work. Because these sorts of measurement issues are common, the Federal Reserve evaluates a wide variety of economic and financial indicators when formulating monetary policy.

Chairman Greenspan's response to a written question from Representative Doug Ose following February 24, 1999, hearing on the conduct of monetary policy:

Q.1. Chairman Greenspan, my concern continues to be the efficient allocation of capital. With respect to our fiscal policy, does our continued funding of IMF with respect to countries such as Russia or Indonesia positively or negatively influence the allocation of capital? If the influence is negative, is there some means of making the influence positive?

A.1. Economists often reason that the return to capital has the potential of being higher in developing countries or countries in transition since capital tends to be scarce in those economies relative to advanced economies like the United States. While in theory this is correct, in practice it depends on whether the capital is employed efficiently in the capital importing country. Countries such as Russia and Indonesia have the potential to employ capital efficiently. In order to do so, these economies must pursue prudent macroeconomic policies, pursue structural reforms, and have stable legal and political systems. The pursuit of such policies is primarily the responsibility of the countries themselves. On balance, I think it is helpful to have organizations like the IMF and the World Bank providing advice and resources to countries that are attempting to create an environment where capital has the potential to be employed efficiently.

For use at 10:00 a.m., E.S.T.
Tuesday
February 23, 1999

Board of Governors of the Federal Reserve System



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

February 23, 1999

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM
Washington, D.C., February 23, 1999

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Alan Greenspan". The signature is fluid and cursive, with a large initial "A" and a long, sweeping tail.

Alan Greenspan, Chairman

Table of Contents

Monetary Policy and the Economic Outlook

Economic and Financial Developments in 1998 and Early 1999

Monetary Policy Report to the Congress

Report submitted to the Congress on February 23, 1999, pursuant to the Full Employment and Balanced Growth Act of 1978

MONETARY POLICY AND THE ECONOMIC OUTLOOK

In 1998, the U.S. economy again performed impressively. Output expanded rapidly, the unemployment rate fell to the lowest level since 1970, and inflation remained subdued. Transitory factors, most recently falling prices for imports and commodities, especially oil, have helped to produce the favorable outcomes of recent years, but technological advances and increased efficiency, likely reflecting in part heightened global competition and changes in business practices, suggest that some of the improvement will be more lasting.

Sound fiscal and monetary policies have contributed importantly to the good economic results: Budgetary restraint at the federal level has bolstered national saving and permitted the Federal Reserve to maintain lower interest rates than would otherwise have been possible. This policy mix and sustained progress toward price stability have fostered clearer price signals, more efficient resource use, robust business investment, and sizable advances in the productivity of labor and in the real wages of workers. The more rapid expansion of productive potential has, in turn, helped to keep inflation low even as aggregate demand has been surging and as labor markets have tightened.

This past year, economic troubles abroad posed a significant threat to the performance of the economy. Foreign economic growth slowed markedly, on average, as conditions in many countries deteriorated. The recession in Japan deepened, and several emerging market economies in Asia, which had started to weaken in the wake of the financial crises of 1997, contracted sharply. A worsening economic situation in Russia last summer led to a devaluation of the ruble and a moratorium by that country on a substantial portion of its debt payments. As the year progressed, conditions in Latin America also weakened. Although some of the troubled foreign economies are showing signs of improvement, others either are not yet in recovery or are still contracting.

The Russian crisis in mid-August precipitated a period of unusual volatility in world financial markets. The losses incurred in Russia and in other emerging market economies heightened investors' and lenders' concerns about other potential problems and led them to become substantially more cautious about taking on risk. The resulting effects on U.S. financial markets included a substantial widening of risk spreads on debt instruments, a jump in measures of market uncertainty and volatility, a drop in equity prices, and a reduction in the liquidity of many markets. To cushion the U.S. economy from the effects of these financial strains, and potentially to help reduce the strains as well, the Federal Reserve eased monetary policy on three occasions in the fall. Global financial market stresses lessened somewhat after mid-autumn, reflecting, in part, these policy steps as well as interest rate cuts in other industrial countries and international efforts to provide support to troubled emerging market economies. Although some U.S. financial flows were disrupted for a time, most firms and households remained able to obtain sufficient credit, and the turbulence did not appear to constrain spending to a significant degree. More recently, some markets were unsettled by the devaluation and subsequent floating of the Brazilian real in mid-January, and the problems in Brazil continue to pose risks to global markets. Thus far, however, market reaction outside Brazil to that country's difficulties has been relatively muted.

The foreign exchange value of the dollar rose substantially against the currencies of the major foreign industrial countries over the first eight months of 1998, but subsequently it fell sharply, ending the year down a little on net. The appreciation of the dollar in the first half of the year carried it to an eight-year high against the Japanese yen. In June, this strength against the yen prompted the first U.S. foreign exchange intervention operation in nearly three years, an action that appeared to slow the dollar's rise against the yen over the following days and weeks. Later in the summer, concerns about the possible impact on the U.S. economy of increasing difficulties in Latin America began to weigh on the dollar's exchange value against major foreign currencies. After peaking in mid-August, it fell sharply over the course of several weeks, reversing by mid-October

the appreciation that had occurred earlier in the year. The depreciation during this period was particularly sharp against the yen. The reasons for this decline against the yen are not clear, but repayment of yen-denominated loans by international investors and decisions by Japanese investors to repatriate their assets in light of increased volatility in global markets seem to have contributed. The exchange value of the dollar fluctuated moderately against the major currencies over the rest of the year, and after declining somewhat early in 1999, it has rebounded strongly in recent weeks, as incoming data have suggested continued strength of economic activity in the United States. Since the end of 1998, the dollar has appreciated about 7 percent against the yen, partly reflecting further monetary easing in Japan. At the turn of the year, the launch of the third stage of European Economic and Monetary Union fixed the eleven participating countries' conversion rates and created a new common currency, the euro. The dollar has appreciated more than 5 percent against the euro, in part because of signs that growth has slowed recently in some euro-area economies.

With the U.S. economy expanding rapidly, the economies of many U.S. trading partners struggling, and the foreign exchange value of the dollar having risen over 1997 and the first part of 1998, the U.S. trade deficit widened considerably last year. Some domestic industries were especially affected by reductions in foreign demand or by increased competition from imports. For example, a wide range of commodity producers, notably those in agriculture, oil, and metals, experienced sharp price declines. Parts of the manufacturing sector also suffered adverse consequences from the shocks from abroad. Overall, real net exports deteriorated sharply, as exports stagnated and imports continued to surge. The deterioration was particularly marked in the first half of the year; the second half brought a further, more modest, net widening of the external deficit.

Meanwhile, domestic spending continued to advance rapidly. Household expenditures were bolstered by gains in real income and a further rise in wealth, while a low cost of capital and optimism about future profitability spurred businesses to invest heavily in new capital equipment. Although securities markets were disrupted in late summer and early fall, credit generally remained available from alternative sources. Once the strains on securities markets had eased, businesses and households generally had ready access to credit and other sources of finance on relatively favorable terms, although spreads in some markets remained quite elevated, especially for

lower-rated borrowers. All told, household and business outlays rose even more rapidly than in 1997, and that acceleration kept the growth of real GDP strong even as net exports were slumping.

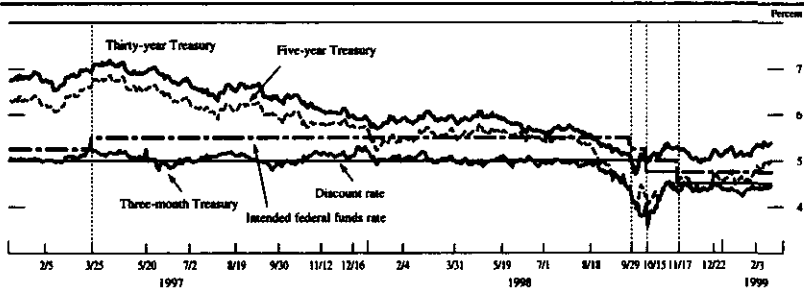
Deteriorating economic conditions abroad, coupled with the strength of the dollar over the first eight months of the year, helped to hold down inflation in the United States by trimming the prices of oil and other imports. These declines reduced both the prices paid by consumers and the costs of production in many lines of business, and the competition from abroad kept businesses from raising prices as much as they might have otherwise. As the result of a reduced rate of price inflation, workers enjoyed a larger rise in real purchasing power even as increases in nominal hourly compensation picked up only slightly on average. Because of increased gains in productivity, corporations in the aggregate were able to absorb the larger real pay increases without suffering a serious diminution of profitability.

*Monetary Policy, Financial Markets,
and the Economy over 1998 and Early 1999*

Monetary policy in 1998 needed to balance two major risks to the economic expansion. On the one hand, with the domestic economy displaying considerable momentum and labor markets tight, the Federal Open Market Committee (FOMC) was concerned about the possible emergence of imbalances that would lead to higher inflation and thereby, eventually, put the sustainability of the expansion at risk. On the other hand, troubles in many foreign economies and resulting financial turmoil both abroad and at home seemed, at times, to raise the risk of an excessive weakening of aggregate demand.

Over the first seven months of the year, neither of these potential tendencies was sufficiently dominant to prompt a policy action by the FOMC. Although the incoming data gave no evidence of a sustained slowing of output growth, the Committee members believed that the pace of expansion likely would moderate as businesses began to slow the rapid rates at which they had been adding to their stocks of inventories and other investment goods, and as households trimmed the large advances in their spending on consumer durables and homes. Relatively firm real interest rates, buoyed by a high real federal funds rate resulting from the decline in the level of expected inflation, were thought likely to help restrain the growth of spending by businesses and households. Another check on growth was expected to come from the effects on imports and

Selected interest rates



NOTE: The data are daily. Vertical lines indicate the days on which the Federal Reserve announced a monetary policy action. The dates on the horizon-

tal axis are those on which either the FOMC held a scheduled meeting or a policy action was announced. Last observations are for February 19, 1999.

exports of the economic difficulties in emerging market economies in Asia and elsewhere. Indeed, production in the manufacturing sector slowed substantially in the first half of the year, and capacity utilization dropped noticeably. Moreover, inflation remained subdued, and a pickup was not expected in the near-to-intermediate term because of declining oil prices, and because of economic weakness abroad and the appreciation of the dollar, which were expected to trim the prices of imported goods and to increase price competition for many U.S. producers. Nonetheless, with labor markets already quite taut and aggregate demand growing rapidly—a combination that often has signaled the impending buildup of inflationary pressures—the Committee, at its meetings from March through July, judged conditions to be such that, if a policy action were to be taken in the period immediately ahead, it more likely would be a tightening than an easing; its directives to the Account Manager of the Domestic Trading Desk at the Federal Reserve Bank of New York noted that asymmetry.

By the time of the August FOMC meeting, however, the situation was changing. Although tight labor markets and rapid output growth continued to pose a risk of higher inflation, the damping influence of foreign economic developments on the U.S. economy seemed likely to increase. The contraction in the emerging market economies in Asia appeared to be deeper than had been anticipated, and the economic situation in Japan had deteriorated. Financial markets in some foreign economies also had experienced greater turmoil, and, the day before the Committee met, Russia was forced to devalue the ruble. These

difficulties had been weighing on U.S. asset markets: Stock prices had fallen sharply in late July and into August as investors became concerned about the outlook for profits, and risk spreads in debt markets had widened, albeit from very low levels. Taking account of these circumstances, the Committee again left monetary policy unchanged at the August meeting, but it shifted to a symmetric directive, reflecting its perception that the risks to the economic outlook, at prevailing short-term rates, had become roughly balanced.

Over subsequent weeks, conditions in financial markets and the economic outlook in many foreign countries deteriorated further, increasing the dangers to the U.S. expansion. With investors around the world apparently reevaluating the risks associated with various credits and seemingly becoming less willing or able to bear such risks, asset demands shifted toward safer and more liquid instruments. These shifts caused a sharp fall in yields on Treasury securities. Spreads of yields on private debt securities over those on comparable Treasury instruments widened considerably further, and issuance slowed sharply. Measures of market volatility increased, and liquidity in many financial markets was curtailed. Equity prices continued to slide lower, with most broad indexes falling back by early September to near their levels at the start of the year. Reflecting the weaker and more uncertain economic outlook, some banks boosted interest rate spreads and fees on new loans to businesses and tightened their underwriting standards.

Against this backdrop, at its September meeting the FOMC looked beyond incoming data suggesting

that the economy was continuing to expand at a robust pace, and it lowered the intended level of the federal funds rate $\frac{1}{4}$ percentage point. The Committee noted that the rate cut would cushion the effects on prospective U.S. economic growth of increasing weakness in foreign economies and of less accommodative conditions in domestic financial markets. The directive adopted at the meeting suggested a bias toward further easing over the intermeeting period. In the days following the policy move, disturbances in financial markets worsened. Movements in the prices of securities were exacerbated by a deterioration in market liquidity, as some securities dealers cut back on their market-making activities, and by the expected unwinding of positions by hedge funds and other leveraged investors. In early October, Treasury yields briefly tumbled to their lowest levels in many years, reflecting efforts by investors to exchange other instruments for riskless and liquid Treasury securities.

Although some measures of market turbulence had begun to ease a bit by mid-October, financial markets remained extremely volatile and risk spreads were very wide. On October 15, consistent with the directive from the September meeting, the intended federal funds rate was trimmed another $\frac{1}{4}$ percentage point, to 5 percent. This policy move, which occurred between FOMC meetings, came at the initiative of Chairman Greenspan and followed a conference call with Committee members. At the same time, the Board of Governors approved a $\frac{1}{4}$ percentage point reduction in the discount rate. These actions were taken to buffer the domestic economy from the impact of the less accommodative conditions in domestic financial markets, in part by contributing to some stabilization of the global financial situation.

Following the October policy move, strains in domestic financial markets diminished considerably. As safe-haven demands for Treasury securities ebbed, Treasury yields generally trended higher, and measures of financial market volatility and illiquidity eased. Nonetheless, risk spreads remained very wide, and liquidity in many markets continued to be limited. Moreover, although pressures on some emerging market economies had receded a bit, partly reflecting concerted international efforts to provide assistance to Brazil, the foreign economic outlook remained uncertain. With downside risks still substantial, and in light of the cumulative effect since August of the tightening in many sectors of the credit markets and the weakening of economic activity abroad, the FOMC reduced the intended federal funds rate a further $\frac{1}{4}$ percentage point at its November meeting,

bringing the total reduction during the autumn to $\frac{3}{4}$ percentage point. The Board of Governors also approved a second $\frac{1}{4}$ percentage point cut in the discount rate. The Committee believed that, with this policy action, financial conditions could reasonably be expected to be consistent with fostering sustained economic expansion while keeping inflationary pressures subdued. The action provided some insurance against an unexpectedly severe weakening of the expansion, and the Committee therefore established a symmetrical directive. By the time of the December meeting, the situation in financial markets had changed little, on balance, and the Committee decided that no further change in rates was desirable and that the directive should remain symmetrical.

Some measures of financial volatility eased further in the new year, although risk spreads on corporate bonds remained at quite high levels. Yields on Treasury securities were about flat, on balance, in January, as the effect of stronger-than-expected economic growth appeared to be about offset by data suggesting that inflation remained quiescent and perhaps also by the effects of some safe-haven flows prompted by the deteriorating situation in Brazil. Over the same period, stock prices surged higher, led by computer and other technology shares, and most stock price indexes posted new highs. By the time of the February 2-3 meeting, financial markets were easily accommodating robust demands for credit, and economic activity seemed to have more momentum than many had anticipated. However, the foreign sector continued to pose a threat to U.S. growth going forward, inflation showed no signs of picking up despite the rapid pace of growth and the very tight labor market, and some slowing of economic growth remained a likely prospect. In these circumstances, the FOMC concluded that it was prudent to wait for further information, and it left policy unchanged.

Economic Projections for 1999

By and large, the members of the Board of Governors and the Federal Reserve Bank presidents, all of whom participate in the deliberations of the FOMC, expect the economy to expand moderately, on average, in 1999. The central tendency of the FOMC participants' forecasts of real GDP growth from the fourth quarter of 1998 to the fourth quarter of 1999 is $2\frac{1}{2}$ percent to 3 percent. The anticipated expansion is expected to create enough new jobs to keep the civilian unemployment rate near its recent average, in a range of $4\frac{1}{4}$ percent to $4\frac{1}{2}$ percent. With tightness of the labor market expected to persist

I. Economic projections for 1999

Indicator	Federal Reserve governors and Reserve Bank presidents		Administration
	Range	Central tendency	
<i>Change, fourth quarter to fourth quarter¹</i>			
Nominal GDP	3½-5	4-4½	4.0
Real GDP ²	2-3½	2½-3	2.0
Consumer price index ³	1½-2½	2-2½	2.3
<i>Average level, fourth quarter</i>			
Civilian unemployment rate	4½-4¾	4½-4¾	4.9

1. Change from average for fourth quarter of 1998 to average for fourth quarter of 1999.

2. Chain-weighted.

3. All urban consumers.

and oil and import prices unlikely to be as weak in 1999 as they were in 1998, inflation is expected to move up somewhat from the rate of this past year but to remain low by the standards of the past three decades: The central tendency of the FOMC participants' CPI inflation forecasts for 1999 is 2 percent to 2½ percent. The Federal Reserve officials' inflation forecasts are closely aligned with that of the Administration, and their forecasts of real GDP and unemployment depict a somewhat stronger real economy than the Administration is projecting.

Present circumstances suggest that domestic demand could continue to rise briskly for a while longer. Consumer spending continues to be driven by strong gains in employment, increases in real incomes, and rising levels of wealth. Those same factors, together with low mortgage interest rates, are keeping housing activity robust. Businesses are still investing heavily in new capital, especially computers and other high-tech equipment. Households and businesses appear willing to take on more debt in support of spending; although spreads on corporate debt remain elevated, rate levels are perceived to be attractive for most borrowers, and restraint on access to finance is not much in evidence.

As the year progresses, however, gains in domestic spending should begin to moderate. Spending increases for housing, consumer durables, and business equipment have been exceptionally large for a while now, substantially raising the rate of growth in the amounts of these goods owned by businesses and households; some moderation in outlays seems likely, lest these holdings become disproportionate to underlying trends in income and output. The outlook for spending continues to be obscured to some degree by uncertainties about the course of equity prices; a failure of these prices to match the outsized gains

posted in recent years would contribute to some moderation in spending growth, especially by households. Government spending, which accounts for about one-sixth of domestic demand, seems likely to expand at a moderate pace overall. Along with the numerous other uncertainties that attend the outlook, an additional uncertainty is present this year because of the approach of the year 2000 and the associated Y2K problem.

Growth abroad is expected to remain sluggish, on balance, in 1999, limiting the prospects for exports. At the same time, growth of the U.S. economy probably will continue to generate fairly brisk increases in imports. In total, real net exports of goods and services seem likely to fall further in the coming year, although several factors—the decline in the dollar from its peak of last summer, the expected slowing of income growth in the United States, and the possibility of a slight pickup in economic growth abroad—provide a basis for thinking that this year's drop in net exports might not be as large as that of 1998.

The future course of inflation will depend in part on what happens to the prices of oil and other imports, and restraint from those sources seems unlikely to be as great as it was in 1998. The drop in the price of oil this past year left it toward the lower end of its range of the past couple of decades and has thereby reduced the incentives for exploration, drilling, and production. Futures markets have been showing a gradual rise in the price of oil going forward. Prices of nonoil imports changed little in the fourth quarter of last year after having fallen sharply in previous quarters. Indicators of the pressures on domestic resources provided mixed signals over the past year. In manufacturing, capacity utilization declined considerably, to a level below its long run average, reflecting slower production growth and sizable additions to the stock of capital. However, labor markets remained very taut, and with the economy apparently carrying substantial momentum into this year, data on costs and prices will need to be monitored carefully for signs that a rising inflation pattern might start to take hold. In that regard, the FOMC will continue to rely not only on the CPI but also on a variety of other price measures to gauge the economy's inflation performance in the period ahead.

Money and Debt Ranges for 1999

At its most recent meeting, the FOMC reaffirmed the 1999 monetary growth ranges that were chosen on a

Monetary Policy Report to the Congress □ February 1999

2. Ranges for growth of monetary and debt aggregates

Percent			
Aggregate	1997	1998	1999
M2	1-5	1-5	1-5
M3	2-6	2-6	2-6
Debt	3-7	3-7	3-7

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

provisional basis last July: 1 percent to 5 percent for M2, and 2 percent to 6 percent for M3. As has been the case for some time, the FOMC intends these money growth ranges to be benchmarks for growth under conditions of price stability, sustainable real economic growth, and historical velocity relationships rather than ranges that encompass the expected growth of money over the coming year or that serve as guides to policy.

Given continued uncertainty about movements in the velocities of M2 and M3 (the ratios of nominal GDP to the aggregates), the Committee would have little confidence that money growth within any particular range selected for the year would be associated with the economic performance it expected or desired. Nonetheless, the Committee believes that, despite the apparent large shift in velocity behavior in the early 1990s, money growth has some value as an economic indicator. Indeed, some FOMC members have expressed the concern that the unusually rapid growth in the money and debt aggregates in 1998 might have reflected monetary conditions that were too accommodative and would ultimately lead to an increase in inflation pressures. The Committee will continue to monitor the monetary aggregates as well as a wide variety of other economic and financial data to inform its policy deliberations.

Last year, M2 increased $8\frac{1}{2}$ percent, and with nominal GDP rising 5 percent, M2 velocity decreased 3 percent. This drop in velocity was considerably larger than would have been expected on the basis of historical relationships and the modest decline in the opportunity cost of M2 (measured as the difference between the interest rate on Treasury bills and the weighted average rate available on M2 assets). The fall in velocity in part reflected an increased demand for the safe and liquid assets in M2 as investors responded to the heightened volatility in financial markets in the second half of the year. Other factors that may have contributed include lower long-term interest rates and a very flat yield curve, which might have suggested to households that they would be giving up very little in earnings by parking savings in short-term assets in M2. In addition, M2 may have been boosted by a desire on the part of some inves-

tors to redirect savings flows away from equities after several years of outsized gains in stock market wealth. With equity wealth still elevated and the yield curve likely to remain flat, M2 velocity could continue to fall this year. However, the pace of decline should slow as some households respond to the easing of concerns about financial market volatility by reversing a portion of the shift toward M2 assets that occurred last fall. Indeed, this effect may already be visible, as M2 growth, while still robust, has slowed considerably early this year. If velocity does fall, given the Committee's expectations for nominal income growth, M2 could again exceed its price-stability benchmark range.

M3 expanded 11 percent last year, and its velocity fell $5\frac{1}{4}$ percent, the largest drop in many years. The rapid growth in this aggregate owed in large part to a substantial rise in institutional money funds. These funds have been expanding rapidly in recent years as nonfinancial firms increasingly employ them to provide cash management services. Investments in these funds provide businesses with greater liquidity than direct holdings of money market instruments, and by substituting for such direct holdings, they boost M3. M3 was also buoyed last year by a large advance in the managed liabilities banks used to fund rapid growth in bank credit. In part, the growth in bank credit reflected demand by borrowers shifting from the securities markets, and with these markets again receptive to new issues, bank credit growth this year is expected to slow to a pace more in line with broader debt aggregates. However, institutional money funds are likely to continue their robust gains, contributing to a further diminution in M3 velocity and, possibly, to growth of this aggregate above its price-stability range.

Domestic nonfinancial debt grew $6\frac{1}{4}$ percent in 1998, somewhat above the middle of the 3 percent to 7 percent growth range the Committee established last February. This robust growth reflected large rises in the debt of businesses and households owing to substantial advances in spending as well as debt-financed mergers and acquisitions. However, the increase in private-sector debt was partly offset by the first annual decline in federal debt in almost thirty years. As with the monetary aggregates, the Committee left the range for debt growth unchanged for 1999. After an aberrant period in the 1980s during which debt growth greatly exceeded growth of nominal GDP, debt growth over the past decade has returned to its historical pattern of about matching growth of nominal GDP, and the Committee members expect debt to fall within its range this year.

ECONOMIC AND FINANCIAL DEVELOPMENTS IN 1998 AND EARLY 1999

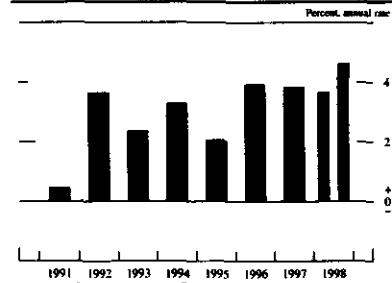
The U.S. economy continued to display great vigor in 1998, despite a sharp slowing of growth in foreign economies and an unsettled world financial environment. According to the Commerce Department's advance estimate, real GDP increased a little more than 4 percent over the four quarters of the year. The economic difficulties facing many of our trading partners and the strength of the dollar through much of the year led to sluggishness in real exports of goods and services. However, the drag on the economy from that source was more than offset by exceptional strength in the real expenditures of households and businesses, which were powered by strong real income growth, large gains in the value of household wealth, ready access to finance during most of the year, and widespread optimism regarding the future of the economy. Although turmoil in financial markets seemed to threaten the economy for a time in late summer and early autumn, that threat later receded, in part because of the steps taken by the Federal Reserve to prevent the tightening of credit markets from impairing the expansion of activity. The final quarter of the year brought brisk expansion of employment and income, and the limited indicators of activity in early 1999 have been strong, on balance.

The increase in the general price level this past year was smaller than that in the previous year, which had itself been among the smallest in decades. The chain-type price index for GDP rose slightly less than 1 percent. The further slowing of price increases was in large part a reflection of sluggish conditions in the world economy, which brought declines in the prices of a wide range of imported goods, including oil and other primary commodities. In the domestic economy, nominal hourly compensation of workers picked up only slightly despite the tightness of the labor market, and much of the compensation increase was offset by gains in labor productivity. As a result, unit labor costs, the most important item in total business costs, rose only modestly.

The Household Sector

Personal consumption expenditures increased more than 5 percent in real terms in 1998, the biggest gain in a decade and a half. Support for the large rise in spending came from a combination of circumstances that, on the whole, were exceptionally favorable to households. Strong gains in employment and real

Change in real GDP

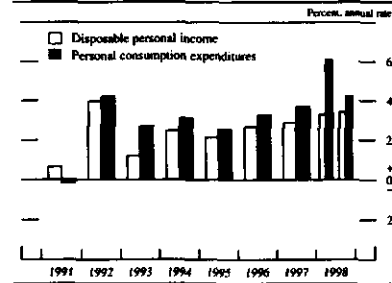


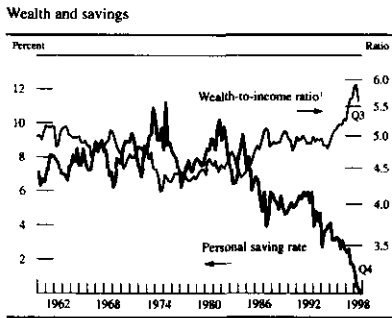
NOTE: In this chart and in subsequent charts that show the components of real GDP, changes are measured to the final quarter of the period indicated, from the final quarter of the preceding period. Last data point is from the advance GDP report for 1998:Q4.

hourly pay gave another appreciable boost to the growth of real labor income. At the same time, the wealth of households recorded another year of substantial increase, bolstered in large part by the continued rise in equity prices. Although not all balance sheet data for the end of 1998 are available, household net worth at that point appears to have been up about 10 percent from the level at the end of 1997. The cumulative gain in household wealth since 1994 has amounted to nearly 50 percent.

The rise in net worth probably accounts for much of the decline in the personal saving rate over the past few years, to an annual average of 1/2 percent in 1998. Households tend to raise their saving from current income when they feel that wealth must be increased to meet longer-run objectives, but they are willing to reduce their saving from current income when they feel that wealth already is at satisfactory levels. The

Change in real income and consumption





1. The ratio of net worth of households to disposable personal income.

low level of the saving rate in 1998 is not so remarkable when gauged against a wealth-to-income ratio that has been running in a range well above its longer-run historical average.

All of the major categories of personal consumption expenditures—durables, nondurables, and services—recorded gains in 1998 that were the largest of the 1990s. Spending on durable goods rose more than 12 percent over the year. Within that category, expenditures on home computers once again stood out, rising roughly 70 percent in real terms, a gain that reflected both increased nominal outlays and a further substantial decline in computer prices. Consumer outlays on motor vehicles also rose sharply, despite some temporary limitations on supply from a midyear auto strike. Spending on most other types of durable goods registered increases that were well above the averages of the past decade or so. Because goods such as these are not consumed all at once—but, rather, add to stocks of durable goods that will be yielding services to consumers for a number of years—they embody a form of economic saving that is not captured in the normal measure of the saving rate in the national income accounts.

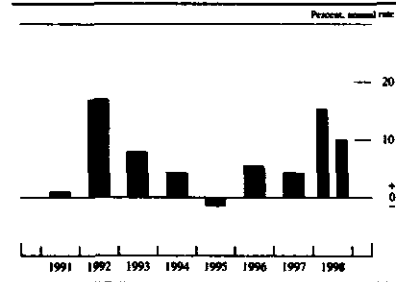
The increases in income and net worth that led households to boost consumption expenditures also led them to invest heavily in additions to the stock of housing. Declines in mortgage interest rates weighed in as well, helping to maintain the affordability of housing even as house prices moved up somewhat faster than overall inflation. These developments brought the objective of owning a home within the reach of a greater number of households, and the home-ownership rate, which has been trending up this decade, rose to another new high in 1998.

In the single-family sector, sales of new and existing homes surged, the former rising more than 10 percent from the previous year's total and the latter more than 13 percent. Construction of single-family houses strengthened markedly. The number of these units started during the year was the largest since the late 1970s, and it exceeded the previous year's total by about 12 percent. In the fourth quarter, unusually mild weather permitted builders to maintain activity later into the season than they normally would have and gave an added kick to housing starts. Starts increased further in January of this year, despite harsher weather in some regions.

In contrast to the strength in the single-family sector, the number of multifamily units started in 1998 was up only a little from the total for 1997. After bottoming out at a very low level early in the 1990s, construction of these units had been trending back up fairly briskly until this past year. But with vacancy rates on multifamily rental units running a touch higher this past year, builders and their creditors may have become concerned about adding too many new units to the stock. Financing appeared generally to be in ample supply for projects that looked promising; during the period of financial turmoil, the flow of credit was supported by substantial purchases of multifamily mortgages and mortgage-backed securities by Freddie Mac and Fannie Mae.

Total outlays for residential investment increased about 12½ percent in real terms during 1998, according to the Commerce Department's initial tally. The large increase reflected not only the construction work undertaken on new residential units during the year but also sizable advances in real outlays for home improvements and in the volume of sales activity being carried on by real estate brokers, which generated substantial gains in commissions.

Change in real residential investment



The robust growth in household expenditures in 1998 was accompanied by an expansion of household debt that likely exceeded 8½ percent, a somewhat larger rise than in other recent years. Nonmortgage debt increased about 6 percent, about 2 percentage points above the previous year's pace but down considerably from the double-digit increases posted in 1994 and 1995. Home mortgage debt is estimated to have jumped more than 9 percent, its largest annual advance since 1990, boosted in part by the robust housing market. In addition, with mortgage rates reaching their lowest levels in many years, many households refinanced existing mortgages, and some households likely took the opportunity presented by refinancing to increase the size of their mortgages, using the extra funds raised to finance current expenditures or to pay down other debts.

The growth in household debt reflected both supply and demand influences. With wealth rising faster than income over the year and with consumer confidence remaining at historically high levels, households were willing to boost their indebtedness to finance increased spending. In addition, lenders generally remained accommodative toward all but the most marginal households, even after the turmoil in many financial markets in the fall. After a more general tightening of loan conditions in response to a rise in losses on such loans between mid-1995 and mid-1997, a smaller and declining fraction of banks tightened consumer lending standards and terms last year, according to Federal Reserve surveys. However, the availability of high loan-to-value and subprime home equity loans likely was reduced in the fall

because of difficulties in the market for securities backed by such loans.

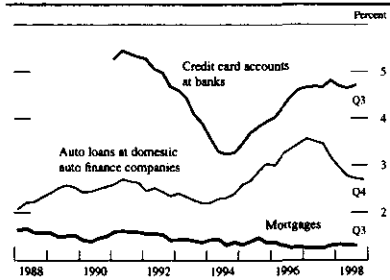
Despite the rapid increase in debt, measures of household financial stress were relatively stable last year, although some remained at high levels. The delinquency rate on home mortgages has stayed quite low in recent years, while the delinquency rate on auto loans at domestic auto finance companies has trended lower. The delinquency rate on credit card loans at banks fluctuated in a fairly narrow range in 1997 and 1998, but it remained elevated after having posted a substantial rise over the previous two years. Personal bankruptcy filings have followed a broadly similar pattern: Annual growth has run at about 3 percent over the past year and a half, down from annual increases of roughly 25 percent between mid-1995 and early 1997. The stability of these measures over the past couple of years likely owes in part to the earlier tightening of standards and terms on consumer loans. In addition, lower interest rates and longer loan maturities, which resulted from the shift toward mortgage finance, have helped to mitigate the effects of increased borrowing on household debt-service burdens.

The Business Sector

Business fixed investment increased about 12½ percent during 1998, with a 17½ percent rise in equipment spending more than accounting for the overall advance. The strength of the economy and optimism about its longer-run prospects provided underpinnings for increased investment. Outlays were also bolstered by the efficiencies obtainable with new technologies, by the favorable prices at which many types of capital equipment could be purchased, and, except during the period of financial market turmoil, by the ready availability and low cost of finance, either through borrowing or through the issuance of equity shares.

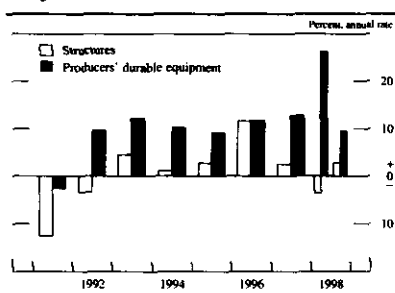
Real expenditures on office and computing equipment, after having risen at an average rate of roughly 30 percent in real terms from 1991 through 1997, shifted into even higher gear in 1998, climbing about 65 percent. The outsized increase likely owed in part to the efforts of some businesses to put new computer systems in place before the end of the millennium, in hopes of circumventing potential difficulties arising from the Y2K problem. But, beyond that, investment in computers is being driven by the same factors that have been at work throughout the expansion—namely, the introduction of machines that offer greater computing power at increasingly attractive

Delinquency rates on household loans



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

Change in real business fixed investment



prices and that provide businesses new and more efficient ways of organizing their operations. Price declines this past year were especially large, as the cost reductions associated with technical change were augmented by heightened international competition in the markets for semiconductors and other computer components and by price cutting to work down the stocks of some assembled products.

Investment in communications equipment—another high-tech category that is an increasingly important part of total equipment outlays—rose about 18½ percent in 1998. After having traced out an erratic pattern of ups and downs through the latter part of the 1980s and the early 1990s, real outlays on this type of equipment began to record sustained large annual increases in 1994, and the advance last year was one of the largest. Spending on other types of equipment displayed varying degrees of strength across different sectors but recorded a sizable gain overall. Investment in transportation equipment was strong across the board, spurred by the need to move greater volumes of goods or to carry more passengers in an expanding economy. Spending on industrial machinery advanced about 4½ percent after larger gains in most previous years of the expansion, a pattern that mirrored a slowing of output growth in the industrial sector.

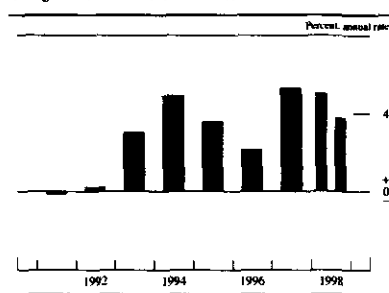
Business investment in nonresidential structures, which accounts for slightly more than 20 percent of total business fixed investment, was down slightly in 1998, according to the advance estimate. Sharply divergent trends were evident within the sector, ranging from considerable strength in the construction of office buildings to marked weakness in the construction of industrial buildings. The waxing and waning of industry-specific construction cycles appears to be the main explanation for the diverse outcomes of this

past year. Although some of the more speculative construction plans may have been shelved because of a tightening of the terms and standards on loans, partly in reaction to the financial turmoil, most builders appear to have been able to eventually obtain financing. Despite the sluggishness of spending on structures this past year, the level of investment remained high enough to generate continued moderate growth in the real stock of structures.

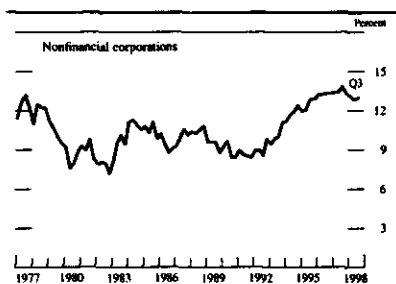
Business inventories increased about 4½ percent in real terms this past year after having risen more than 5 percent during 1997. Stocks grew at a 7 percent annual rate in the first quarter, appreciably faster than final sales, but inventory growth over the remainder of the year was considerably slower than in the first quarter. At year-end, stocks in most nonfarm industries were at levels that did not seem likely to cause firms to restrain production going forward. Inventories of vehicles may even have been a little on the lean side, as a result of both a strike that held down assemblies through the middle part of 1998 and exceptionally strong demand, which prevented the rebuilding of stocks later in the year. By contrast, inventories at year-end appear to have been excessive in a few nonfarm industries that have been hurt by the sluggish world economy. Stocks of farm commodities also appeared to be excessive, having been boosted further this past year by large harvests and sluggish export demand.

The economic profits of U.S. corporations—that is, book profits adjusted so that inventories and fixed capital are valued at their current replacement cost—rose further, on net, over the first three quarters of 1998 but at a much slower pace than in most other years of the current expansion. Companies' earnings from operations in the rest of the world fell back a bit, as did the profits of private financial corporations

Change in nonfarm business inventories



Before-tax profits as a share of GDP



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

from domestic operations. The profits of nonfinancial corporations from domestic operations increased at an annual rate of about 1¼ percent. Although the volume of output of the nonfinancial companies continued to rise rapidly, profits per unit of output were squeezed a bit by companies' difficulties in raising prices in step with costs in a competitive market environment.

With profits expanding more slowly and investment spending still on the upswing, businesses' external funding needs increased substantially last year. Aggregate borrowing by the nonfinancial business sector is estimated to have expanded 9½ percent from the end of 1997 to the end of 1998, the largest increase in ten years. The rise reflected growth in all major types of business debt. Business borrowing was also boosted by substantial merger and acquisi-

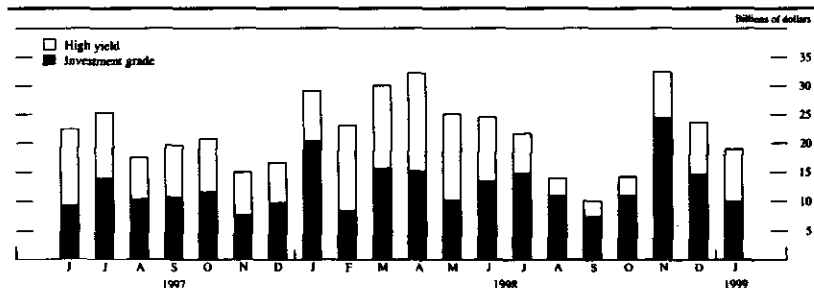
tion activity. Indeed, mergers and acquisitions, share repurchases, and foreign purchases of U.S. firms last year overwhelmed the high level of both initial and seasoned public equity issues, and net equity retirements likely exceeded \$250 billion.

The disruptions in the financial markets in late summer and early fall appear to have had little effect on total business borrowing but caused a substantial temporary shift in the sources of credit. With investors favoring high credit quality and liquidity, yields on lower-rated corporate bonds rose despite declining Treasury rates; the spread of yields on junk bonds over those on comparable Treasury securities roughly doubled between mid-summer and mid-autumn before falling back somewhat as conditions in financial markets eased. The spread of rates on lower-tier commercial paper over those on higher-quality paper rose substantially during the fall but had retraced the rise by the early part of this year.

Reflecting these adverse market conditions, non-financial corporate bond issuance fell sharply in August and remained low through mid-October, with issuance of junk bonds virtually halted for a time. Commercial paper issuance rose sharply in August and September, as some firms apparently decided to delay bond issues, turning temporarily to the commercial paper market instead. Bond issuance picked up again in late October, however, and issuance in November was robust. Reflecting this rebound, commercial paper outstanding fell back in the fourth quarter. More recently, bond issuance has remained healthy, while borrowing in the commercial paper market has picked up.

During the period when financial markets were strained, some borrowers substituted bank loans—in some cases under credit lines priced before the mar-

Gross corporate bond issuance

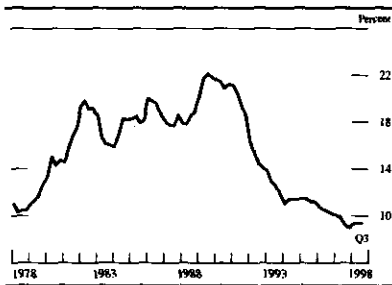


NOTE: Excludes warrant issues and issues sold abroad.

kets became volatile—for other sources of credit, and business loans at banks expanded very rapidly for a time before tailing off late in the year. Federal Reserve surveys indicate that banks responded to the turmoil in financial markets by tightening standards and terms on new loans and credit lines, especially loans to larger customers and those to finance commercial real estate ventures. The tightening reflected the less favorable or more uncertain economic outlook as well as a reduced tolerance for risk on the part of some banks. Bank lending standards and terms appear to have tightened only a little further since the fall, however, and business loans at banks have expanded a bit since the end of December.

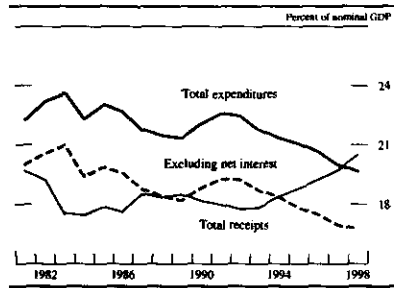
Despite the rapid growth in debt and the relatively small gain in profits last year, the financial condition of nonfinancial businesses remained strong. Interest rates for many businesses fell, on balance, over the course of the year, and bond yields for investment-grade firms reached their lowest level in many years. Reflecting these low borrowing costs, the aggregate debt-service burden for nonfinancial corporations, measured as the ratio of net interest payments to cash flow, remained about 9½ percent, near its low of 9 percent in 1997 and less than half the peak level reached in 1989. The delinquency rate for banks' commercial and industrial loans also remained near the trough reached in late 1997, while that for commercial real estate loans fell a bit further from the already very low level posted in 1997. Although Moody's Investors Service downgraded more non-financial firms than it upgraded over the second half of the year, the downgraded firms were smaller on average, and so the debt of those upgraded about equaled the debt of those downgraded. Through

Net interest payments of nonfinancial corporations relative to cash flow



NOTE: The data are quarterly.

Federal receipts and expenditures



NOTE: Data on receipts and expenditures are from the unified budget and are for the fiscal year ended in September.

October, business failures remained at the low end of the range seen over the past decade.

The Government Sector

The federal government recorded a surplus in the unified budget this past fiscal year for the first time in nearly three decades. The surplus, amounting to \$69 billion, was equal to about ¼ percent of GDP, a huge turnabout from the deficits of the early 1990s, which in some years were more than 4½ percent of GDP. The swing from deficit to surplus over the past few years is partly the result of fiscal policies aimed at lowering the deficit and partly the result of the strength of the economy and the stock market. Excluding net interest payments—a charge stemming from past deficits—the government recorded a surplus of more than \$300 billion in fiscal 1998.

The improvement in the government's saving position has permitted national saving—the combined gross saving of households, businesses, and governments—to move up about 3 percentage points from its low of a few years ago, even though personal saving has fallen sharply. In turn, that increase in national saving has helped facilitate the boom in investment spending—in contrast to the experience of the 1980s and early 1990s, when persistent large budget deficits tended to reduce national saving, boost interest rates higher than they otherwise would have been, and thereby crowd out private capital formation.

Federal receipts in the unified budget in fiscal year 1998 were up 9 percent from the previous fiscal year, with much of the gain coming from personal income



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

taxes, which rose more than 12 percent for a second consecutive year. These receipts have been rising faster than personal income in recent years, for several reasons: Tax rates at the high end of the income scale were raised by legislation that was passed in 1993 to help reduce the deficit; more taxpayers have moved into higher tax brackets as income has increased; and large increases in asset values have raised tax receipts from capital gains. Social insurance tax receipts, the second most important source of federal revenue, increased 6 percent in fiscal 1998, just a touch faster than the increase in fiscal 1997 and roughly in step with the growth of wages and salaries. Receipts from the taxes on corporate profits, which account for just over 10 percent of federal revenues, rose less rapidly than in other recent years, restrained by the slower growth of corporate profits. In the first three months of fiscal 1999, net receipts from corporate taxes dipped below year-earlier levels, but gains in individual income taxes and payroll taxes kept total federal receipts on a rising trajectory.

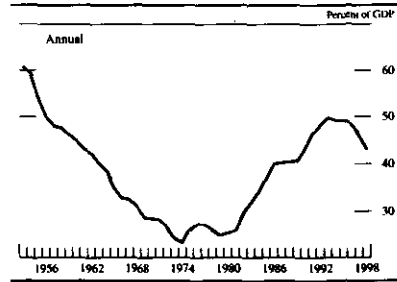
Unified outlays increased 3¼ percent in fiscal 1998 after having risen 2½ percent in the preceding fiscal year. Net interest payments and nominal expenditures for defense fell slightly in the latest fiscal year, and outlays for income security and Medicare rose only a little. Social security expenditures increased moderately but somewhat less than in other recent years. By contrast, the growth of Medicaid payments picked up to about 6 percent after having increased less than 4 percent in each of the preceding two years; however, even the 1998 rise was not large compared with those of many earlier years when both medical costs and Medicaid caseloads were increasing rapidly and rates of federal reimbursement to the states were being raised. Federal spending in fiscal 1999 will be

boosted to some degree by new budget authority for a variety of functions, including defense, embassy security, disaster relief, preparation for Y2K, and aid to agriculture; this authority was created in emergency legislation that provided an exception to statutory spending restrictions.

Real federal outlays for consumption and investment, the part of federal spending that is counted in GDP, increased 1 percent, on net, from the final quarter of calendar year 1997 to the final quarter of 1998. A reduction in real defense outlays over that period was more than offset by a jump in the non-defense category.

With the budget balance shifting from deficit to surplus, the stock of publicly held federal debt declined last year for the first time since 1969 and fell further as a share of GDP. From the end of 1997 to the end of 1998, U.S. government debt fell 1½ percent, as the government reduced the outstanding stock of both bills and coupon securities. Despite the reduction in its debt, the federal government continued substantial gross borrowing to fund the retirement of maturing securities. However, with the need for funds trimmed substantially, the Treasury changed its auction schedules, discontinuing the three-year note auctions and moving to quarterly, rather than monthly, auctions of five-year notes. By reducing the number of coupon security issues, the Treasury is able to boost the size of each, thereby contributing to their liquidity. The decrease in the total volume of coupon securities is intended to boost the size of bill offerings over time, helping liquidity in that market and also allowing, as the Treasury prefers, for balanced issuance across the yield curve. The Treasury also announced in October that all future bill and coupon security auctions would employ the single-price format that had already been adopted for the

Federal government debt held by the public



two-year and five-year note auctions and for auctions of inflation-indexed securities. The Treasury judged that the single-price format had reduced servicing costs and resulted in broader market participation.

The Treasury continued to auction inflation-indexed securities in substantial volume last year in an effort to build up this part of the Treasury market. In April, the Treasury issued its first thirty-year indexed bond, and in September it announced a regular schedule of ten- and thirty-year indexed security auctions. The Treasury also began offering inflation-indexed savings bonds in September.

State and local governments recorded further increases in their budgetary surpluses in 1998, both in absolute terms and as a share of GDP. Revenue from the taxes on individuals' incomes has been growing very rapidly, keeping total receipts on a solid upward course. At the same time, the growth of transfer payments, which had threatened to overwhelm state and local budgets earlier in the decade, has slowed substantially in recent years. Growth of other types of spending has been trending up moderately, on balance. The 1998 rise in real expenditures for consumption and investment amounted to about 2¼ percent, according to the initial estimate; annual gains have been in the range of 2 percent to 2¾ percent in each of the past seven years.

Despite rising surpluses, state and local government debt increased an estimated 7 percent in 1998, a pickup of about 2 percentage points from growth in 1997. Somewhat more than half of the long-term borrowing by state and local governments last year reflected new borrowing to fund current and anticipated capital spending on utilities, transportation, education, and other capital projects. The combination of budget surpluses and relatively heavy borrowing likely reflected a number of factors. First, some of these governments may have spent the newly raised funds on capital projects while at the same time building up surpluses in "rainy day funds" for later use. Second, because state and local governments under some circumstances are allowed to hold funds raised in the markets for as long as five years before spending them, some of the money raised last year may not have been spent. Finally, there was a substantial volume of "advance refunding" last year. In an advance refunding, the borrower issues new bonds before existing higher-rate bonds can be called, in anticipation of calling the old bonds on the date that option becomes available. While this sort of refinancing temporarily boosts total debt, it allows the state or local government to lock in the lower rate even if municipal bond yields subsequently rise over the period before the call date. The high level of advance-

refunding activity last year was the result of lower borrowing costs. Although yields on tax-exempt municipal securities did not decline nearly as much as those on comparable Treasury securities, they nonetheless reached their lowest levels in many years. In addition, rating agencies upgraded about five times as many state and local government issues last year as they downgraded, trimming borrowing costs further for the upgraded entities.

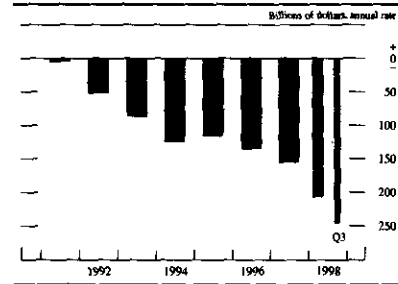
The External Sector

Trade and the Current Account

U.S. external balances deteriorated further in 1998, largely because of the disparity between the rapid growth of the U.S. economy and the sluggish growth of the economies of many of our trading partners. The nominal trade deficit for goods and services was \$169 billion, considerably larger than the \$110 billion deficit in 1997. For the first three quarters of the year, the current account deficit averaged \$220 billion at an annual rate, substantially larger than the 1997 deficit of \$155 billion. The large current account deficits of recent years have been funded with increased net foreign saving in the United States. As a result, U.S. gross domestic investment has exceeded the level that could have been financed by gross national saving alone, but at the cost of a rise in net U.S. external indebtedness.

The increase in the current account deficit last year was due to a decline in net exports of goods and services as well as a further weakening of net investment income from abroad. Until 1997, net investment income had helped to offset persistent trade deficits. But as the U.S. net external debt has risen in recent

U.S. current account



years, net investment income has become increasingly negative, moving from a \$14 billion surplus in 1996 to a \$5 billion deficit in 1997 and a deficit averaging \$15 billion at an annual rate over the first three quarters of 1998. Net income from portfolio investment became increasingly negative during that period as the net portfolio liability position of the United States grew larger. In addition, net income from direct investment slowed last year because slower foreign economic growth lowered U.S. earnings on investment abroad, the appreciation of the dollar reduced the value of U.S. earnings, and buoyant U.S. growth boosted foreigners' earnings on direct investment in the United States.

The rise in the trade deficit reflected an increase of about 10 percent in real imports of goods and services during 1998, according to the advance estimates from the Commerce Department. The expansion was fueled by robust growth of U.S. domestic demand and by continued declines in import prices, which stemmed in part from the strength of the dollar through mid-August and in part from the effects of recessions abroad. Of the major trade categories, increases in imports were sharpest for finished goods, especially capital equipment and automotive products. The quantity of imported oil rose appreciably as demand increased in response to the strength of U.S. economic activity and lower oil prices, while domestic production declined slightly. The price of imported oil fell about \$6.50 per barrel over the four quarters of the year. World oil prices fell in response to reduced demand associated with the economic slowdown in many foreign nations and with unusually warm weather in the Northern Hemisphere as well as to an increase in supply from Iraq.

Real exports of goods and services grew about 1 percent, on net, in 1998 after posting a 10 percent

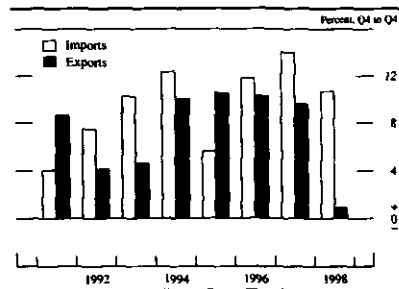
rise in 1997. Declines during the first three quarters (especially in machinery exports) were offset by a rebound in the fourth quarter, which was led by increases in exports of automotive products. The price competitiveness of U.S. products decreased, reflecting the appreciation of the dollar through mid-August. In addition, economic activity abroad weakened sharply; total average foreign growth (weighted by shares of U.S. exports) plunged from 4 percent in 1997 to an estimated ½ percent in 1998. Moderate expansion of exports to Europe, Canada, and Mexico was about offset by a decline in exports associated with deep recessions in Japan and the emerging Asian economies (particularly in the first half of the year) and in South America (in the second half of the year).

Capital Flows

The financial difficulties in a number of emerging market economies had several noticeable effects on U.S. international capital flows in 1998. Financial turmoil put strains on official reserves in many emerging market economies. Foreign official assets in the United States fell \$43 billion in the first three quarters of the year. This decline, which began in the fourth quarter of 1997, has been largest for developing countries, as many of them drew down their foreign exchange reserves in response to exchange rate pressures. OPEC nations' foreign official reserves also shrank in the first three quarters of 1998, as oil revenues dropped. Preliminary data indicate that foreign official assets in the United States, especially those of industrial countries, rebounded in the fourth quarter.

Private capital flows also were affected by the global turmoil. On a global basis, capital flows to emerging market economies fell substantially in the first half of 1998 and then dropped precipitously in late summer and early fall in the wake of the Russian crisis. During the first half of the year, U.S. residents acquired more than \$40 billion of foreign securities. Net purchases virtually stopped in July, and in the August–October period U.S. residents, on net, sold about \$40 billion worth of foreign securities. Preliminary data indicate a resumption of net U.S. purchases in the final two months of 1998. Foreign net purchases of U.S. securities, which were substantial in the first half of the year, fell off markedly in the July–October period, but preliminary data suggest a significant recovery in November and December. Thus, there is some evidence that the contraction in gross capital flows seen in late summer and early fall waned somewhat in the fourth quarter.

Change in real imports and exports of goods and services

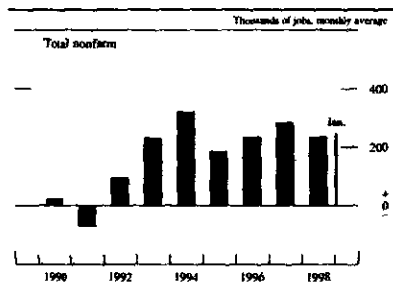


Balance of payments data available through the first three quarters of 1998 show that total private foreign purchases of U.S. securities amounted to \$194 billion, somewhat below the level in the first three quarters of 1997. Private foreign purchases of U.S. Treasury securities were only \$22 billion in the first three quarters, compared with \$147 billion for all of 1997. Private foreigners' purchases of other U.S. securities shifted away from equities and toward bonds, relative to 1997. U.S. purchases of foreign securities slowed markedly from their 1997 pace, totaling only \$27 billion for the first three quarters of 1998 compared with \$89 billion for all of the preceding year. The contraction in private portfolio capital flows, though large, was overshadowed by huge direct investment capital flows, which resulted in part from a number of very large cross-border mergers. The \$72 billion in foreign direct investment into the United States in the first three quarters, together with several large mergers that occurred in the fourth quarter, are certain to bring the total for last year well above the record-high \$93 billion posted in 1997. Merger activity also buoyed U.S. direct investment abroad: The pace of such investment in the first three quarters suggests that the annual total will be near the record-high \$122 billion recorded in 1997.

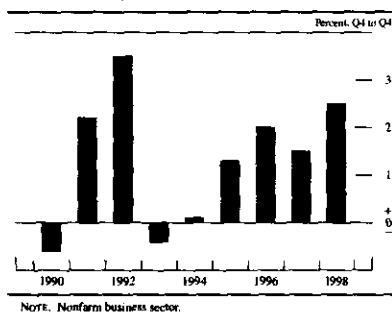
The Labor Market

The rapid growth of output in 1998 was associated with both increased hiring and continued healthy growth in labor productivity. The number of jobs on nonfarm payrolls rose about 2¼ percent from the end of 1997 to the end of 1998, a net increase of 2.8 mil-

Change in payroll employment



Change in output per hour



lion. Manufacturers reduced employment over the year, but in other parts of the economy the demand for labor continued to rise rapidly. The construction industry boosted employment about 6 percent over the year, and both the services industries and the finance, insurance, and real estate sector posted increases of more than 3½ percent. Stores selling building materials and home furnishings expanded employment rapidly, as did firms involved in computer services, communications, and managerial services. In the first month of 1999, nonfarm payrolls increased an additional 245,000.

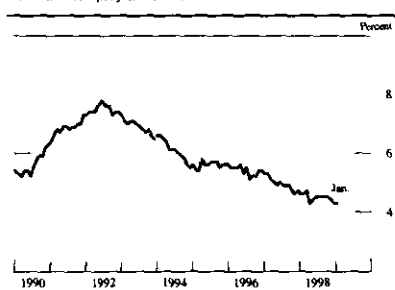
Output per hour in the nonfarm business sector rose 2½ percent in 1998 after having increased about 1¾ percent, on average, over the two previous years. By comparison, the average rate of rise during the 1980s and the first half of the 1990s was just over 1 percent per year. Because productivity often picks up to a pace above its long-run trend when economic growth accelerates, the results of the past three years might well be overstating the rate of efficiency gain that can be maintained in coming years. However, reasons for thinking that the trend might have picked up to some degree are becoming more compelling in view of the incoming data. The 1998 gain in output per hour was particularly impressive in this regard, in part because it came at a time when many businesses were diverting resources to correct the Y2K problem, a move that likely imposed a bit of drag on growth of output per hour. Higher rates of capital formation are raising the growth of capital per worker, and workers are likely becoming more skilled in employing the new technologies. Businesses not only are increasing their capital inputs but also are continuing to implement changes to their organizational structures and

operating procedures that might enhance efficiency and bolster profit margins.

The rising demand for labor continued to strain supply in 1998. The civilian labor force rose just a touch more than 1 percent from the fourth quarter of 1997 to the fourth quarter of 1998, and with the number of persons holding jobs rising somewhat faster than the labor force, the civilian unemployment rate fell still further. The unemployment rate was 4.3 percent at the end of 1998; the average for the full year—4.5 percent—was the lowest of any year in almost three decades. In January of this year, the size of the labor force rose rapidly, but so did employment, and the unemployment rate remained at 4.3 percent. The percentage of the working age population that is outside the labor force and is interested in obtaining work but not actively seeking it edged down further this past year and has been in the lowest range since the collection of these data began in 1970. With the supply of labor as tight as it is, businesses are reaching further into the pool of individuals who do not have a history of strong attachment to the labor force; persons who are attempting to move from welfare to work are among the beneficiaries.

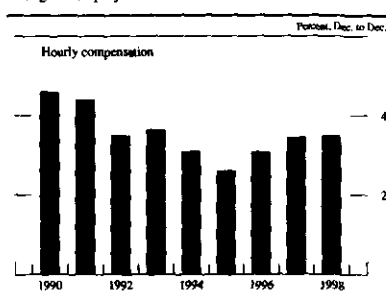
Workers have realized large increases in real wages and real hourly compensation over the past couple of years. The increases have come partly through faster gains in nominal pay than in the mid-1990s but also through reductions in the rate of price increase, which have been enhancing the real purchasing power of nominal earnings, perhaps to a greater degree than workers might have anticipated. According to the Labor Department's employment cost index, the

Civilian unemployment rate



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

Change in employment cost index



Note. Private industry, excluding farm and household workers.

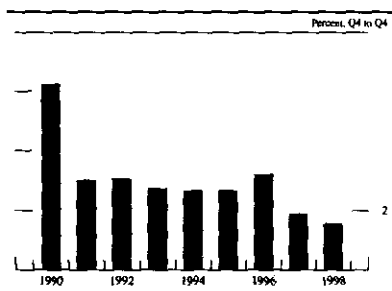
hourly compensation of workers in private nonfarm industries rose 3½ percent in nominal terms during 1998, a touch more than in 1997 and ½ percentage point more than in 1996. Taking the consumer price index as the measure of price change, this increase in nominal hourly compensation translated into a 2 percent increase in real hourly pay, one of the largest on record in a series that goes back to the start of the 1980s; the gain was bigger still if the chain-type price index for personal consumption expenditures is used as the measure of consumer prices. Moreover, the employment cost index does not capture some of the forms of compensation that employers have been using to attract and retain workers—for example, stock options and signing bonuses.

Because of the rapid growth in labor productivity, unit labor costs have been rising much less rapidly than hourly compensation in recent years. The increase in unit labor costs in the nonfarm business sector was only 1½ percent in 1998. Businesses were unable to raise prices sufficiently to recoup even this small increase in costs, however. Labor gained a greater share of the income generated from production, and the profit share, though still high, fell back a little from its 1997 peak.

Prices

The broader measures of aggregate price change showed inflation continuing to slow in 1998. The consumer price index moved up 1½ percent over the four quarters of the year after having increased nearly 2 percent in 1997. A steep decline in energy prices in the CPI more than offset a small acceleration in the

Change in consumer prices



NOTE: Consumer price index for all urban consumers.

prices of other goods and services. Only part of the deceleration in the total CPI was attributable to technical changes in data collection and aggregation.¹

Measures of aggregate price change from the national income and product accounts, which draw heavily on data from the CPI but also use data from other sources, showed a somewhat more pronounced deceleration of prices in 1998. The chain-type price index for personal consumption expenditures, the measure of consumer prices in the national accounts, rose ¾ percent after increasing 1½ percent in 1997. The chain-type price index for gross domestic purchases—the broadest measure of prices paid by U.S. households, businesses, and governments—increased only ½ percent in 1998 after moving up 1¼ percent over the previous year. The rise in the chain-type price index for gross domestic product of slightly less than 1 percent was down from an increase of 1¾ percent in 1997.

Developments in the external sector helped to bring about the favorable inflation outcome of 1998. Consumers benefited directly from lower prices of finished goods purchased from abroad. Lower prices for imports probably also held down the prices charged by domestic producers, not only because businesses were concerned about losing market share to foreign competitors but also because declines in

1. Since the end of 1994, the Bureau of Labor Statistics has taken a number of steps to make the consumer price index a more accurate price measure. The agency also introduced new weights into the CPI at the start of 1998. In total, these changes probably reduced the 1998 rise in the CPI by slightly less than ½ percentage point, relative to the increase that would have been reported using the methodologies and weights in existence at the end of 1994. Without the changes that took effect in 1998, the deceleration in the CPI last year probably would have been about half as large as was reported.

3. Alternative measures of price change

Price measure	Percent	
	1997	1998
<i>Fixed-weight</i>		
Consumer price index	1.9	1.5
Excluding food and energy	2.2	2.4
<i>Chain-type</i>		
Gross domestic product	1.7	.9
Gross domestic purchases	1.3	.5
Personal consumption expenditures	1.5	.8
Excluding food and energy	1.6	1.2

NOTE: Changes are based on quarterly averages and are measured to the fourth quarter of the year indicated from the fourth quarter of the previous year.

commodity prices in sluggish world markets helped reduce domestic production costs to some degree.

In manufacturing, one of the sectors most heavily affected by the softness in demand from abroad, the rate of plant capacity utilization fell noticeably over the year—even as the unemployment rate continued to decline. The divergence of these two key measures of resource use—the capacity utilization rate and the unemployment rate—is unusual: They typically have exhibited similar patterns of change over the course of the business cycle. Because the unemployment rate applies to the entire economy, it presumably should be a better indicator of the degree of pressure on resources in general. At present, however, slack in the goods-producing sector—a reflection of the sizable additions to capacity in this country and excess capacity abroad—seemingly has enforced a discipline of competitive price and cost control that has affected the economy more generally.

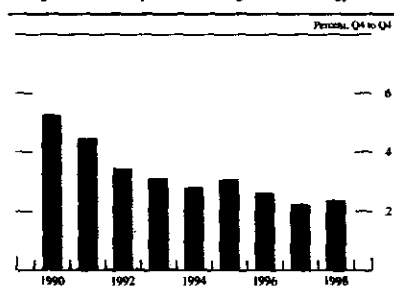
Prices this past year tended to be weakest in the sectors most closely linked to the external economy. The price of oil fell almost 40 percent from December 1997 to December 1998. This drop triggered steep declines in the prices of petroleum products purchased directly by households. The retail price of motor fuel fell about 15 percent over the four quarters of the year, and the price of home heating fuel also plunged. With the prices of natural gas and electricity also falling, the CPI for energy was down about 9 percent over the year after having slipped 1 percent in 1997.

Large declines in the prices of internationally traded commodities other than oil pulled down the prices of many domestically produced primary inputs. The producer price index for crude materials other than energy, which reflects the prices charged by domestic producers of these goods, fell more than 10 percent over the year. However, because these non-oil commodities account for a small share of total production costs, the effect of their decline on inflation was much less visible further down the

chain of production. Intermediate materials prices excluding food and energy fell about 1½ percent over the four quarters of the year, and the prices of finished goods excluding food and energy rose about 1½ percent. The latter index was boosted, in part, by an unusually large hike in tobacco prices that followed the settlement last fall of states' litigation against the tobacco companies. In the food sector as well, the effects of declining commodity prices became less visible further down the production chain; the PPI for finished foods was about unchanged, on net, over the year, and price increases at the retail level, though small, were somewhat larger than those of the preceding year.

Consumer prices excluding those of food and energy—the core CPI—continued to rise in 1998, but not very rapidly. As measured by the CPI, these prices increased nearly 2½ percent from the final quarter of 1997 to the final quarter of 1998, a shade more than in 1997. The chain-type price index for personal consumption expenditures excluding food and energy—the core PCE price index—decelerated a bit further, rising at roughly half the pace of the core CPI. Methodological differences between the two measures are numerous; some of the technical problems that have plagued the CPI are less pronounced in the PCE price measure, but the latter also depends partly on imputations of prices for which observations are not available. Both measures, however, seemed to suggest that the underlying trend of consumer price inflation remained low. A similar message came from surveys of consumers, which showed expectations of future price increases easing a bit further in 1998—although, as in other recent years, the expected increases remained somewhat higher than actual price increases.

Change in consumer prices excluding food and energy



NOTE: Consumer price index for all urban consumers.

U.S. Financial Markets

U.S. interest rates fluctuated in fairly narrow ranges over the first half of 1998, and most equity price indexes posted substantial gains. However, after the devaluation of the Russian ruble in August and subsequent difficulties in other emerging market economies, investors appeared to reassess the risks and uncertainties facing the U.S. economy and concluded that more cautious postures were in order. That sentiment was reinforced by the prospect of an unwinding of positions by some highly leveraged investors. The resulting shift toward safe, liquid investments led to a substantial widening of risk spreads on debt instruments and to volatile changes in the prices of many assets. Financial market volatility and many risk spreads returned to more normal levels later in the year and early this year, as lower interest rates and robust economic data seemed to reassure market participants that the economy would remain sound, even in the face of additional adverse shocks from abroad. However, lenders remained more cautious than they had been in the first part of last year, especially in the case of riskier credits.

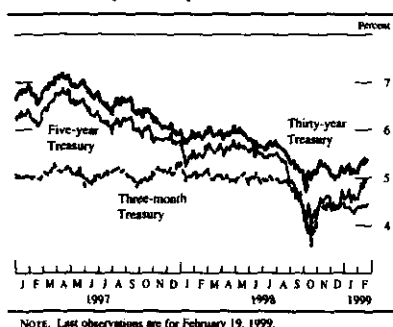
Interest Rates

Over the first half of 1998, short-term Treasury rates moved in a narrow range, anchored by unchanged monetary policy, while yields on intermediate- and long-term Treasury securities varied in response to the market's shifting assessment of the likely impact of foreign economic difficulties on the U.S. economy. In late 1997 and into 1998, spreading financial crises in Asia were associated with declines in U.S. interest rates, as investors anticipated that weakness abroad would constrain U.S. economic growth and cushion the impact of tight U.S. labor markets on inflation. However, interest rates moved back up later in the first quarter of 1998, as the U.S. economy continued to expand at a healthy pace, fueled by hefty gains in domestic demand. After a couple of months of small changes, Treasury rates fell in May and June, when concerns about foreign economies, particularly in Asia, once again led some observers to expect weaker growth in the United States and may also have boosted the demand for safe Treasury securities relative to other instruments.

Treasury rates changed little, on net, in the early summer, but they slipped lower in August, reflecting increased concern about the Japanese economy and financial problems in Russia. The default by Russia on some government debt obligations and the devalu-

Monetary Policy Report to the Congress □ February 1999

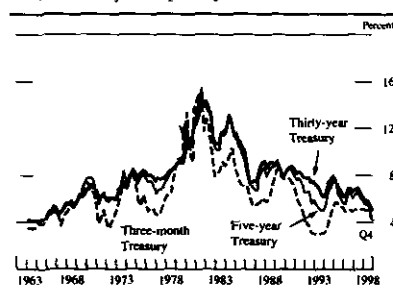
Selected Treasury rates, daily data



NOTE: Last observations are for February 19, 1999.

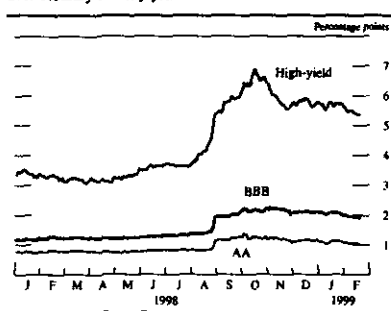
ation of the ruble in mid-August not only resulted in sizable losses for some investors but also undermined confidence in other emerging market economies. The currencies of many of these economies came under substantial pressure, and the market value of the international debt obligations of some countries declined sharply. U.S. investors shared in the resulting losses, and U.S. economic growth and the profits of U.S. companies were perceived to be vulnerable. In these circumstances, many investors, both here and abroad, appeared to reassess the riskiness of various counterparties and investments and to become less willing to bear risk. The resulting shift of demand toward safety and liquidity led to declines of 40 to 75 basis points in Treasury coupon yields between mid-August and mid-September. In contrast, yields on higher-quality private securities fell much less, and those on issues of lower-rated firms

Selected Treasury rates, quarterly data



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

Spreads of corporate bond yields over Treasury security yields



NOTE: The data are daily. The spread of high-yield bonds compares the yield on the Merrill Lynch Maser II index with that on a seven-year Treasury; the other two spreads compare yields on the appropriate Merrill Lynch indexes with that on a ten-year Treasury. Last observations are for February 19, 1999.

increased sharply. As a result, spreads of private rates over Treasury rates rose substantially, reaching levels not seen for many years, and issuance of corporate securities dropped sharply.

The desire of investors to limit risk-taking as markets became troubled in the late summer showed up clearly in mutual fund flows. High-yield bond funds, which had posted net inflows of more than \$1 billion each month from May to July, saw a \$3.4 billion outflow in August and inflows of less than \$400 million in September and October before rebounding sharply in November. By contrast, inflows to government bond funds jumped from less than \$1 billion in July to more than \$2 billion a month in August and September. Equity mutual funds posted net outflows totaling nearly \$12 billion in August, the first monthly outflow since 1990, and inflows over the rest of the year were well below those earlier in the year.

In part, the foreign difficulties were transmitted to U.S. markets by losses incurred by leveraged investors—including banks, brokerage houses, and hedge funds—as the prospects for distress sales of riskier assets by such investors weighed on market sentiment, depressing prices. Many of these entities did reduce the scale of their operations and trim their risk exposures, responding to pressures from more cautious counterparties. As a result, liquidity in many markets declined sharply, with bid-asked spreads widening and large transactions becoming more difficult to complete. Even in the market for Treasury securities, investors showed an increased preference for the liquidity offered by the most recent issues at each maturity, and the yields on these more actively

traded "on-the-run" securities fell noticeably relative to those available on "off-the-run" issues, the ones that had been outstanding longer.

Conditions in U.S. financial markets deteriorated further following revelations in mid-September of the magnitude of the positions and the extent of the losses of a major hedge fund, Long-Term Capital Management. LTCM indicated that it sought high rates of return primarily by identifying small discrepancies in the prices of different instruments relative to historical norms and then taking highly leveraged positions in those instruments in the expectation that market prices would revert to such norms over time. In pursuing its strategy, LTCM took very large positions, some of which were in relatively small and illiquid markets.

LTCM was quite successful between 1995 and 1997, but the shocks hitting world financial markets last August generated substantial losses for the firm. Losses mounted in September, and before new investors could be found, the firm encountered difficulties meeting liquidity demands arising from its collateral agreements with its creditors and counterparties. With world financial markets already suffering from heightened risk aversion and illiquidity, officials of the Federal Reserve Bank of New York judged that the precipitous unwinding of LTCM's portfolio that would follow the firm's default would significantly add to market problems, would distort market prices, and could impose large losses, not just on LTCM's creditors and counterparties, but also on other market participants not directly involved with LTCM.

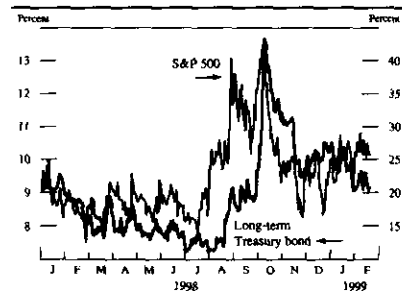
In an effort to avoid these difficulties, the Federal Reserve Bank of New York contacted the major creditors and counterparties of LTCM to see if an alternative to forcing LTCM into bankruptcy could be found. At the same time, Reserve Bank officials informed some of their colleagues at the Federal Reserve Board, the Treasury, and other financial regulators of their activities. Subsequent discussions among LTCM's creditors and counterparties led to an agreement by the private-sector parties to provide an additional \$3½ billion of capital to LTCM in return for a 90 percent equity stake in the firm.

Because of the potential for firms such as LTCM to have a large influence on U.S. financial markets, Treasury Secretary Robert Rubin asked the President's Working Group on Financial Markets to study the economic and regulatory implications of the operations of firms like LTCM and their relationships with their creditors. In addition, the extraordinary degree of leverage with which LTCM was able to operate has led the federal agencies responsible for the prudential oversight of the fund's creditors and

counterparties to undertake reviews of the practices those firms employed in managing their risks. These reviews have suggested significant weaknesses in the risk-management practices of many firms in their dealings with LTCM and—albeit to a lesser degree—in their dealings with other highly leveraged entities. Few counterparties seem to have had a complete understanding of LTCM's risk profile, and their credit decisions were heavily influenced by the firm's reputation and strong past performance. Moreover, LTCM's counterparties did not impose sufficiently tight limits on their exposures to LTCM, in part because they relied on collateral agreements requiring frequent marking to market to limit the risk of their exposures. While these agreements generally provided for collateral with a value sufficient to cover current credit exposures, they did not deal adequately with the potential for future increases in exposures from changes in market values. This shortcoming was especially important in dealings with a firm like LTCM, which had such large positions in illiquid markets that its liquidation would likely have moved prices sharply against its creditors. In such cases, creditors need to take further steps to limit their potential future exposures, which might include requiring additional collateral or simply scaling back their activity with such firms.

The private-sector agreement to recapitalize LTCM allowed its positions to be reduced in an orderly manner over time, rather than in an abrupt fire sale. Nonetheless, the actual and anticipated unwinding of LTCM's portfolio, as well as actual and anticipated sales by other similarly placed leveraged investors, likely contributed materially to the tremendous volatility of financial markets in early October. Market

Implied volatilities



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

expectations of asset price volatility going forward, as reflected in options prices, rose sharply, as bid-asked spreads and the premium for on-the-run securities widened. Long-term Treasury yields briefly dipped to their lowest levels in more than thirty years, in part because of large demand shifts resulting from concerns about the safety and liquidity of private and emerging market securities. Spreads of rates on corporate bonds over those on comparable Treasury securities rose considerably, and issuance of corporate bonds, especially by lower-rated firms, remained very low.

By mid-October, however, market conditions had stopped deteriorating, and they began to improve somewhat in the days and weeks following the cut in the federal funds rate on October 15, between Federal Open Market Committee meetings. Internationally coordinated efforts to help Brazil cope with its financial difficulties, culminating in the announcement of an IMF-led support package in mid-November, contributed to the easing of market strains. In the Treasury market, bid-asked spreads narrowed a bit and the premium for on-the-run issues declined. With the earlier flight to quality and liquidity unwinding, Treasury rates backed up considerably. Corporate bond spreads reversed a part of their earlier rise, and investment-grade bond issuance rebounded sharply. In the high-yield bond market, investors appeared to be more hesitant, especially for all but the best-known issuers, and the volume of junk bond issuance picked up less. In the commercial paper market, yields on higher-quality paper declined; yields on lower-quality paper remained elevated, however, and some lower-tier firms reportedly drew on their bank lines for funding, giving a further boost to bank business lending, which had begun to pick up during the summer.

Market conditions improved a bit further immediately after the Federal Reserve's November rate cut, but some measures of market stress rose again in late November and in December. In part, this deterioration reflected widespread warnings of lower-than-expected corporate profits, a weakening economic outlook for Europe, and renewed concerns about the situation in Brazil. In addition, with risk a greater-than-usual concern, some market participants were likely less willing to hold lower-rated securities over year-end, when they would have to be reported in annual financial statements. As a result, liquidity in some markets appeared to be curtailed, and price movements were exaggerated. These effects were particularly noticeable in the commercial paper market: The spread between rates on top-tier and lower-tier thirty-day paper jumped almost 40 basis points

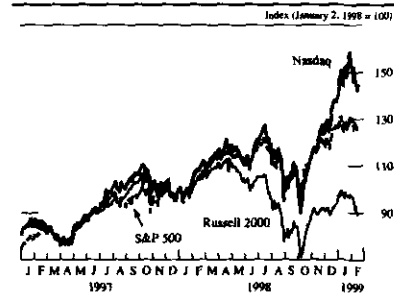
on December 2, when that maturity crossed year-end, and then reversed the rise late in the month.

By shortly after year-end, some measures of market stress had eased considerably from their levels in the fall, although markets remained somewhat illiquid relative to historical norms, and risk spreads on corporate bonds stayed quite elevated. Nonetheless, with Treasury yields very low, corporate bond rates were apparently perceived as advantageous, and—following a lull around year-end—many corporate borrowers brought new issues to market. The devaluation and subsequent floating of the Brazilian *real* in mid-January had a relatively small effect on U.S. financial markets. More recently, intermediate- and long-term Treasury rates have increased, as incoming data have continued to show the economy expanding briskly, and investors have come to believe that no further easing of Federal Reserve policy is likely.

Equity Prices

Most equity indexes rose strongly, on balance, in 1998, with the Nasdaq Composite Index up nearly 40 percent, the S&P 500 Composite Index rising more than 25 percent, and the Dow Jones Industrial Average and the NYSE Composite Index advancing more than 15 percent. Small capitalization stocks underperformed those of larger firms, with the Russell 2000 Index off 3 percent over the year. The variation in stock prices over the course of the year was extremely wide. Prices increased substantially over the first few months of 1998, as concerns eased that Asian economic problems could lead to a slowdown in the United States and to a consequent decline

Major stock price indexes



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

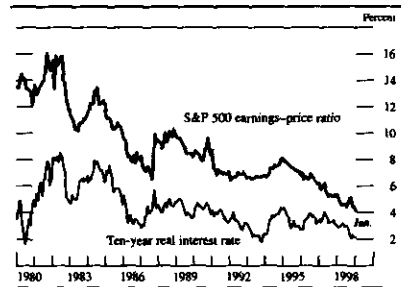
in profits. The major indexes declined, on balance, over the following couple of months before rising sharply, in some cases to new records, in late June and early July, on increasing confidence about the outlook for earnings. The main exception was the Russell 2000; small capitalization stocks fell more substantially in the spring, and their rise in July was relatively muted.

Rising concerns about the outlook for Japan and other Asian economies, as well as the deepening financial problems in Russia, caused stock prices to retrace their July gains by early August. After Russia devalued the ruble and defaulted on some debts in mid-August, prices fell further, reflecting the general turbulence in global financial markets. By the end of the month, most equity indexes had fallen back to roughly their levels at the start of the year. Commercial bank and investment bank stocks fell particularly sharply, as investors became concerned about the effect on these institutions' profits of emerging market difficulties and of substantial declines in the values of some assets. Equity prices rose for a time in September but then fell back by early October before rebounding as market dislocations eased and interest rates on many private obligations fell. By December, most major indexes were back near their July highs, although the Russell 2000 remained below its earlier peak.

In late December, and into the new year, stock prices continued to advance, with several indexes reaching new highs in January. The devaluation of the Brazilian real caused some firms' shares to drop as investors reevaluated prospective earnings from Latin American operations, but all the major stock indexes posted gains in January; the Nasdaq advanced nearly 15 percent over the month, driven by large advances in the stock prices of high-technology firms, especially those related to the Internet. More recently, however, stock prices fell back, as interest rates rose and some investors apparently concluded that prices had risen too far, given the outlook for earnings.

The increase in equity prices last year and early this year, coupled with the slowing of earnings growth, left many valuation measures beyond their historical ranges. After ticking higher in the late summer and early autumn, the ratio of consensus estimates of earnings over the coming twelve months to prices in the S&P 500 later fell back, dropping to a new low in January. In part, the decline in this measure over the past year likely reflected lower real long-term bond yields. For example, as measured by the difference between the ten-year nominal Treasury yield and inflation expectations reported in the

Equity valuation and long-term real interest rate



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

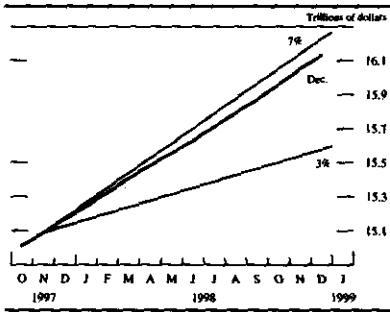
Philadelphia Federal Reserve Bank's survey of professional forecasters, real yields fell appreciably between late 1997 and early 1999. (The yield on ten-year inflation-indexed Treasury securities actually rose somewhat last year. However, the increase may have reflected the securities' lack of liquidity and the substantial rise in the premium investors were willing to pay for liquidity.) Since mid-1998, the real interest rate has declined somewhat more than the forward earnings yield on stocks, and the spread between the two consequently increased a bit, perhaps reflecting the greater sense of risk in financial markets. Nonetheless, the spread has remained quite small relative to historical norms: Investors may be anticipating rapid long-term earnings growth—consistent with the expectations of securities analysts—and they may still be satisfied with a lower risk premium for holding stocks than they have demanded historically.

Debt and the Monetary Aggregates

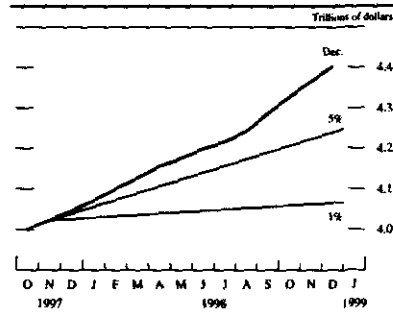
Debt and Depository Intermediation

From the fourth quarter of 1997 to the fourth quarter of 1998, the total debt of the U.S. household, government, and nonfinancial business sectors increased about 6¼ percent, in the top half of its 3 percent to 7 percent range and considerably faster than nominal GDP. Buoyed by strong spending on durable goods, housing, and business investment, as well as by merger and acquisition activity that substituted debt for equity, nonfederal debt expanded about 9 percent

Domestic nonfinancial debt: Annual range and actual level



M2: Annual range and actual level



last year, more than 2 percentage points faster than in 1997. By contrast, federal debt declined 1¼ percent, following a rise of ¾ percent the previous year.

Credit market instruments on the books of depository institutions rose at a somewhat slower pace than did the debt aggregate, posting a 5¼ percent rise in 1998, about half a percentage point less than in 1997. Growth in depository credit picked up in the second half of the year, as the turbulence in financial markets apparently led many firms to substitute bank loans for funds raised in the markets. Banks also added considerably to their holdings of securities in the third and fourth quarters, in part reflecting the attractive spreads available on non-Treasury debt instruments.

Financial firms also appeared to turn to banks for funding when the financial markets were volatile, and U.S. banks substantially expanded their lending to financial firms through repurchase agreements and loans to purchase and carry securities. As a result, growth of total bank credit, adjusted to remove the effects of mark-to-market accounting rules, accelerated to 10½ percent on a fourth-quarter to fourth-quarter basis, the largest annual increase in more than a decade.

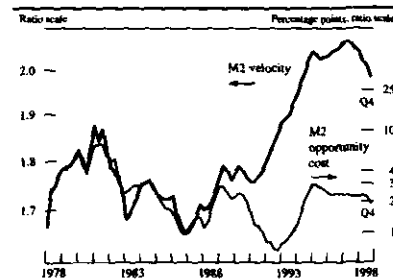
The Monetary Aggregates

The broad monetary aggregates expanded very rapidly last year. From the fourth quarter of 1997 to the fourth quarter of 1998, M2 increased 8½ percent, placing it well above the upper bound of its 1 percent to 5 percent range. However, as the FOMC noted last February, this range was intended as a benchmark for money growth under conditions of stable prices, real economic growth near trend, and historical velocity relationships. Part of the excess of M2 above its

range was the result of faster growth in nominal spending than would likely be consistent with sustained price stability. In addition, the velocity of M2 (defined as the ratio of nominal GDP to M2) fell 3 percent. Some of the decline resulted from the decrease in short-term market interest rates last year—as usual, rates on deposits fell more slowly than market rates, reducing the opportunity cost of holding M2 (defined as the difference between the rate on Treasury bills and the average return on M2 assets).

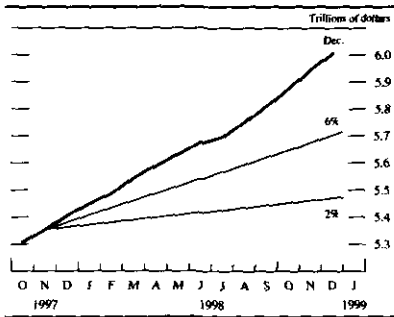
However, the bulk of the decline cannot be explained on the basis of the historical relationship between the velocity of M2 and this measure of its opportunity cost. Three factors not captured in that relationship likely contributed to the drop in velocity. First, households seem to have allocated an increased

M2 velocity and the opportunity cost of holding M2



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

M3: Annual range and actual level



share of savings flows to monetary assets rather than equities following several years of outsized gains in stock market wealth. Second, some evidence suggests that in the 1990s the demand for M2 assets has become more sensitive to longer-term interest rates and to the slope of the yield curve, and so the decline in long-term Treasury yields last year, and the consequent flattening of the yield curve, may have increased the relative attractiveness of M2 assets. Finally, a critical source of the especially rapid M2 expansion in the fourth quarter likely was an increased demand for safe, liquid assets as investors responded to the heightened volatility in financial markets. With some of these safe-haven flows likely

being reversed, growth in the broad monetary aggregates, while still brisk, has slowed appreciably early this year.

M3 expanded even faster than M2 in 1998, posting an 11 percent rise on a fourth-quarter to fourth-quarter basis. Last year's growth was the fastest since 1981 and left the aggregate well above the top end of its 2 percent to 6 percent growth range. As with M2, however, the FOMC established the M3 range as a benchmark for growth under conditions of stable prices, sustainable output growth, and the historical behavior of velocity. The rapid growth of M3 in part simply reflected the rise in M2. In addition, the non-M2 components of M3 increased 18½ percent over the year, following an even larger advance in 1997. The substantial rise in these components last year was partly the result of the funding of the robust growth in bank credit with managed liabilities, many of which are in M3. However, M3 growth was boosted to an even greater extent by flows into institution-only money funds, which have been expanding rapidly in recent years as they have increased their share of the corporate cash management business. Because investments in these funds substitute for business holdings of short-term assets that are not in M3, their rise has generated an increase in M3 growth. In addition, institution-only funds pay rates that tend to lag movements in market rates, and so their relative attractiveness was temporarily enhanced—and their growth rate boosted—by declines in short-term market interest rates late last year.

4. Growth of money and debt Percent

Period	M1	M2	M3	Domestic nonfinancial debt
<i>Annual¹</i>				
1988	4.2	5.6	6.4	9.1
19896	5.2	4.1	7.5
1990	4.2	4.2	1.9	6.7
1991	8.0	3.1	1.2	4.5
1992	14.3	1.8	.6	4.5
1993	10.6	3.3	1.0	4.9
1994	2.5	.6	1.7	4.9
1995	-1.6	3.9	6.1	5.4
1996	-4.5	4.6	6.8	5.3
1997	-1.2	5.8	8.8	5.0
1998	1.8	8.5	11.0	6.3
<i>Quarters (annual rate)²</i>				
1998:1	3.2	7.6	10.3	6.2
2	1.0	7.5	10.1	6.1
3	-2.0	6.9	8.6	6.0
4	5.0	11.0	13.2	6.4

NOTE: M1 consists of currency, travelers checks, demand deposits, and other checkable deposits. M2 consists of M1 plus savings deposits (including money market deposit accounts), small-denomination time deposits, and balances in retail money market funds. M3 consists of M2 plus large-denomination time deposits, balances in institutional money market funds, RP liabilities (overnight and term), and Eurodollars (overnight and term). Debt consists of the out-

standing credit market debt of the U.S. government, state and local governments, households and nonprofit organizations, nonfinancial businesses, and farms.

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

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

M1 increased 1¾ percent over the four quarters of 1998, its first annual increase since 1994. Currency expanded at an 8¼ percent pace, its largest rise since 1994. The increase apparently reflected continued strong foreign shipments, though at a slower pace than in 1997, and a sharp acceleration in domestic demand. Deposits in M1 declined further in 1998, reflecting the continued introduction of retail "sweep" programs. Growth of M1 deposits has been depressed for a number of years by these programs, which shift—or "sweep"—balances from household transactions accounts, which are subject to reserve requirements, into savings accounts, which are not. Because the funds are shifted back to transactions accounts when needed, depositors' access to their funds is not affected by these programs. However, banks benefit from the reduction in holdings of required reserves, which do not pay interest. Over 1998, sweep programs for demand deposit accounts became more popular, contributing to a 4¼ percent decline in such balances. By contrast, new sweep programs for other checkable deposits, which had driven double-digit declines in such deposits over the previous three years, were less important in 1998, and, with nominal spending strong and interest rates lower, other checkable deposits were about unchanged over the year.

As a result of the introduction of retail sweep accounts, the average level of required reserve balances (balances that must be held at Reserve Banks to meet reserve requirements) has trended lower over the past few years. The decline has been associated with an increase in banks' required clearing balances, which are balances that banks agree in advance to hold at their Federal Reserve Bank in order to facilitate the clearing of their payments. Unlike required reserve balances, banks earn credits on their required clearing balances that can be applied to the use of Federal Reserve priced services. Despite the increase in required clearing balances, required operating balances, which are the sum of required reserve balances and required clearing balances, have declined over the past few years and in late 1998 reached their lowest level in several decades.

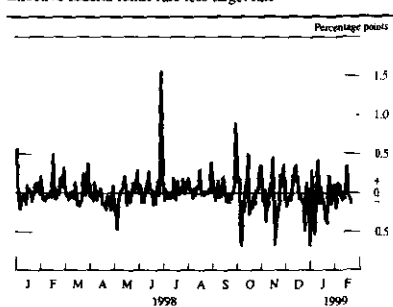
The decline in required operating balances has generated concerns about a possible increase in the volatility of the federal funds rate. Because a bank's required level of operating balances must be met only on average over a two-week maintenance period, banks are free to allocate their reserve holdings across the days of a maintenance period in order to minimize their reserve costs. However, banks must also manage their reserves in order to avoid overdrafts, which the Federal Reserve discourages through

administrative measures and financial penalties. Thus, as required operating balances decline toward the minimum level needed to clear banks' transactions, banks are less and less able to respond to fluctuations in the federal funds rate by lending funds when the rate is high and borrowing when the rate is low. As a result, when required operating balances are low, the federal funds rate is likely to rise further than it otherwise would when demands for reserves are unexpectedly strong or supplies weak; conversely, the federal funds rate is likely to fall more in the event of weaker-than-expected demand or stronger-than-expected supply. One way to ease this difficulty would be to pay interest on required reserve balances, which would reduce banks' incentives to expend resources on sweeps and other efforts to minimize these balances.

Despite the low level of required operating balances, the federal funds rate did not become noticeably more volatile over the spring and summer of 1998. In part, this result reflected more frequent overnight open market operations by the Federal Reserve to better match the daily demand for and supply of reserves. Also, banks likely improved the management of their accounts at the Federal Reserve Banks. Moreover, large banks apparently increased their willingness to borrow at the discount window. The Federal Reserve's decision to return to lagged reserve accounting at the end of July also likely contributed to reduced volatility in the federal funds market by enhancing somewhat the ability of both banks and the Federal Reserve to forecast reserve demand.

In the latter part of 1998 and into 1999, however, the federal funds rate was more volatile. The increase may have owed partly to further reductions in

Effective federal funds rate less target rate



NOTE: Data are daily. Last observation is for February 19, 1999.

required operating balances resulting from new sweep programs, but other factors were probably more important, at least for a time. Market participants were scrutinizing borrowing banks more closely, and in some cases lenders pared or more tightly administered their counterparty credit limits, or shifted more of their placements from term to overnight maturities. The heightened attention to credit quality also made banks less willing to borrow at the discount window, because they were concerned that other market participants might detect their borrowing and interpret it as a sign of financial weakness. As a result, many banks that were net takers of funds in short-term markets attempted to lock in their funding earlier in the morning. On net, these forces boosted the demand for reserves and put upward pressure on the federal funds rate early in the day. To buffer the effect of these changes on volatility in the federal funds market, the Federal Reserve increased the supply of reserves and, at times, responded to the level of the federal funds rate early in the day when deciding on the need for market operations. Because demand had shifted to earlier in the day, however, the federal funds rate often fell appreciably below its target level by the end of the day.

At its November meeting, the FOMC amended the Authorization for Domestic Open Market Operations to extend the permitted maturity of System repurchase agreements from fifteen to sixty days. Over the remainder of 1998, the Domestic Trading Desk made use of this new authority on three occasions, arranging System repurchase agreements with maturities of thirty to forty-five days to meet anticipated seasonal reserve demands over year-end. While the Desk had in the past purchased inflation-indexed securities when rolling over holdings of maturing nominal securities, it undertook its first outright open market purchase devoted solely to inflation-indexed Treasury securities in 1998, thereby accorded those securities the same status in open market operations as other Treasury securities.

International Developments

In 1998, developments in international financial markets continued to be dominated by the unfolding crises in emerging markets that had begun in Thailand in 1997. Financial market turbulence spread to other emerging markets around the globe, spilling over from Korea, Indonesia, Malaysia, Singapore, the Philippines, and Hong Kong in late 1997 and in the first part of 1998 to Russia in the summer, and to Latin America, particularly Brazil, shortly thereafter.

The Asian crisis contributed to a deepening recession in Japan last year, and as the year progressed, growth in several other major foreign industrial economies slowed as well.

At the beginning of 1998, many Asian currencies were declining or were under pressure. The Indonesian rupiah dropped sharply in January, amid widespread rioting and talk of a coup, and fell again in May and June, as the deepening recession prompted more social unrest and ultimately the ouster of President Suharto. Some of the rupiah's losses were reversed in the second half of the year, following the relatively orderly transition of power to President Habibie. Tighter Indonesian monetary policy, which pushed short-term interest rates as high as 70 percent by July, contributed to the rupiah's recovery. On balance, between December 1997 and December 1998, the rupiah depreciated more than 35 percent against the dollar.

In contrast, the Thai baht and Korean won, which had declined sharply in 1997, gained more than 20 percent against the dollar over the course of 1998. Policy reforms and stable political environments helped boost these currencies. Between these extremes, the currencies of the Philippines, Malaysia, Singapore, and Taiwan fluctuated in a narrower range and ended the period little changed against the dollar. In September, Malaysia imposed capital and exchange controls, fixing the ringgit's exchange rate against the dollar. The Hong Kong dollar came under pressure at times during the year, but its peg to the U.S. dollar remained intact, although at the cost of interest rates that were at times considerably elevated. Short-term interest rates in Asian economies other than Indonesia declined in 1998, and as some stability returned to Indonesian markets near the end of the year, short-term rates in that nation began to retreat from their highs.

As the year progressed, the financial storm moved from Asia to Russia. At first the Russian central bank was able to defend the ruble's peg to the dollar with interest rate increases and sporadic intervention. By midyear, however, the government's failure to reach a new assistance agreement with the International Monetary Fund, reported shortfalls in tax revenues, and the disruption of rail travel by striking coal miners protesting late wage payments brought to the fore the deep structural and political problems faced by Russia. In addition, declining oil prices were lowering government revenues and worsening the current account. As a result of these difficulties, the ruble came under renewed pressure, forcing Russian interest rates sharply higher, and Russian equity prices fell abruptly. A disbursement of \$4.8 billion

from the IMF in July was quickly spent to keep the currency near its level of 6.2 rubles per dollar, but the lack of progress on fiscal reform put the next IMF tranche in doubt.

On August 17, Russia announced a devaluation of the ruble and a moratorium on servicing official short-term debt. Subsequently, the ruble depreciated more than 70 percent against the dollar, the government imposed conditions on most of its foreign and domestic debt that implied substantial losses for creditors, and many Russian financial institutions became insolvent. The events in Russia precipitated a global increase in financial market turbulence, including a pullback of credit to highly leveraged investors and a widening of credit spreads in emerging market economies and in many industrial countries, which did not abate until after central banks in a number of industrial countries eased policy in the fall.

Latin American financial markets were only moderately disrupted by the Asian and Russian problems during the first half of 1998. The reaction to the Russian default, however, was swift and strong, and the prices of Latin American assets fell precipitously. The spreads between yields on Latin American Brady bonds and comparable U.S. Treasuries widened considerably (with increases ranging from 900 basis points in Argentina to 1500 basis points in Brazil) and peaked in early September before retracing part of the rise. Latin American equity prices plunged, ending the year down 25 percent or more. Several currencies came under pressure, despite sharp increases in short-term interest rates. The Mexican peso, which was also weakened by the effects of falling oil prices, depreciated 18 percent against the dollar over the year. The Colombian peso and the Ecuadorian sucre were devalued, but Argentina's currency board arrangement survived.

Brazil's central bank defended the *real's* crawling peg until mid-January 1999 but is estimated to have used more than half of the \$75 billion in foreign exchange reserves it had amassed as of last April. Anticipation of the IMF-led financial assistance package for Brazil helped spur a partial recovery in Latin American asset markets in late September and October. The details of the \$41.5 billion loan package were announced in November, but after the package was approved by the IMF in early December, Brazil's Congress rejected a part of the government's fiscal austerity plan, sparking renewed financial turmoil. In mid-December, \$9.3 billion of the loan package was disbursed, but as the year ended, the continuing pressure from investors seeking to take funds out of Brazil put the long-run viability of the crawling exchange rate peg in doubt. The *real* came under

pressure again in early January after the state of Minas Gerais threatened not to pay its debt to the federal government. On January 13, the *real* was devalued 8 percent, and two days later it was allowed to float. Since the end of 1998, the *real* has depreciated nearly 38 percent against the dollar, and capital flight from Brazil has likely persisted. The collapse of the *real* exerted some downward pressure on the currencies of other Latin American countries. Thus far, however, contagion has been more limited than it was after the Russian devaluation; unlike Russia, Brazil has continued to meet debt service obligations, and investors apparently had an opportunity to adjust positions in advance of the devaluation and have drawn a distinction between Brazil's problems and those of other economies.

The fallout from the financial crises that hit several Asian emerging market economies in late 1997 triggered a further decline in output in the region in early 1998. In the countries most heavily affected—Thailand, Korea, Malaysia, and Indonesia—output dropped at double-digit annual rates in the first half of the year, as credit disruptions, widespread failures in the financial and corporate sectors, and a resulting high degree of economic uncertainty depressed activity severely. Output in Hong Kong also dropped in early 1998, as interest rates rose sharply amid pressure on its currency peg. Later in the year, with financial conditions in most of the Asian crisis countries stabilizing somewhat, output started to bottom out.

The Asian crisis had a relatively moderate effect on China, although it may have encouraged authorities in that country to move ahead more quickly with various financial sector reforms. Financial tensions mounted early this year as foreign investors have reacted with concern to the failure of the Guangdong International Trust and Investment Corporation. Chinese growth remained fairly strong throughout 1998, despite a dramatic slowdown in the growth of exports.

Inflation in the Asian developing economies rose only moderately on average in 1998, as the inflationary effects of currency depreciations in the region were largely offset by the deflationary influence of very weak domestic activity. The current account balances of the Asian crisis countries swung into substantial surplus last year, reflecting a sharp drop in imports resulting from the falloff in domestic demand as well as improvement in the countries' competitive positions associated with the substantial depreciations of their currencies in late 1997 and early 1998.

In Russia, economic activity declined last year as interest rates were pushed up in an attempt to fend off

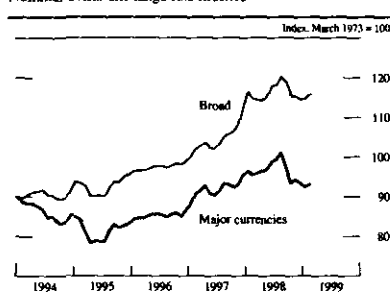
pressure on the ruble. After the August debt moratorium and ruble devaluation, output dropped sharply, ending the year down about 10 percent from its year-earlier level. The ruble collapse triggered a surge in inflation to a triple-digit annual rate during the latter part of the year.

In Latin America, the pace of economic activity slowed only moderately in the first half of 1998, as the spillover from the Asian financial turbulence was limited. The Russian financial crisis in August, in contrast, had a strong impact on real activity in Latin America, particularly Brazil and Argentina, where interest rates moved sharply higher in response to exchange rate pressures. Output in both countries is estimated to have declined in the second half of the year at annual rates of about 5 percent. Activity in Mexico and Venezuela was also depressed by lower oil export revenues. Inflation rates in Latin American countries were little changed in 1998 and ranged from 1 percent in Argentina and 3 percent in Brazil to 31 percent in Venezuela.

The dollar's value, measured on a trade-weighted basis against the currencies of a broad group of important U.S. trading partners, rose almost 7 percent during the first eight months of 1998, but it then fell, by December reaching a level about 2 percent above its year-earlier level. (When adjusted for changes in U.S. and foreign consumer price levels, the real value of the dollar in December 1998 was about 1 percent below its level in December 1997.) Before the Russian default, the dollar was supported by the robust pace of U.S. economic activity, which at times generated expectations that monetary policy would be tightened and which contrasted with weakening economic activity abroad, especially in Japan. Occasionally, however, the positive influence of the strong economy was countered by worries about growing U.S. external deficits. From August through October, in the aftermath of the Russian financial meltdown, concerns that increased difficulties in Latin America might affect the U.S. economy disproportionately, as well as expectations of lower U.S. interest rates, weighed on the value of the dollar, and it fell sharply. The broad index of the dollar's exchange value eased a bit further during the fourth quarter of the year. So far in 1999, the dollar has gained nearly 3 percent in terms of the broad index.

Against the currencies of the major foreign industrial countries, the dollar declined 2 percent in nominal terms over 1998, on balance, reversing some of its 10 percent appreciation the preceding year. Among these currencies, the dollar's value fluctuated most widely against the Japanese yen. The dollar rose against the yen during the first half of the year as a

Nominal dollar exchange rate indexes

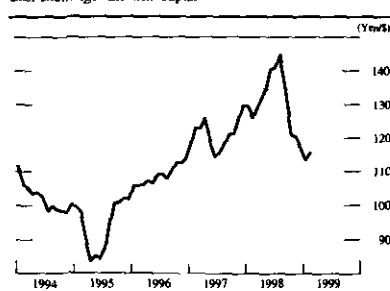


NOTE: The data are monthly. Indexes are trade-weighted averages of the exchange value of the dollar against major currencies and against the currencies of a broad group of important U.S. trading partners. Last observations are for the first three weeks of February 1999.

result of concerns about the effects of the Asian crisis on the already-weak Japanese economy and further signs of deepening recession and persistent banking system problems in that country. It reached a level of almost 147 yen per dollar in mid-June, prompting coordinated intervention by U.S. and Japanese authorities in foreign exchange markets that helped to contain further downward pressure on the yen. The dollar resumed its appreciation against the yen, albeit at a slower pace, in July and early August.

The turning point in the dollar-yen rate came after the Russian collapse, amid the global flight from risk that caused liquidity to dry up in the markets for many assets. During the first week of October, the dollar dropped nearly 14 percent against the yen in extremely illiquid trading conditions. Although fun-

U.S. exchange rate with Japan



NOTE: The data are monthly. Last observation is for the first three weeks of February 1999.

damental factors in Japan, such as progress on bank reform, fiscal stimulus, and the widening trade surplus may have helped boost the yen against the dollar, market commentary at the time focused on reports that some international investors were buying large amounts of yen. These large purchases reportedly were needed to unwind positions in which investors had used yen loans to finance a variety of speculative investments. On balance, the dollar depreciated almost 10 percent against the yen in 1998, reversing most of its net gain during 1997. It depreciated further against the yen in early 1999, hitting a two-year low on January 11, but it then rebounded somewhat amid reports of intervention purchases of dollars by the Bank of Japan. More recently, the Bank of Japan has eased monetary policy further, and the dollar has strengthened against the yen. So far this year, the dollar has gained about 7 percent against the yen.

Japanese economic activity contracted in 1998, as the country remained in its most protracted recession of the postwar era. Business and residential investment plunged, and private consumption stagnated, more than offsetting positive contributions from government spending and net exports. Core consumer prices declined slightly, while wholesale prices fell almost 4½ percent. In April, the Japanese government announced a large fiscal stimulus package. During the final two months of the year, the government announced another set of fiscal measures slated for implementation during 1999, which included permanent personal and corporate income tax cuts, various incentives for investment, and further increases in public expenditures.

Against the German mark, the dollar depreciated about 6 percent, on net, during 1998. Late in the year the dollar moved up against the mark, as evidence of a European growth slowdown raised expectations of easier monetary conditions in Europe. In the event, monetary policy was eased sooner than market participants had expected, with a coordinated European interest rate cut coming in early December.

A major event at the turn of the year was the birth of the euro, which marked the beginning of Stage Three of European Economic and Monetary Union (EMU). On December 31, the rates locking the euro with the eleven legacy currencies were determined; based on these rates, the value of the euro at the moment of its creation was \$1.16675. Trading in the euro opened on January 4, with the first trades reflecting a significant premium for the euro over its initial value. As the first week of trading progressed, however, the initial euphoria wore off, and so far this year the dollar has strengthened more than 5 percent against the euro, partly reflecting better-than-

U.S. dollar exchange rate against the restated German mark and the euro

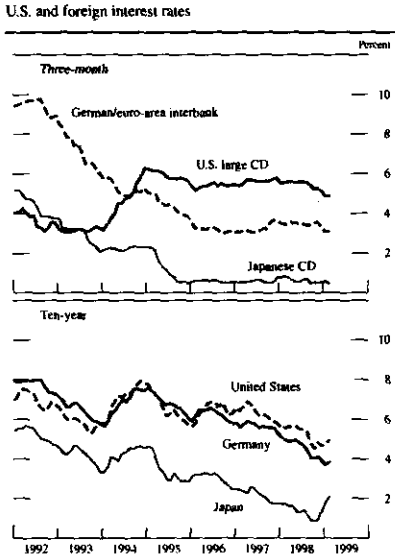


NOTE: The data are monthly. Restated German mark is the dollar/mark exchange rate restated by the official conversion factor between the mark and the euro, 1.93683, through December 1998. Euro exchange rate as of January 1999. Last observation is for the first three weeks of February 1999.

expected economic data in the United States, contrasted with weaker-than-expected data in the euro area.

In the eleven European countries whose currencies are now fixed against the euro, output growth slowed moderately over the course of 1998, as net exports weakened and business sentiment worsened. Unemployment rates came down slightly, but the average of these rates remained in the double-digit range. Consumer price inflation continued to slow, helped by lower oil prices. In December, the harmonized CPI for the eleven countries stood ¾ percent above its year-earlier level, meeting the European Central Bank's primary objective of inflation below 2 percent.

Between December 1997 and December 1998, the average value of the dollar changed little against the British pound but rose 8 percent against the Canadian dollar. Weakness in primary commodity prices, including oil, likely depressed the value of the Canadian dollar. The Bank of Canada raised official rates in January 1998 and again in August, in response to currency market pressures. The Bank of England raised official rates in June 1998 to counter inflation pressures. Tighter monetary conditions in both countries, as well as a decline in net exports associated with global difficulties, contributed to a slowing of output growth in the second half of the year. The deceleration was sharper in the United Kingdom than in Canada. U.K. inflation eased slightly to near its target rate, while Canadian inflation remained near the bottom of its target range. In response to weaker economic activity as well as to the expected effects of the global financial turmoil, both the Bank of Canada



NOTE: The data are monthly. Last observations are for the first three weeks of February 1999.

and the Bank of England have lowered official interest rates since September.

The general trend toward easier monetary conditions was reflected in declines in short-term interest rates in almost all the G-10 countries during the year. Interest rates in the euro area converged to relatively low German levels in anticipation of the launch of the third stage of EMU. Yields on ten-year government bonds in the major foreign industrial countries declined significantly over the course of the year, as economic activity slowed, inflation continued to moderate, and investors sought safer assets. Between

December 1997 and December 1998, ten-year interest rates fell 180 basis points in the United Kingdom and 150 basis points in Germany. The ten-year rate fell only 30 basis points in Japan, on balance, declining about 90 basis points over the first ten months of the year but backing up in November and December. Market participants attributed the increase to concerns that the demand for bonds would be insufficient to meet the surge in debt issuance associated with the latest fiscal stimulus package.

Share prices on European stock exchanges posted another round of strong advances last year, with price indexes rising 8 percent in the United Kingdom, about 15 percent in Germany, nearly 29 percent in France, and 41 percent in Italy. In contrast, Japanese equity prices fell more than 9 percent in 1998, and Canadian share prices decreased 4 percent. After a considerable run-up earlier in the year, share prices around the globe fell sharply in August and September, but they rebounded in subsequent months as the Federal Reserve and central banks in many other industrial countries eased monetary policy.

On November 17, the FOMC voted unanimously to reauthorize Federal Reserve participation in the North American Framework Agreement (NAFA), established in 1994, and in the associated bilateral reciprocal currency swap arrangements with the Bank of Canada and the Bank of Mexico. On December 7, the Secretary of the Treasury authorized renewal of the Treasury's participation in the NAFA and of the associated Exchange Stabilization Agreement with Mexico. Other bilateral swap arrangements with the Federal Reserve—those with the Bank for International Settlements, the Bank of Japan, and many European central banks—were allowed to lapse in light of their disuse over the past fifteen years and in the presence of other well-established arrangements for international monetary cooperation. The swap arrangement between the Treasury's Exchange Stabilization Fund and the German Bundesbank was also allowed to lapse.