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.)

HEARINGS

BEFORE THE

SUBCOMMITTEE ON DOMESTIC MONETARY POLICY

OF THE

COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS HOUSE OF REPRESENTATIVES

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THE CONDUCT OF MONETARY POLICY

Tuesday, February 21, 1989

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON DOMESTIC MONETARY POLICY,
COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS,
Washington, DC.

The subcommittee met at 10:06 a.m. in room 2222 of the Rayburn House Office Building, Hon. Stephen L. Neal [chairman of the subcommittee] presiding.

Present: Chairman Neal, Representative McCollum.

Chairman NEAL. I would like to call the subcommittee to order.

This morning we begin hearings on monetary policy and the economy 1989. We have invited a panel of economic forecasters to present their analysis of the state of the economy. Their testimony should help us evaluate the Federal Reserve's semiannual monetary policy report to Congress.

Tomorrow, Chairman Greenspan will appear before the subcommittee to discuss that report. Since it is due for release today, our witnesses today do not know what it will contain. Their testimony and our discussion will not, therefore, center on the report itself but on the state of the economy as they see it.

Next week, on March 1, we will conclude these hearings with a panel of economists and financial experts who will offer assessments and critiques on the Fed's report.

I am pleased to welcome Professor James F. Smith, from the University of North Carolina Business School; and Professor Clopper Almon, director of INFORUM, an economic forecasting center at the University of Maryland. The subcommittee had also invited Mr. Norman Robertson, chief economist of the Mellon Bank of Pittsburgh. Unfortunately, we just learned that Mr. Robertson, for health reasons, could not appear today. We do, however, have Mr. Robertson's prepared testimony, and it will be put into the record of these hearings. And, I may refer in our discussion to some of the points Mr. Robertson makes.

[The prepared statement of Mr. Robertson can be found in the appendix.]

Chairman NEAL. It is a pleasure to welcome our witnesses this morning.

We will put your entire statements in the record, and would ask you to summarize if you will. We will hear from Mr. Smith first and then go to Mr. Almon.

STATEMENT OF PROFESSOR JAMES F. SMITH, UNIVERSITY OF NORTH CAROLINA BUSINESS SCHOOL, CHAPEL HILL, NC

Mr. SMITH. Thank you, Mr. Chairman. It is a real pleasure to be here today. It has been several years since I have been invited to testify to a committee of Congress, and it is always a pleasure.

The current state of the U.S. economy is extraordinarily robust, probably too robust for our own good. We are running at a $5 trillion-plus annual rate, the first time that any economy in the history of the world has ever seen $5 trillion, even in current inflated dollars.

My forecast for 1989 is definitely on the high side among most forecasters. That is not an unusual position for me to be in. I frequently end up on the upper end, and usually wind up right, although there have been a couple of great clunkers, like 1975 and 1982, when I had positive signs on the economy. I have been forecasting the economy, the U.S. economy, for about 20 years, the world economy for about 7 years.

The United States is more interconnected with the world economy than at any other time since at least the 1920's, if not since the 1870's or 1880's. The major concern today, while it revolves around the Federal deficit, really should be more highly focused on inflation. Most forecasters see inflation heating up.

My basic scenario, as contained in the written testimony, is for an extremely strong 1989, 4 percent or so in real growth, with inflation rising significantly above 4 percent on the implicit GNP deflator and above 5 percent on the consumer price index.

This is probably above the trigger point at which the Federal Open Market Committee would tighten even more significantly than they currently have, causing an inverted yield curve which invariably, or at least since 1928, it hasn't missed. It did miss the 1927–1928 recession. It has signalled a recession 8 or 9 months down the road.

There is a typical 1950's-style recession beginning in April and May 1990, continuing through the end of the year with a strong rebound in 1991.

As you well know, macroeconomic policy, both monetary and fiscal, and exchange rate policy only affect the U.S. economy or, for that matter, that of any other country with a long lag. Therefore, most of what happens to the economy in 1989 is determined by policies taken in 1986, 1987, and 1988.

In empirical work I have done in the past, for example, the peak impact of a change in the value of the dollar—the trade-weighted dollar versus the Federal Reserve average versus 10 other industrial countries—has its peak impact on the economy six to seven quarters after it occurred, which means we are still collecting on the downturn in the dollar in 1986 and 1987, and the upturn in 1988 will slow us down in 1990.

Similarly, we are still responding to the sharp increase in the rate of growth of the money supply in 1986–1987, and the slowdown in 1988 will not take effect until 1990.

The advantage of being a policymaker as you are, as opposed to an analyst or a corporate economist where I spend most of my life,

is that you, or you and your colleagues at any rate, do have the power to make a difference.

In my testimony I point out that the only way that I can see to head off the riot of the bond market vigilantes, so-called, who will run up interest rates, precipitate the inverted yield curve, and cause the recession in 1990, is to take significant action to reduce the rate of increase in Government spending.

We don't have a deficit problem in the United States, we have a Government spending problem. The ratio of revenues to GNP is about 19.5 percent, which is about where it has been. Actually, it is an all-time high, but it's not much above where it has been over the previous 20 years.

Spending, unfortunately, is up around 22.5 percent. We need to figure out ways to slow down the rate of increase. We do need probably to go through and cancel a few programs.

As I point out in the testimony—and I see that both Professor Almon and I brought our Congressional Budget Office "222 trusty ways to reduce spending;" granted there are 59 ways in there to increase revenues—but I don't see a great outcry from the American people to increase their taxes.

Also, attached to my testimony is the latest forecast of the National Association of Business Economists, of which I am the vice president currently. There will be a new forecast from this group released next Monday morning at 10 a.m., here in Washington, I hope. It hasn't been compiled yet, so I cannot let you on an early insight. I don't have any either.

But you will note in looking at that that the vast majority, 87 percent of the respondents, expect a recession in 1990.

I would be happy to answer any questions that you have about anything in my written or oral testimony.

Thank you.

[The prepared statement of Mr. Smith can be found in the appendix.]

Chairman NEAL. Thank you, Mr. Smith. We will welcome the opportunity to ask questions in a few minutes.

Next we will hear from Mr. Almon.

STATEMENT OF PROFESSOR CLOPPER ALMON, DIRECTOR, INFORUM UNIVERSITY OF MARYLAND

Mr. ALMON. I would like to begin with a quotation from a very fine document which I have just read called "Review of the Course of Monetary Policy in 1988," prepared by the staff of this committee. I found this fascinating reading, quite informative, interesting, and judicious.

I found only one small sentence where I wanted to add a footnote, and that is on page 14, where it reads: "In practice, given the lags under which monetary policy affects prices and economic activity, there is no workable alternative"—and this is what I disagree with—"short of complete reliance on large and complex econometric models of the economy, but to examine a number of plausible indicators. . . "

I would just point out that there is a halfway measure, which is: partial reliance on small and simple econometric models. And I

want to talk with you this morning about some of the results which come from such a small and simple model.

This is a model called "QUEST," standing for "quarterly economic structural model. It is on a diskette which I have just given to your staff Members. We hope after the hearing to go over to your offices and make it run there. It is available without charge for use in any college or university in this country or any congressman's office. I think it has some interesting things to say.

When Mr. Greenspan was before this committee last July 28, he urged a very tight fiscal policy and, indeed, that the Congress should be running surpluses and not deficits. At that time, Mr. Barnard asked him a very natural question: How detrimental would a tax increase be? He did not answer that question. I would like to try to give an answer.

We will first look at some of the effects of different monetary policies and, then at combinations of monetary and fiscal policies. You you have a copy of the graphs in front of you Mr. Chairman.

In the first of these graphs, on page 3, figure 1, I have shown the historical quarterly rates of change of the M2 money supply from 1980 through the fourth quarter of 1988, and then, to the right, three alternative assumptions about the way it might grow in the future.

The highest one of these is at 6 percent, and I have labeled that as "easy." The lowest, "tight" is 3 percent, edging down to 2.5 percent. Finally "moderate", in the middle, starts off at 5 percent and then, after 1990, inches down to hit the 2.5 percent by 1994.

Now, these names are all relative to one another. One might say that 6 percent M2 growth is, by historical standards, not easy money.

The fiscal policy against which I will compare all of these is simply a freeze on spending in real terms and no increase, no changes, in tax laws. That does leave room for a slight increase in tax rates due to bracket creep with increasing income.

The impacts of these on unemployment are seen in figure 2. You will see here that for reasons rather different from those given by Mr. Smith, I come to the same conclusion: that a recession in 1990 and 1991 is rather likely.

I frankly think that there is not a great deal that the Congress can do about that recession, given my reasons for it. His reasons are responsive to fiscal policy. Mine would not be.

It is not, however, in my forecast a disastrous recession, rather a growth recession, a slowdown in the growth rate, a rising unemployment rate, but not an actual drop in GNP.

Now, you will notice that in figure 2 the tight-money policy does indeed produce somewhat higher unemployment. However, by 1995 there is no perceptible difference between the unemployment rate in the "tight" and the "moderate" policies, and the difference between the "easy" and the "tight" has been narrowing and is by then under 1 percent.

The differences in the impacts of these three different monetary policies on inflation, however, are very striking. On page 5, figure 3, the middle line is the result of the moderate policy. You will recall that the moderate policy called for a declining rate of growth of M2. That decline was necessary to prevent inflation from accel-

erating during the period to 1995. The moderate policy is defined to maintain inflation rates at about the present 4 percent.

The easy money, 6 percent growth of M2—is not, I would repeat, easy by historical standards; but in the current context I think it is very easy, for it leads to accelerating inflation, reaching 8 percent by the end of 1995.

The only one of the policies which meets the objective to which Members of committee and the chairman in particular have referred in the past, namely, actually bringing down the inflation rate, is the tight-money policy, which sets M2 growth at 3 percent now and gradually moves it down toward 2.5 percent.

The effects of these different policies on the Treasury bill rate are also striking, as you see in figure 4 on page 6. There you see that the tight-money policy is the one which produces the lowest Treasury bill rates. The easy-money policy turns rapidly into inflation, and the inflation turns into increases in the Treasury bill rates and into other rates as well.

Because of those increases in interest rates, the interest charges on the Federal debt rise rapidly under the easy policy. And you see in figure 5 on page 7 that easy money leads to a higher deficit in 1995 than does tight money by a margin of some $100 billion 1995 dollars.

It is interesting in that graph that you see a crossover. Initially the tight-money policy—because in the short run it does work like a Keynesian would think—restrains the economy and produces slightly larger deficits. But by 1993 that reverses, and the low-deficit policy is definitely the tight-money policy.

Against that background of analysis of monetary policies, I now want to look at the effects of fiscal policy. From the last graph, you will notice that none of the monetary policies succeed in bringing the deficit back to zero by 1995, even though they are accompanied by what might seem a fairly stringent fiscal policy, namely, no increase in real spending and no new tax breaks, no adjustments or changes, on capital gains or anything else. So, even the freeze and the no-tax-gains changes do not bring about anything approaching a balanced budget by 1995 in our calculations.

The second part of the paper, beginning with figure 6 on page 8, examines some possible changes in fiscal policy and their impacts on the same variables which we have already looked at. There is, first of all, a reduction in expenditures of $20 billion, 1982 dollars, over the course of 4 years and then holding it flat.

I used to run larger reductions. The problems with the nuclear production facilities has convinced me that enormous reductions are not very likely. So, this is a fairly modest reduction.

A greater increase in the austerity of fiscal policy is shown in figure 7, where I have looked at the effects of an increase in the personal tax rate. (Mr. Smith has said he is not in favor of increases in personal tax rates. I am in favor of them, especially if you can find some way to increase everybody else's taxes but not mine.) The tax increase in figure 7 is very simple. It is 1 percent of personal income. That puts the tax rates about halfway back to where they were before the tax cuts of the early year of the Reagan administration.

Now, the effects of these policies on GNP appear in figure 8. Initially they have the impacts which a Keynesian would believe that they have. That is to say, the low-expenditure, high-tax policy produces the lowest GNP; the high-expenditure, low-tax policy produces the highest levels of GNP. But those proved to be quite transient influences, and by the end of 1995 there is no perceptible difference in the GNP under these various assumptions.

In figure 9, you can see, however, where the costs of the high-tax alternatives come. Both of the high-tax alternatives reduce personal consumption expenditures and reduce it permanently below the levels of the constant tax.

That shows the cost of the high-tax alternatives. The cost of the low-expenditure alternatives was visible back in the earlier graph showing Government consumption. Both of these changes would reduce consumption. One would reduce personal consumption; the other would reduce public consumption.

Now, the impacts of these on the real AAA bond rate are shown in figure 10, where the most austere of the policies produces the lowest real interest rate by about 1.5 percentage points.

I have included the interest rate here because it is very significant in explaining the behavior of exchange rates where it has the result that the austere fiscal policy produces the lowest value of the dollar. That is simply because, with lower real interest rates, there is less incentive for foreigners to hold dollars. As they move out of dollars the dollar falls.

The net result is visible in figure 11 on page 12, where we are not looking precisely at an exchange rate but at the relative price of nonpetroleum imports, more precisely, at the price of nonpetroleum imports relative to the gross national product deflator. In this figure, you see that the austere policy produces what is, in effect, the lowest value of the dollar.

The consequence of that low value of the dollar is seen in figure 12, which shows imports reduced by the austere fiscal policy.

Figure 12A, which does not appear in the paper, shows exports. It looks almost like the opposite of imports. There is a slight increase in exports.

The impacts of all of these policies on investment are shown in figure 13, where the low real interest rates and the accelerating growth of the economy lead to a crossover in the ivestment picture. Initially, the austere fiscal policies produce the lowest levels of investment, as a Keynesian would anticipate. Then in 1991, there is a crossover and the economy grows more rapidly under the austere policies, and investment rises in 1995.

The result of all of this can be seen back in the GNP graph or in the unemployment graph on figure 14.

You will notice that all four of the policies produce approximately the same unemployment rates by 1995. The austere ones do indeed produce somewhat higher unemployment rates in the earlier years.

The impacts on the deficit, which, while not an immediate concern of this committee, are a major concern of this Congress, are shown in figure 15. The top line shows that with current fiscal policy and even the most favorable monetary policy for deficit reduction, there still remains a deficit of some $80 billion by the end

of 1995. Going for only the expenditure reduction brings that down to about $30 billion. Going for only the tax reduction but not the expenditure reduction brings it down to zero by 1995. Going for both brings it to zero in mid-1993 and, as Mr. Greenspan would like, down to minus 50 in by the end of 1995.

Now, notice that in 1995 the four alternatives give strikingly different budget balances. They give almost identical unemployment rates.

This analysis shows, I feel, that the choice that the Congress face, is not between inflation and unemployment, nor between deficits and unemployment, but between consumption now—now and passing on our Republic in sound financial shape. We inherited it in relatively good financial shape. Will we pass it on to posterity heavily indebted and largely to foreigners? I hope not.

My own personal urgings are that you move toward one of the rather austere policies. If it proves impossible to make even more significant cuts in expenditures than I have suggested here, then I feel that a tax rate increase is the only responsible policy, even if it has to increase my taxes.

Thank you.

[The prepared statement of Mr. Almon can be found in the appendix.]

Chairman NEAL. I thank both of you for your very excellent testimony.

Mr. Almon, you present three projections about the future relationship between M2 growth and inflation. Most economists now tell us that the historical relationships between money growth and inflation seem to have broken down—they are not so reliable that we can use them as a guide for conducting monetary policy. But you use them in your model in a very precise way, and make very precise predictions based on the behavior of M2. This must mean, I guess, that you really do find M2 to be a really good gauge of monetary policy. Why do you differ from so many other economists on this question?

Mr. ALMON. First of all, I said that this is a small and simple model and, therefore, I had to pick one measure of monetary policy. And if you can pick only one, you pick M2. I don't think there is a lot of difference about that. M2 is one of the two monetary aggregates which is targeted by the Federal Reserve. The other is M3. And they move fairly closely together, generally.

Now, it is true that I rely on M2 as a measure of monetary policy here. However, notice that there is a very variable relationship in this model between the rates of growth of M2 and the rates of growth of inflation. In order to maintain the rate of inflation at other than 4 percent, we had to continually reduce the rate of growth of M2. That says there is a varying relationship between the two.

Second, with the easy money, which is a constant rate of M2, there is an accelerating growth of inflation. There is indeed a variable relationship between the two, and that is really why I feel that you need to use a model which systematizes and summarizes the results of past experience to understand a dynamic system which is fairly complicated.

Maybe I should say a word about why I think it is worthwhile to build this sort of model. In the process of building a model, the model builder has to first ask himself how he thinks the parts of the economy work. What is the relationship between the money supply, and investment or interest rates? How did the money turn into inflation? The model has to be very specific about that: I know that many of my own ideas about these questions have gotten very much corrected by testing them out in developing equations.

The next step was to put these equations together and to see if the whole thing worked together. Initially, it didn't; it blew apart. It didn't work at all like the economy does. So, I had to go through a number of iterations back and forth between the whole model and the parts. I know that my own thinking was corrected and clarified in the process of doing this. And I believe that this process helps correct and clarify thinking.

Now, the fact that I have come out with something that satisfied me doesn't prove that I am right about it. There could be other models with other factors that would give other answers to these questions. But I do find a view which has been through this sort of examination, through the discipline of this sort of examination, preferable to one that hasn't been put through this sort of discipline. That is why I use the model as a check on my own thinking.

I too return to question, there is here very definitely a variable relationship between M2 growth and the rate of inflation.

Chairman NEAL. You seem to be saying that you find a relationship between M2 and inflation that has held up over time and is a predictor of future economic behavior.

Mr. ALMON. There is not, I believe, a simple relationship between the rate of growth of M2 and the rate of inflation. I don't think that you can say something as simple as, "real growth is 3 percent and therefore, 3 percent money growth will give us zero inflation immediately," or "6 percent money growth will give us 3 percent inflation." It doesn't happen immediately. There are considerable lags.

But I am saying that I think there is ultimately a relationship between M2 and the level of nominal GNP.

Chairman NEAL. Is it a consistent and predictable relationship that has held up over time and will hold up in the future?

Mr. ALMON. I think if you look at a plot showing M1 velocity and M2 velocity over the last 20 years, you see that while there has been considerable change in the M1 velocity—so much so that the Fed has given up targeting M1—the M2 velocity is much more constant, but certainly has variations in it.

My model has variations in the M2 velocity, but in the long term, it is stable.

Mr. SMITH. I would agree with Professor Almon. There is a beautiful chart in the back of a paper that Governor Heller gave in a speech in Switzerland a couple of weeks ago that has 25 or 30 years' history of M1 and M2 velocity, and you can see that M2 is incredibly more stable both in velocity and therefore in the predictability of its impacts.

The rate of change in M2 on the rate of change in the economy with normally—probably with a 2-year lag on real output and 3 years on inflation.

I would certainly strongly support your efforts and others to get the Fed to keep ratcheting down the upper end of its target for M2 and M3 by ½ a percentage point a year until we get down to a low stable range of 3 percent or less, as shows up in Professor Almon's model.

Chairman NEAL. We are better off urging the Fed to move toward zero inflation and leaving it up to them how they get there, the mark of success being the inflation rate, not any of the monetary aggregates or any measure of velocity. We can say to the Federal Reserve look, you guys, you go out and reduce inflation to zero. That is your job. We can tell if you are doing it or not.

What is wrong with saying zero is the proper goal for inflation over the next few years? I would like to say over the next 5 years that we ratchet it down to zero. Even if it took 7 years, that would be fine with me.

What would be the problem with that? What is wrong with the approach of saying to the Fed something like: we are not interested in your reporting to us on M's and velocities that no one seems to understand, it just muddies the picture. How about getting inflation down?

Mr. SMITH. My initial response is to jump up, clap loudly, and scream hallelujah. The Fed would not like that because you are piercing the veil of something they control directly, which is the nonborrowed reserves for the short run, the Fed funds rate, and making them responsible for what they ultimately should be responsible for, which is inflation, and not all of the other goals that they periodically shoot for.

Again, if you look in the back of Governor Heller's speech, there is a summary of all of the FOMC minutes for the last 3 years and how different targets have moved from number one, you have seen that Mr. Kramer, the move from number one to number five and back up.

I certainly share your comment that inflation is number one about half the time. It should be number one all the time. If this were Germany and you had the president of Bundesbank both the members of the Bundestag and the people who run the Bundesbank know that that is the target of monetary policy is to make inflation zero.

I also would applaud your comment and the recommendation that you have that you shouldn't try to move to zero in the next quarter or indeed in the next year. The trend should be downward. We have grown accustomed to the idea in the last few years that 4 percent is an "acceptable" level of inflation. Now we are moving up to 5 or perhaps even toward 6 percent.

I think it bears remembering that on August 15, 1971, President Nixon gave us wage and price controls because of a forecast that inflation might go above 4 percent, which we certainly couldn't tolerate in those days. And from 1952 to 1966 we only went above 2 percent on the consumer price index once or twice, and usually it was 1 percent or less.

As you point out in your report, 1 percent of the CPI is as close to zero—I mean it doesn't wind up measuring inflation exactly. So I would certainly support that as a policy goal.

Chairman NEAL. What would be the downside of that? Would you see that resulting in a recession somewhere along the line?

Mr. SMITH. As I point out in my written testimony, not even the U.S. Congress can repeal the business cycle. We are going to have a recession at some point. Perhaps we can learn to postpone them for a good long time, as the Japanese have. They went through the 1973–1975 wringer just like we did, just like the Western European countries did. But they did not let the second oil shock, because of monetary policy, move into the base rate of inflation and therefore did not suffer the 1980 and even more severe 1981–1982 recession.

Sure, they had slowdowns in rate of growth with their major customers. When your major customers are in recession, that hurts you, but that doesn't mean that you will have a recession any sooner. It doesn't mean that a recession would be any deeper nor last any longer.

Now, that would be the case—that is why following hard on the heels of the 1980 recession, which was the sharpest and shortest that we have had in the postwar period, we had another one within a year because we had not wrung inflation out of the system and because the Fed kept up pumping up the money supply.

If you give them goals to get inflation down to zero over the next 5 years, it seems to me it is certainly doable and tell them not to panic when we do go, as inevitably we will, through the next phase of the business cycle.

Mr. ALMON. I share those views. Particularly, I feel there is not a great deal that the Fed or the Congress can do about the business cycle.

The lags in monetary policy and in fiscal policy are quite lengthy. Monetary policy can react quickly, but then the effect of the reaction can be very delayed. Fiscal policy has a very quick effect, but there is a considerable recognition time and time to pass all of the laws.

I come out with essentially the feeling that fighting business cycles with monetary and fiscal policy is really not very possible and that we ought to aim at long-term goals, such as you have indicated.

I would have, however, two slight qualifications about concentrating entirely upon inflation. Although I would agree that that is what the Fed is ultimately responsible for, it is also true that, because of the long lags in monetary policy and its effects, you could very well bring Mr. Greenspan before you tomorrow and, if we were running a high inflation rate, rake him over the coals for what his predecessor had done 3 years ago. With what is happening to M2, however, you can be quite certain that what happened to M2 in the last 3 months is his doing.

So the problem that I have with saying "You tend to inflation, and we will be tough on you if it gets out of hand" is that you may be tough on some fellow who had nothing to do with the policies which are causing the inflation.

Chairman NEAL. I understand that perfectly. In fact, in our report we discussed that. It is fortunate that the Fed Chairman and Governors are appointed for extended periods of time. I think it would be unreasonable to try to tie things down like that, to say

we want this this month, this within the next 6 months, or something like that.

I do not believe that inflation ought to be the only question. It seems the Fed did the proper thing in October 1987, when the stock market took a big dive. They immediately pumped in whatever reserves were necessary to stabilize things. But once things stabilized they returned immediately to their goal of fighting inflation. That seemed to me to be quite proper.

If we had an oil shock or something similar, such steps would also be proper for them. Let's assume we had this goal in place and working—that we were moving toward zero inflation over the next 5-year period—and a real recession developed. It would seem to me, as I understand how monetary policy works, that the Fed could pump in reserves quickly and probably might stop that. People would see what the Fed has done and react in a positive way. Then, once you got the desired reaction, which I would think would be very rapidly over a month to something like that, the Fed could return to its anti-inflation posture and get back on track. Does that make sense? Is that realistic?

Mr. SMITH. Well, I think that would work. I would strongly urge that the primary goal, number one, would be fight inflation and maintain stable growth. The real fight in macroeconomics today is between a dwindling band of folks—but all of us were educated that way, that the economy is unstable and needs a lot of tinkering to try to set it right—and a growing band who think that the market economies are not unstable and indeed to right themselves.

The latter group includes supply-siders, monetarists, and rational expectationists, the Keynesians, the neo-Keynesians, and "we need to plug the button" group, and if the goal were to maintain a stable growth rate and reduce it over time, don't have rapid shifts. That is the problem. When you get the rapid shifts, the economy winds up, being jacked around, and if you try counter-cyclical monetary policy or fiscal policy, for that matter, invariably what happens is that the kick comes after you don't need it and you make the slowing down, the rise in inflation, or other undesirable things worse.

One thing the Fed could certainly do today because the Federal Reserve does not have the—without question—reputation of standing firm against knocking out inflation that the Bundesbank or the Swiss National Bank or the Bank of Japan, for that matter, have would be to strongly urge that they accept as rapidly as possible, which would mean by this Friday, petitions, which I am sure come in every week from at least some, if not most of the regional reserve banks and raise the discount rate at least 8 percent, where it would be in line. Historically, that would be—it has never moved 150 basis points—100 basis points. One hundred is historically the most, since the only real use of the discount rate is as a signaling device, to make anyone who had the slightest doubt completely clear that the current policy of the Federal Reserve supported by statements at least, if not passage of a joint resolution or actual legislation of the U.S. Congress, is get inflation run out of the U.S. economy, but do it over a period of time, as you recommend.

Mr. ALMON. I think that is substantially right, particularly the point about the kick comes later when you don't need it.

I don't think the Fed has a particularly striking record of forecasting recessions and acting well ahead to have the kick coming at the right time. They seem to be like the rest of us, and they start fighting the recession when we are in the middle of it, which produces the kick when we have come out of it, and then it is apt to be inflation.

So I am, as Jim has said, a convert to the growing band, having been educated like he was in the days when different views were held.

Chairman NEAL. It seems to me that if the goal were clear, and if it was also clear that the Federal Reserve, maybe with a little help from the Congress—and we would support this—that there would be an almost immediate beneficial impact on long interest rates just as soon as it sank in that this was serious.

Mr. SMITH. Even more on short rates.

The problem with a recession is not the fact that we have a recession in 1990 or in 1991. The problem is that in every recession for the last 6 years we get there by having an inverted yield curve sharply rising interest rates.

As I point out in the testimony, the trouble with that today is you create tremendous problems for Third World debtor nations as the borrowing costs rise far above anything they can service. You—as you pointed out earlier, it creates tremendous problems for the U.S. Government, which is primarily financed through Treasury bills. You create enormous problems with whatever the latest round of leveraged buyouts, restructurings, and so forth, whomever has got the high debt outstanding, and you create enormous problems for the poor, old, or young as the case may be, but the downtrodden consumer who gets banged about the head when they try to go borrow to buy a house or a car, or what have you.

If you can postpone this by making it clear that inflation is not going to be tolerated, then why not?

It seems like a simple tradeoff to me.

Mr. ALMON. Mr. Chairman, if I may, I would like to add a point here which I did not get to discuss in either the oral or the written testimony.

We have also done some studies on the impacts of monetary policy on individual industries, and we find, contrary to what I was taught, that monetary policy has very different impacts on different industries.

I was taught that fiscal policy involves expenditure on particular goods; whereas, monetary policy just stimulates the economy, seeping up out of the ground everywhere. We find that is the reverse of the case. Fiscal policy is indeed concentrated by industry, but so is monetary policy.

The principal effect of the monetary policy is, as we all recognize, inflation. The next question is: What does inflation do to exchange rates? Now, if exchange rates automatically adjust to inflation, then there is not much impact on foreign trade. However, there isn't a lot of evidence that exchange rates do automatically and immediately adjust to changes in inflation rates, and insofar as they don't, there can be, as a result of changes in inflation, very large differential effects on different industries. An industry such as textiles, which competes with imports, will be relatively adverse-

ly affected. Industries such as beer production, which does not—is not going to be strongly affected, and industry such as lumber, which I believe exists in your State and Mr. Smith's State, is going to be adversely affected by tight monetary policy which impacts the construction industry strongly.

So I feel that from this point of view, also—from the very differential impacts on industries of inflation—that it is very important that inflation should be low and stable and not fluctuate from the results of trying to fight temporary fires with a long-term instrument.

Chairman NEAL. I am surprised that you say that inflation is not reflected in exchange rates in a predictable fashion. Why would that be? It seems to me that would be one of the earliest and most clear and predictable outcomes of the change in policy concerning inflation.

Mr. ALMON. Well, the exchange rates are affected by many other things other than inflation. They are affected in the first place by real interest rates, and these may be affected in the short term by easy or tight money. Exchange rates are also affected by the trade balance. But it takes quite a while for the trade balance to respond to what has happened with the inflation. If the inflation has made foreign textiles cheap relative to American's, it takes a while for American manufacturers to set up importations from abroad, and likewise when—if it goes the other way, it also takes a while for the American manufacturers to get back on their feet and drive the imports out.

It is because there are very long lags in adjustments to exchange rates that the trade balance is slow to adjust, but the trade balance is one of the things influencing the exchange rates. So exchange rates, although they eventually and gradually respond, do not immediately respond to changes in inflation rates. That is what can produce differential pressures on different industries.

Chairman NEAL. One of the things that we often hear is that if we would reduce our budget deficit—run a tighter fiscal policy—and the Fed should cooperate by easing up on monetary policy, that is something that should happen. Do you believe that if we would tighten up on fiscal policy then the Fed could ease up on monetary policy and sort of help out.

This makes no sense to me. It would seem to me that we would be much better off by urging the Fed to continue its anti-inflation fight no matter what happens on the fiscal side. It would make the job easier if we ran a more balanced and sensible fiscal policy. But there is no argument that I can see for the Fed easing if we do something that is sensible.

Mr. SMITH. I would agree with you totally. It makes it a lot easier for the Fed to maintain a stable policy and work to stamp out inflation if the markets, as characterized by the "bond market vigilantes," are not worried that the Government keeps borrowing more and more every year, not that it is a larger deficit but that the total amount of Government debt keeps rising every year, that sooner or later the pressures on the Fed to monetize this debt and therefore create inflation because they have no choice eventually if the debt is to have any possibility whatsoever of being repaid.

But I agree with you totally that in the current environment what is needed is the clear commitment of the Fed to eliminating inflation and the clear commitment of Congress to reducing the rate of increase in Government spending.

I would add a caveat there—not really a caveat but a comment that—as contained in my written testimony and an issue that I would think is high on the agenda of this committee—to avoid in the solution to the savings and loan problem the ephemeral carrot of, oh, look, we can do this off budget and off Gramm-Rudman-Hollings without having a direct Treasury guarantee which will result in borrowing money at 25 or 50 basis points more and it will cost the taxpayers $30 to $40 billion more over the next 10 or 15 years than proceeding with an on-budget opportunity.

I cannot speak for any taxpayer other than myself, but I certainly don't see any wonderful advantage to be gained by fuzzing up the rules that you stayed within—that the Congress stayed within Gramm-Rudman-Hollings while going off budget and costing the taxpayers a great deal of money in higher interest.

Mr. ALMON. I certainly agree with that. We may as well call a spade a spade.

Chairman NEAL. What about this idea that seems to be popular, that if we run a tighter fiscal policy then somehow the Fed should ease up? Does that make any sense to you?

Mr. ALMON. No. I think if we run a tighter fiscal policy it reduces inflation somewhat, not a great deal. But I think the goal of the Fed is the same, which is low inflation. I think maybe I would set a target of, say, 1 percent rather than zero.

Chairman NEAL. Why?

Mr. ALMON. Well, to go to zero, since there will be changes in relative prices, means that some prices have got to be going down. It is possible, also, that it means that some wages may be going down, and it may be more costly, considerably more costly, in terms of unemployment to go from 1 percent inflation to zero percent than it is to go from 3 to 2 or even from 2 to 1.

If we can get it down to 1 percent, then we should study the situation with benefit of the data which we would then have in that range and ask: Do we want to go lower.

I would take 1 percent as an interim target.

Chairman NEAL. Do either one of you know offhand what percent of the debt we refinance every year?

Mr. SMITH. Every year?

Chairman NEAL. Yes.

Mr. SMITH. It is about 95 percent. The bulk of the financing of the Federal Government is in Treasury bills and short-term notes, very little in long-term financing, one reason being because until last year for 20 years or so it was—there was a very small limit on long-term debt that could be issued with a coupon above 4 percent.

Because we haven't had inflation in the zero to 1 percent range, I agree with Clopper, we should declare victory if we get to 1, but I think zero should be the announced goal in the effort to get there.

As I said earlier, 1 percent on the CPI is equivalent to zero inflation, anyway, if that is your measuring device. So that seems like the way that we should go.

Mr. ALMON. To revert to the previous question for a moment, I have managed to locate a number in the full calculation back of the graphs, which shows that, as inflation rate that I find under the tightest of the fiscal policies, and we went through the range of fiscal policies from one with a large budget deficit to one with a $50 billion surplus, the 1995 inflation rate changed by only .4 of a point, a drop from 1.9 percent per year with easy fiscal policy to 1.5 percent with the tightest.

In other words, fiscal policy did have some effect on inflation, but it is primarily monetary policy that rules inflation.

So I think the Fed can't blame the deficit very much for inflation.

Chairman NEAL. I don't think they do. It is certainly my impression that Mr. Greenspan and the other Governors understand inflation to be a monetary phenomenon. People in the administration like to fudge it a lot because they like to claim some credit for bringing down the rate of inflation when in fact they have had little or nothing to do with it. In fact, they have made it more difficult.

Mr. ALMON. It came about because of Paul Volcker, and we know who appointed Paul Volcker.

Chairman NEAL. Exactly, but it is important to me beyond the political implications. It is important that we understand what the policymakers did. My worry is that 20 years from now we find ourselves in another inflationary mode and we say, well, we had great success back in the 1980's. They had a high inflation rate and they dealt with it. What did they do?

Well, they tripled the national debt; they vastly increased the trade deficit, and so on. Thus I think it is important that we understand how this thing works and do sensible things.

Mr. SMITH. According to the CBO, it looks like it is more. It says in 4 years it would be 100—virtually 100 percent over done. So somewhere around ⅓ of it is done every year. They have been pushing into the longer term, 2 to 5 years.

Chairman NEAL. But if we could lower the inflation rate, that would lead to lower long-term rates which would have a positive effect on deficit. That would be dramatically significant.

Mr. SMITH. Sure. Interest on the debt is bigger than the deficit today.

Chairman NEAL. Right, and if you could cut that by—I don't know what is realistic there.

Mr. SMITH. Ten percent would be nice.

Chairman NEAL. That could save tens of billions of dollars over the next few years just by running a more sensible fiscal and monetary policy, primarily monetary policy?

Mr. ALMON. I am glad to hear that my figure 5 has made an impression on the chairman. That is exactly what it shows.

Chairman NEAL. All of your testimony made a very favorable impression on me, I must tell you. I certainly appreciate all of it. What was figure 5?

Mr. ALMON. That showed the Federal deficit under the different monetary policies.

Chairman NEAL. I see, and the cost of it?

Mr. ALMON. It shows that it comes down from about 175 under easy money to about 80 under tight money.

Chairman NEAL. With no other change?

Mr. ALMON. With no other change in fiscal policy. That is just because of the interest on the debt and inflation.

Chairman NEAL. Right. It has seemed to me that we probably know enough about our economy to know how to almost reduce it to a set of formulas for what makes sense. As I see the formula, it would be over a period of time getting to zero inflation, and on the fiscal side that we essentially run balanced budgets and that we spend no more than 20 percent of the GNP.

Now, it just seems to me in macroeconomic terms if those three things were in fact our country's macroeconomic policy, that we would have the healthiest possible economy. I don't see that 20 percent as arbitrary. As I look back over time, from the end of the Second World War for about 20 years we had a very low inflation rate and a very prosperous economy. We financed much of two wars and did not spend more than 20 percent of the GNP during that period of time. We had high employment on balance, and you know, we are not that far from it now.

Does that sort of make sense to you or does that seem too arbitrary? What would you say about that?

Mr. SMITH. If those were the policy goals, again where you have set them where you have time to move toward them, trying to go to 20 percent of GNP for fiscal 1990 and zero inflation for fiscal 1990——

Chairman NEAL. No one is talking about that.

Mr. SMITH. I understand.

That would certainly put the economy through a ringer, but you would create an environment that would—we talk a lot and we hear a lot of talk about global competitiveness these days. We would have by such a large margin the most globally competitive environment in which to do business that we would see unprecedented—more unprecedented in growth I should say, the sort of thing you teach, or least I do since I teach MBA students who aren't interested in becoming economists, but how does all of this stuff affect business. That economic growth since World War II has been greater than the sum total of annual economic production for the entire world in recorded history prior to 1946, just the growth since then.

It blows your mind, but we are talking about, you know, 1987 with a $17 trillion world, with the United States about $4.5 trillion of it.

I heartily support your policy recommendation, but I would warn you that making the United States so attractive in global competitiveness is going to make it even more attractive for foreigners to invest here. Every dollar they invest here is another dollar on the trade deficit because that is where they get the money to invest, and the two have to add up to zero.

So I strongly support your goals, but if those were to come to pass, we would have a terrible trade deficit for a very long time, until everyone else in the world had invested everything that they had that they wanted to invest.

So you shouldn't look at the trade deficit as an unmitigated evil.

Mr. ALMON. I am a little bit confused. We agree that the three-pronged goal, which was no inflation, about 20 percent expenditure, and balanced budget, that sounds like——

Mr. SMITH. It is incredible.

Mr. ALMON. Now, the next step of the argument was that this would be so good that it would attract in everybody from all over the world to invest in the United States, and this would create an imbalance in the trade deficit.

Well, this policy is not very far from what the Germans have at home and not very far from what the Japanese have, and they are big investors here. So I am not sure——

Chairman NEAL. But they are running great trade surpluses. I am not quite following that either. I can see cutting both ways.

Mr. SMITH. It is possible.

Chairman NEAL. It seems to me that real interest rates would decline.

Mr. SMITH. Sure.

Chairman NEAL. Which I see as very desirable, but on the other hand, some foreign capital might say that they can get a better deal somewhere else. They wouldn't have the safety and stability, but they might get a higher real interest rate from an economy that wasn't doing things quite as sensibly, like they are getting from ours now, for example.

Mr. SMITH. Yes, they are getting that from us now, but the rate of return on investment is the highest in any EOCD country. We are a magnet for foreign capital, which is why it is taking so long to get the trade deficit down to zero. In the long-run trade surpluses and deficits should vary very slightly around a zero baseline. You have problems if you build up too big of a surplus and other problems if you build up too big of a deficit.

But your policy environment, if we could move toward that, that State would put us as close to the Golden Age as we could get, yes.

Chairman NEAL. Would you not have a situation then when it would be such an attractive place to invest that industry would in fact suck up all of the money it could to invest and in effect hold rates up?

Mr. SMITH. Well, no, I don't think so. You would certainly see a significant in the demand for capital, which would keep rates from falling as much as they otherwise would.

But we had that environment for a good long time in the 1950's and 1960's. Treasury long-term bonds sold for 3 percent. The prime rate was 3.5 percent. Inflation was zero to .5 of 1 percent.

Chairman NEAL. That is what I would like to see again, and it does not seem unrealistic.

We are beginning a period, it looks to me like, where there will be actual labor shortages. One of the arguments used against pursuing this kind of policy often is that it will create higher unemployment. I am not saying it is a valid argument, but I am saying that that is an argument that is often used. It would seem to me that insomuch as it is valid, it would not be a factor over the next period because we are going to experience shortages of labor.

Mr. SMITH. Absolutely. The only thing that is keeping us from seeing tremendous inflationary wage pressures at the moment and for the last couple of years is—it is unprecedented since World War

II, when we drafted all of the men and all of the women left home, went to work, and then dropped out of the labor force after the war—but I would assume even your labor force participation rate equations are not tracking very well in the last couple of years. I know any that I have worked with, they worked beautifully in the 1950's and 1960's and 1970's, and they do not track.

We have got an unprecedented fraction of people over age 16 in this country who want to work and, even better news, an unprecedented proportion of those who actually have a job. If we didn't have that, we would have an unemployment rate down around 2 percent, as I point out, and you would be reading newspaper stories every day about wage pressures.

Chairman NEAL. Aren't we going to see some of that anyway?

Mr. SMITH. Sure.

Chairman NEAL. I would think we would see a good deal of it.

Mr. SMITH. It is a miracle that we haven't seen it already. I don't know anyone with a good explanation.

When I see Janet Norwood, I ask if anybody over at BLS has found it, and she just says—you know, she smiles and says, well, we are grateful, aren't we, and I say you better believe it.

But ⅔ of the adult population wanting a job, that has never happened.

Mr. ALMON. Perhaps we have made the workplace more pleasant. We have also——

Chairman NEAL. There is also the necessity. There have been shifts in employment patterns. I think most families feel that it takes two wage earners to pay the bills.

Mr. SMITH. That is true, but how has that suddenly—relatively suddenly become accepted. In past years you just didn't incur so many bills, was how you handled that. It is not—it is not a question of, you know, houses in relative terms being any more expensive than they were 40 or 50 years ago. In fact, they are less expensive. So are most other things that improve the standard of living.

So it is either an expanded notion of the great mystery variable we can never measure in models, tastes and attitudes, or it is something that we just simply do not understand.

Part of it shows up when you look at surveys that the Institute for Social Research, the University of Michigan does, and they do a number of them across different countries, and one thing that stands out—they don't do these more than every 2 or 3 years but when they do—is that Americans define themselves by their occupation. That is not true anywhere else in the world.

When you meet someone and say, what is it—you know, who are you, you say I am an economist, I am a Member of Congress, I am what have you. In other parts of the world it is the town you come from or the country you come from or what your parents did or some——

Mr. ALMON. Or your religion.

Mr. SMITH. Or what your religion is.

Only in America is it what I do, and perhaps that has become so ingrained—perhaps it is to a significant degree because of the successes we have had through enforcing the 14th Amendment to the Constitution with additional civil rights legislation to make the workplace attractive to all of our citizens.

I don't have an answer. As I said, no one has an answer.

But it is saving us right now from tremendous inflationary pressures. But, you know, it is not going to keep going to where we have 75 percent of the people wanting to work in the next 2 years.

Mr. ALMON. I think those are essentially the reasons that we have opened up a range of jobs to people who would not previously have been considered appropriate for those jobs. They now move in, find nice jobs, interesting work, they want to work. I think part of the credit also goes to medicine, that people in older age groups are in better health and able to work, and I think that also, as Jim says, Americans by and large like to work.

I can recall living a year in a European country and being surprised by how many rather young looking people I met who, when I asked what they did, happily said "I am retired". If you meet an American who is retired and in his sixties, he may say to you, "I am retired and I am now doing volunteer work at the National Art Gallery", or he tells you what his work is. He does not want to simply say "I sit at home to entertain myself".

Chairman NEAL. The Social Security so-called trust fund is predicted to grow dramatically and thus it will make our deficit appear smaller than it actually is. That apparition will continue and may, in fact, grow dramatically over the next several years. On one hand, it seems to me that that might have the effect of doing what Chairman Greenspan said he would like to see. That is us in fact running budget surpluses over time. On the other hand, it seems to me that this is not only fooling ourselves during the short term, but also not doing the people that we say we are trying to help any big favor.

We are building up this surplus so that in the year 2020, or thereabouts, when demographics indicate that there will only be maybe two working people for each retired person, that there will be this pool of money there to pay the people who will be retiring in that period, and that is to take the burden off of the taxpayers of the time. But it is the very taxpayers at that time who will have to ante up to pay off those Treasury instruments. So in terms of helping those taxpayers, I can't see that we will have done anything. And, in the meantime, we will have been fooling ourselves considerably about the status of our current budget deficit. Is that correct?

Mr. ALMON. I think it is correct if we—I think it is certainly correct that the taxpayers of the time are the ones who are going to have to provide for those people. We cannot now make the food and the clothing and medical services that they are going to require and put them on the shelf and hold them there and then bring them down, and the only people who can provide those goods and services are the people who are alive at that time.

There is an extensive economic literature about whether you can pass the burden of, say, a war from one generation to another by having the first group fight the war but finance it with debt and then have the subsequent generation pay off that debt. That debate has gone both ways.

Under some circumstances you certainly can have some savings done by individuals in a later generation—let us say an individual alive in World War II saved a lot of bonds, and then he in the

1950's sells those bonds and then consumes much more than if he had consumed back in the 1940's. He has indeed shifted his own personal consumption so that he did not in his lifetime have to pay for the war, although he shifted it.

Now, I think there is probably something similar to that possible with Social Security, and it is possible to shift—for individuals to shift from—to shift the burden of paying. I have to confess to having not thought that through, for this morning in particular.

It is a tricky subject, and there have been arguments one way and then the other.

I should say that the deficits shown in my testimony were all-inclusive of the Social Security trust funds, so that when it shows a minus 50 you can think of that as a buildup of the Social Security trust fund.

I think each generation essentially has to pay its own way. It is certainly a reasonable interim target to aim for a balanced budget on a consolidated basis; that is to say, including the Social Security trust fund.

I would also agree with you that the building up and then running down is a bit of a smoke screen to conceal what is actually happening.

Chairman NEAL. Professor Smith?

Mr. SMITH. Well, it is hard. If you did it where the excessive taxes being paid today were invested in productive assets of some sort, then you would have more at the end when people retire and actually collect, since they are basically bookkeeping entries on the Treasury's books.

This idea that there is a pot of cash sitting somewhere, you know, there isn't. I think it belongs in the consolidated budget, but great care has to be taken that it doesn't get spent, which is of course what is happening to it at the moment. The $160 billion or so deficit this year would be something like $240, I think, without the——

Chairman NEAL. It seems to me they show it as about $40 billion this year. Last year it was about $30 billion.

Mr. SMITH. It would be $200 billion instead of $160-plus. So we are spending it.

Something like your proposal of shooting for 20 percent of GNP over time, it certainly is going to require a lot of hard choices. How much do we devote to area X as a share of GNP?

But that is probably the sort of debate that is long overdue.

Chairman NEAL. Exactly. It seems to me, then, that we would have pretty much the same dates?

Mr. SMITH. Sure.

Chairman NEAL. But we would have just carved out a piece of the pie as being that part that we can debate about?

Mr. SMITH. Right.

Chairman NEAL. It would show a commitment to a private sector economy of at least 20 percent.

Mr. SMITH. Oh, yes.

Chairman NEAL. That is essentially what we would be doing—80 percent private sector is what I mean.

Mr. SMITH. Don't forget the 8 or 9 percent for State and local governments.

Chairman NEAL. However, Congress and the rest of the Federal Government could have some impact on policies beyond spending. In other words, there are proposals around for requiring business to provide health insurance, for example. Whether that is a good idea or not, that would be debated around here. I have not come to a firm opinion on that myself, but in any case that sort of thing is still possible.

This idea doesn't solve all of our problems, is what I am trying to say. But it seems to me it would get us to a point where it would be a formula for the healthiest possible economy.

Mr. SMITH. Not only the healthiest possible, but the healthiest ever in the history of the world, which is sort of a neat accomplishment to be in favor of.

Chairman NEAL. Yes, sir. Wouldn't it be? If you looked at the period from the end of the Second World War, about, let's say about 1944 to 1964. During the early 1960's is when inflation started to inch up, and the deficit spending started inching up, also. Am I correct?

Mr. SMITH. Absolutely. William Martin, as Chairman of the Fed from 1961 to 1969, the gentleman who is famous for coining the phrase "Our job is to take the punch bowl away when the party is going good," and until the very end of his term that is what he always did, was take the punch bowl away. We had a lot of recessions in the 1950's. We had unemployment go up and unemployment go down.

I think the peak unemployment we ever had was 6.5 percent, which looks low by modern standards, and the lowest was we got down to 2 percent.

Chairman NEAL. Without inflation?

Mr. SMITH. Without inflation and with Government spending at around 20 percent of GNP.

If you want to go farther back when Calvin Coolidge was President, Government spending was 3 percent of GNP after going much higher during World War I, and then we paid off all of the war debt and got going with phenomenal economic growth, and then it was ruined by a combination of tariff and that Federal Reserve Board shrinking the money supply. It creates a wonderful environment for all of our citizens and the maximum opportunity you can create. I cannot think of what is better, a better set of policy recommendations to try to put into place.

Chairman NEAL. We have several more questions here, but may ask that you respond in writing for us.

Mr. SMITH. Sure.

Chairman NEAL. I want to thank each of you very much for your testimony this morning. It is an enormous help to us, and I very much appreciate your taking the time to come and be with us.

Mr. ALMON. We are pleased to have been here.

Chairman NEAL. The subcommittee will stand adjourned until tomorrow morning, when we have Chairman Greenspan as our witness. That hearing will be at 2128 at 8 a.m.

[Whereupon, at 11:50 a.m., the hearing was recessed, to reconvene at 10 a.m., Wednesday, February 22, 1989.]

CONDUCT OF MONETARY POLICY—REPORT OF THE FEDERAL RESERVE BOARD

Wednesday, February 22, 1989

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON DOMESTIC MONETARY POLICY,
COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS,
Washington, DC.

The subcommittee met at 10:12 a.m. in room 2128 of the Rayburn House Office Building, Hon. Stephen L. Neal [chairman of the subcommittee] presiding.

Present: Chairman Neal, Representatives Gonzalez, LaFalce, Vento, Barnard, Kaptur, Kennedy, Hoagland, Wylie, Leach, McCollum, Roth, Bunning, and Paxon.

Also present: Representative McMillan.

Chairman NEAL. I would like to call this meeting of the subcommittee to order.

This morning we are pleased to welcome Chairman Greenspan to this hearing on the Federal Reserve's Monetary Policy report to the Congress. As required by the Full Employment and Balanced Growth Act of 1978, the Board of Governors must report to Congress twice a year on its conduct of monetary policy. It must present target ranges of growth for monetary and credit aggregates for the coming year, and it must, if monetary growth strays outside these ranges, present an explanation and justification for missing those targets.

In 1987, monetary growth was below the target range, and the Fed's report to the Congress at this time last year concentrated on an explanation of that shortfall.

Monetary growth in 1988, however, remained within the targets throughout the year and finished the year close to the midpoint of the ranges.

I want to congratulate Chairman Greenspan that the Fed was within the target ranges.

There is a second point on which the Fed deserves to be commended. In the report presented to us today, the Fed lowers its ranges for M2 by a whole percentage point, from a range of 4 percent to 8 percent for 1988 down to a range of 3 percent to 7 percent for 1989. That, I am convinced, is the right direction. If the Fed continues this practice, gradually lowering the ranges and keeping money growth within the ranges, then it would eventually achieve genuine price stability.

The Federal Reserve should emphasize that it is indeed committed to genuine price stability; that is, to zero inflation. We have

been stuck on a plateau of about 4 percent inflation for several years. Though this had been a major and welcomed achievement, but only in comparison with the double digit inflation we had been suffering. Inflation at 4 percent is not an acceptable long range goal. We cannot be satisfied until we reach zero.

Chairman Greenspan certainly has stated in past hearings that the Federal Reserve does not regard the present level of inflation as acceptable, and I certainly welcome and applaud such statements. I urge the Fed to continue its policy of persistent restraint until zero inflation is actually achieved. It would not be necessary to emphasize the commitment to zero inflation if inflation were moving in the right direction; that is, downward. But I share the fears many have expressed that price pressures are growing and inflation is trending upward.

If we had been close to zero over the past few years and the Fed's commitment to price stability were absolutely paramount, this modest trend would not be so alarming, but our point of departure is not zero. It is around 4 percent. Any upward trend that begins from 4 percent is alarming precisely because we need to move toward zero, not toward 5 or 6 percent. If we become satisfied at 5 percent, 6 percent will surely follow, and so on. That we must not permit. We must insist that the ultimate target is zero and refuse to accommodate inflationary trends away from zero.

Mr. Chairman, I want to emphasize that I think this commitment is especially important on behalf of the people who are least able to defend themselves in this economy. It is working people who suffer the most when we let inflation get out of hand. It is retired people who cannot adapt easily. It is small business people who cannot adjust their prices when inflation gets out of hand. It is the people working at minimum wage. For 8 years, even though we have had inflation running at 4 and 5 percent, the minimum wage has not been adjusted.

Now, whether the minimum wage is a good idea or not is a separate issue. The point is that the fight against inflation is a fight on behalf of the working people, the average people of this economy, the people least able to defend themselves. I commend the chairman for his fight against inflation and encourage him to continue it and in fact accelerate it.

Now I would like to yield to others who might want to make comments. First, I would yield to our distinguished minority leader.

Mr. MCCOLLUM. Thank you very much, Mr. Chairman, and, Chairman Greenspan, we are glad to have you with us this morning. I think you come at a time when the policies of the Federal Reserve and the Open Market Committee are particularly critical.

The inflation rate is of great concern, as it has been for you, for quite some time, but I think the public is now sensing it more perhaps because of reports like this morning's CPI which showed up a little on the high side, I guess, of the analysts' projections and I believe at an annualized rate of about 7 percent if it were to continue.

You have that problem that we all want to see maintained and controlled, but you also have the challenge of maintaining some degree of sensibility in the whole process for reasonable growth in

the economy, or otherwise we are not going to be able to manage the deficit over on the fiscal side, which Congress hasn't been doing well but needs to do and hopefully will this time.

I know you also have the problem of the value of the dollar to be concerned about and how that impacts our trade imbalance.

So it is a rather delicate time, a very critical time, and we are appreciative of your report this morning that you are going to give to us and the opportunity to ask questions, but we are most appreciative of the input that you yourself and those members of the Board put in and the many, many hours that your staff do as well.

We want to thank you for that, and we look forward to hearing from you.

Chairman NEAL. I would yield to the distinguished chairman of our full committee.

Mr. GONZALEZ. Thank you, Mr. Chairman. I want to congratulate you and wish you well and Godspeed in your endeavors here at the 101st Congress as chairman of the subcommittee on domestic economic matters, monetary policy.

I know that you have done an excellent job in the last Congress and the Congress before last as well, and I foresee where you will be very successful, and I congratulate you on this hearing, and we look forward to you sharing a great deal of the responsibility of leadership in this Congress, in this committee.

I also wanted to thank Chairman Greenspan for his willingness to come before us and to take time to do so.

Finally, I want to say that I am on record as favoring an increase in the minimum wage. So that is where I come from.

Thank you very much, Mr. Chairman.

Chairman NEAL. Thank you, Mr. Chairman. Mr. Wylie.

Mr. WYLIE. Thank you, Mr. Chairman, and I join the distinguished chairman of the full committee in congratulating you on assuming the chairmanship of this most important subcommittee and also join you in welcoming Chairman Greenspan to your hearing on monetary policy which, if it runs true to form, will turn into a very helpful review of the broader economic policy issues that concern us all. We are always better informed after an appearance by the distinguished Chairman of the Federal Reserve, and I think that today's hearing is particularly well-timed.

Not long ago, the Reagan administration released to Congress the President's economic report surveying the past year and its accomplishments and providing its economic forecast for the present year and beyond. We understand that these forecasts represented a major input in the administration's budget planning, and we will therefore be interested in your comments about the economic outlook for the current year and the consensus of your colleagues on the Federal Open Market Committee.

It seems to me, you, Mr. Chairman, are particularly well-positioned to comment on the prospective monetary restraints that may be needed and the effect they may have on economic growth and price stability during the remainder of this year.

I am looking forward to your testimony with great interest, especially any comments you might have with reference to the headline of the story on the front page of the Washington Post this morning which says, "CEA-Fed Chief Differ On Inflation."

Thank you very much, Mr. Chairman.

Chairman NEAL. Mr. Barnard.

Mr. BARNARD. Mr. Chairman, I would likewise want to welcome you to the hearing this morning and to discuss this very important issue.

Mr. Chairman, for some time now you have been sounding the alarm about the importance of private savings and their ability to offset Government deficits. In your remarks to the National Economic Commission last November, you observed that our savings is low by both historical and international standards, and you stated that net lower personal plus business savings in the 1980's was about 3 percent lower relative to the Gross National Product than its average for the previous 30 years.

You also pointed out that about half of the U.S. private savings is absorbed by the deficits, while in Japan less than 20 percent of private savings has been absorbed by Government deficits. This is true even though Japan has been borrowing about 3 percent of its Gross National Product, roughly equivalent to the present U.S. deficit on a cyclically adjusted basis.

Obviously, we have a severe structural problem in terms of savings, which bodes ill for our long-term economic health.

Mr. Chairman, I hope that somewhere in our hearings this morning that you will address the subject of whether some other measure such as a conversion to a VAT or other consumption based tax offers some structural improvement to our system.

I look forward to hearing your testimony this morning.

Thank you.

Chairman NEAL. Mr. Roth.

Mr. ROTH. If I could take a minute because I know time is of the essence and we do want to hear the chairman, but I would like to say that, yes, we are all concerned about inflation, Mr. Chairman and Chairman Greenspan, but I am also very much concerned about tightening of the economy.

If we see inflation going up for a short period of time, I don't think we ought to take rash measures. I think we want to keep our cool, and that certainly I would think is the case here.

Certainly, there must be other options in cooling down the economy, which is in a robust condition today. Maybe those of us on Capitol Hill could work to balance the budget and hold inflation in check that way.

There must be, again, other ways to fight the inflation rather than cooling down the economy. The President—maybe he can do some jawboning, maybe he can use the pulpit, but I am concerned about the working people, too, and there is nothing that is going to hurt the working people more than if we again slide into a recession.

Not only our country but the entire world is dependent on our economy because if our economy cools down, what is going to happen to the rest of the world economy? What will happen to the international debt?

So I think this is a very serious issue we have before us, and my question would be, yes, employment is good now, jobs are strong, but our economy is very fragile, and let's look at the alternatives rather than to the tight money policy.

Ever since I was a kid in school, every time we went to the tight money policy we always had a recession. That is the historical lesson that we have learned, and, Mr. Chairman, I don't want to see another recession.

Thank you, Mr. Chairman.

Chairman NEAL. Mr. Kennedy.

Mr. KENNEDY. Thank you very much, Chairman Neal, for letting interested committee Members sit in on this meeting this morning of your subcommittee to discuss full employment policies of the United States.

I would also like to welcome Chairman Greenspan to Capitol Hill again and thank him for the close working relationship that he has developed with the Congress.

The main point of today's hearing is to examine the monetary policies of the Federal Reserve and their impact on full employment, economic growth, and inflation. It may seem that monetary policy is a crude and heavy-handed tool. It is not very useful in making delicate adjustments to the economy.

I am very concerned that we will walk out of this room today with the false impression that we have met the goal of full employment. Today's exercise would be cruel, indeed, if we accepted its status quo unemployment simply because we are afraid of inflation. The 5.7 percent unemployment rate we boast of today, it masks underlying rates of unemployment for minority groups that are much higher, up to 50 percent in many cities, especially amongst young people. It also conceals the fact that certain depressed regions of the country are suffering under much higher rates.

It may be that monetary policy is not the best way to fix these problems, but that does not mean that nothing can be done.

The Fed's other role is to regulate financial institutions. In that light, Chairman Greenspan, I hope you will inform us as to the Federal Reserve's current policy regarding enforcement of the Community Reinvestment Act, particularly in the recent decision by your institution with regard to the Continental Illinois case.

Thank you very much, Mr. Chairman.

Chairman NEAL. Are there others who would like to make opening statements?

[No response.]

Chairman NEAL. If not, Mr. Chairman, you can see that Members of this committee expect a lot of you and we know that you are up to the test. So we would like to hear from you at this time. We will put your entire statement in the record, and please feel free to summarize as you will.

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

Mr. GREENSPAN. I appreciate this opportunity to discuss recent monetary policy and our plans for the future.

I believe you have received our formal report to the Congress and the detailed copies of my testimony.

This morning I would like to place monetary policy in the context of the overall economic and financial situation.

On the whole, the economic expansion remains vigorous and unusually well-balanced after more than 6 years, but, with the economy running close to its potential, the risks seem to be on the side of a further strengthening of price pressures.

Prior to this morning's disturbing Consumers Price Index increase of .6 percent for the month of January and an earlier estimate of 1.0 increase in the Producers' Price Index for January, the step-up in inflation had been rather small. However, some signs have been emerging of greater acceleration in broad measures of costs of production.

Wage gains accelerated toward the end of last year. Moreover, benefits took an unusually large jump in 1988, adding to business costs and prices of materials. Inputs also rose at a faster rate.

The rise in those material prices did not show through into final goods prices until the most recent report, largely because the wage increases were clearly subdued and, as a consequence, unit labor costs, which is the crucial cost element in the consolidated income statement of the American balance sheet, were remarkably well-behaved.

The recent acceleration in wage rates is probably the reason why we are beginning to get a somewhat stronger inflationary tone. In these circumstances, the Federal Reserve remains more inclined to act in the direction of restraint than towards stimulus.

The determination to resist any pickup in inflation in 1989, and especially to move over time toward price stability, shapes the committee's decisions with respect to monetary and credit ranges for 1989.

The committee lowered the range for M2 by a full percentage point, from 3 to 7 percent, and reduced the range for M3 by half a percentage point to 3.5 to 7.5 percent. The committee also lowered the monitoring range for domestic nonfinancial sector debt by half of a percentage point to a range of 6.5 to 10.5 percent. These were the ranges adopted on a tentative basis last June and reconfirmed.

We decided to retain the wider 4 percentage point ranges that were adopted in 1988. The potential for sizeable and somewhat unpredictable movements in velocity requires fairly broad ranges in order to have a reasonable assurance that the targets are consistent with satisfactory economic performance.

In view of the rather loose relationship of the aggregates to GNP and prices that has developed in the 1980's, the committee agreed to continue its current approach to the implementation of policy, which involves monitoring a variety of economic and financial indicators, including growth of money and debt. In this regard, appropriate growth of M2 and M3 relative to their ranges will be determined in part by developments during the year.

The Federal Reserve expects its policy in 1989 to support continued economic expansion while putting in place conditions for a gradual easing in the rate of inflation over time. However, the wage and price process may have developed some momentum. The central tendency of forecasts made by members of the Federal Reserve Board and the presidents of Federal Reserve Banks is for inflation to rise slightly in 1989.

But let me stress that the current rate of inflation, let alone an increase, is not acceptable, and our policies are designed to reduce inflation in coming years.

This restraint will involve containing pressures on our productive resources and, thus, some slowing in the underlying rate of growth of real GNP is likely this year.

The central tendency of GNP growth forecasts for this year of Board members and Reserve Bank Presidents is between 2.5 and 3 percent. Abstracting from the expected rebound from last year's drought losses, real GNP is expected to grow at closer to a 2 percent rate.

With demands for labor growing more in line with expansion of the labor force, the unemployment rate is expected to remain near its recent level over 1989.

Maximum sustainable economic growth over time is the Federal Reserve's ultimate objective. The primary role of monetary policy in the pursuit of this goal is to foster price stability. Price stability, in effect, is a necessary condition, in our judgment, for maximum sustainable economic growth.

Price stability contributes to economic efficiency in part by reducing the uncertainties that tend to inhibit investment. Also, it directs resources to productive economic activity that otherwise would tend to be diverted to mitigating the financial effects of inflation.

Price stability, indeed, even preventing inflation from accelerating, requires that aggregate demand be in line with potential aggregate supply. In the long run that balance depends crucially on monetary policy. Inflation cannot persist without a supporting expansion in money and credit. Conversely, price stability requires moderate growth in money, at rates below those prevailing in recent years.

In the short run, demands can fall short of or run ahead of available resources. Monetary policy can assist in bringing about a much better match between demand and potential supply and thereby contribute to aggregate price stability.

When the economy is operating below capacity, bringing demand in line with supply can involve real GNP growth that is faster for a time than its long-run potential. But when the economy is operating essentially at capacity, monetary policy cannot force demand to expand more rapidly than potential supply without adverse consequences. Such an attempt will result in accelerating prices and wages as producers bid for scarcer and at the margin less productive labor and capital. Over time it would result in little, if any, additional output.

As a result of robust expansion in the last few years, the U.S. economy has absorbed much of its unused labor and capital resources. No one can say precisely which level of resource utilization marks the dividing line between accelerating and decelerating prices. However, the evidence in the form of direct measures of prices and wages is clear that we are now in the vicinity of that line.

Thus, policies that foster more economic growth, if such growth is to be sustainable over the long run, should focus on aggregate supply. The United States could increase growth of supply by step-

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ping up the rate of capital accumulation. Government policies can contribute to a higher rate of investment. Tax policies can help by ensuring the returns from capital are not taxed excessively or unpredictably, and fiscal policy can boost the national savings rate through a reduction in government dissaving.

Congress should follow the Gramm-Rudman-Hollings timetable and then seek a budgetary surplus by the mid-1990's.

An improving Federal budget position should have a variety of favorable effects. It can pave the way for a reduction in our external imbalance by freeing resources currently absorbed by domestic demand. By putting downward pressure on real interest rates, it can encourage domestic business capital formation and make housing more affordable. It can encourage households and businesses to focus more on the long run in economic planning.

Monetary policy also has a role to play in encouraging capital formation and economic growth over time by providing a stable price environment. Although the relationship between growth of money and the economy can vary from year to year, over the long haul there is a close relationship between money and prices.

The historical evidence suggests that price stability ultimately will require somewhat slower M2 growth than we have experienced in recent years.

The Federal Reserve recognizes that monetary policy over the coming year will be carried out against the backdrop of a financial system facing certain difficulties. The thrift and FSLIC situation is perhaps most pressing. The administration has proposed an extensive, workable plan for dealing with this matter.

Developments in the corporate sector warrant close scrutiny as well. As you know, corporate equity continues to be retired at a startling rate in conjunction with LBOs and other mergers and restructurings and has involved the issuance of correspondingly large amounts of debt.

The Federal Reserve and other Federal regulators are instructing bank examiners to review especially carefully loans to highly leveraged firms in order to maintain a safe and sound banking system.

The international economy also will command the continuing attention of policymakers around the world. Among the industrial countries, greater concern about rising inflation followed the substantial economic growth recorded last year.

Meanwhile, the process of adjustment of international imbalances appear to have slowed somewhat in the second half of last year, and many developing countries continue to face serious problems of achieving sustained economic growth, fostering development, and servicing large external debts.

Some have argued that these financial stresses, taken together, could hamstring the Federal Reserve's anti-inflationary policy. Certainly, we have to take account of the effects of our actions on all sectors of the domestic and international economy and on financial markets.

At the same time, we recognize that monetary policy is not the instrument to deal with structural financial stresses and imbalances here and abroad and that attempts to use monetary policy may even worsen these problems.

Lowering interest rates in the short run through more rapid money growth against countervailing market pressures would quickly raise inflationary expectations, leading sooner to higher, not lower interest rates.

Instead, the structural financial problems require the prompt application of microeconomically oriented solutions within the supervisory, regulatory, and legal framework. Imbalances in the world economy require the continued, patient application of responsible macroeconomic policies in the United States and in other industrial countries, as well as further progress in economic reforms by the developing countries.

In conclusion, for its part, the Federal Reserve will continue to seek monetary conditions that will reduce inflation. Our major trading partners are following consistent policies in their own economies. Together, these policies should bring about a more stable financial environment and promote long-term worldwide economic growth.

Relatively stable long-term nominal interest rates and flattening yield curves around the industrial world are strong evidence that savers and investors are in accord with this view.

Monetary policy, at least for the moment, appears on track in the United States. The task is to keep it on track while making necessary adjustments to fiscal policy and reforms to the regulation of financial institutions. In this way we can ensure vigorous and balanced economic conditions over the long run.

Thank you very much.

[The prepared statement of Chairman Greenspan can be found in the appendix.]

Chairman NEAL. Thank you, Mr. Chairman.

Mr. Chairman, over my years in Congress I have come to appreciate, and have great respect for my colleagues in the Congress of both political persuasions and whether or not they are liberals, conservatives, and so on, and also great respect for others who serve in our Government. It seems to me we all essentially want the same things. We want a good life for the people we represent. We want jobs for our people. We want a healthy economy for the future. Often we will differ on how best to get from here to there. It seems to me it is a matter of coming to some common understanding of how things work in the real world.

On the question of monetary policy, there are essentially a number of different understandings. I know that, say, between a number of us who want to see a full employment economy that there are different opinions as to how best to get there.

You have heard some of those opinions expressed this morning, one member saying, well, we want to be sure that we keep short-term interest rates down so that we don't cause more unemployment, or others who think that it may be worth paying a little price now in higher short rates to get those long-term rates down and to get inflation under control for the long term. We have an opportunity here in this committee—and maybe we can start it this morning—of improving our common understanding of how the economy works and what are the most sensible policies for the long run.

I have come to be convinced that inflation is essentially a monetary phenomenon; that is, that every inflation throughout history, but most particularly I think we could focus on the inflation of the late 1970's—was clearly caused by an excessively easy monetary policy. The grinding down of that inflation was achieved by the Federal Reserve under the leadership of Paul Volcker not without some costs.

I don't think there is a way to grind it out of the system without some costs. But it seems to me as a starting point that there ought to be common understanding that inflation is a monetary phenomenon, and if we are going to control it, it has got to be controlled by the Federal Reserve.

In your testimony on page 9 you say "Inflation cannot persist without a supporting expansion in money and credit." That is precisely the case. There are some that think that we can improve the picture for employment by inflating the economy. I would like to call your attention to a chart in our report released earlier this month, entitled Review of the Course of Monetary Policy in 1988, on page 9 which shows the relationship between inflation and unemployment.

[The chart referred to above can be found in the appendix.]

It shows that over the past three decades a significant rise in inflation was always followed not by a sharp rise in employment but by a sharp rise in unemployment and that a fall in inflation is followed by a fall in unemployment. That is to say—low inflation is the proper condition for full employment—that we don't increase employment by inflating the economy. The clear implication here is that inflation is the enemy of full employment, not its friend. Would you comment on what I have just said.

Do you agree, essentially, that inflation is a monetary phenomenon, that we must grind inflation out of our economy over time—I certainly would not want to do anything radical. I would like to see a commitment to a path over the next 5, 6, or 7 years. I don't think the exact number of years is the important thing, but that we set ourselves clearly on a path that will lead within a reasonably short period of time, 5, 6, 7 years——

Mr. GREENSPAN. I think you want to stay on the shorter end of that.

Chairman NEAL. It suits me. I frankly think the shorter the better. I think the important thing is the commitment that we head down a path toward price stability, that is to zero inflation; that we commit ourselves to it, we work toward that goal, and that we all come to understand that that is in the best interest of every sector of our economy.

Would you care to comment on that and also please comment on the question about the relationship between unemployment and inflation?

Mr. GREENSPAN. Mr. Chairman, I just want to say that I agree with you fully, including your opening comments this morning. The only minor quibble I would have is the issue of the time frame in which one should view the monetary process of bringing the inflation rate down.

I agree that you don't want to do it so abruptly that it breaks the economy, but if you extend it over too long a period I think you

will find that there are always 20 different reasons why you can extend it further. I think the commitment that we have to make to reducing inflation and achieving a noninflationary environment has got to be cast in terms of a much shorter period than you contemplate.

Chairman NEAL. What would you suggest?

Mr. GREENSPAN. I wouldn't actually like to say. It depends very significantly on the starting point. But I think it should be done as quickly as possible in the least disruptive manner, and that can vary, but in no case that I can conceive of can it be as long as 5 years. It probably should be substantially less than that.

Chairman NEAL. How about commenting on the question of inflation and unemployment?

Mr. GREENSPAN. I think one of the major advances in economic policy in the post-World War II period was a communique coming out of one of the early economic summits in the mid-1970's, which stipulated precisely the issue that you raise, Mr. Chairman; namely, that inflation produces unemployment and that price stability in a noninflationary environment is a necessary condition for low unemployment. That notion has gradually been embodied in most of the conventional economic policy wisdom, and I certainly hope that those of us who are involved in this very sensitive policy operation fully subscribe to that proposition.

Chairman NEAL. I have been notified that my time is up, and we will stick to the 5-minute rule here so that everyone has an opportunity. At this time I would like to yield to Mr. McCollum.

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

Mr. Chairman, the media critics, analysts, and so forth, who are concerned about inflation have been widely reported in the last few days to be concerned that you and the Federal Reserve and the Open Market Committee Members are jawboning a lot about inflation and being tight, but they are saying in reality the Fed is not acting boldly enough to control inflation.

That is the general criticism—not mine, but theirs.

One of them has cited—and I looked at one of these reports the other day—the monetary basis as the authority for this concern and its direction over the last few weeks.

I guess that is the reason it is cited. I guess it is the currency reserves and the purist way to look at what the Fed is doing in the marketplace to reserves.

What the report shows—and I do not know the accuracy. I assume it is for the sake of asking you the question—it says that by mid-December the annual growth rate in the monetary base had slowed to 6.4 percent, its lowest rate since its growth began to accelerate as the result of actions taken to supply liquidity after the crash of 1987 and then it began to expand. And it said as the monetary base in mid-December began to expand, its growth rate has accelerated sharply early this year and it has grown now at an annual rate of 10 percent over the past 2 months.

Is there an explanation of why the monetary base would have grown that rapidly all of a sudden in the December to February period as opposed to its normal course of the last year. As you had indicated in your testimony, you had been reducing, I think, that growth.

Mr. GREENSPAN. I was just checking, Mr. McCollum, on whether or not the currency figure was a big element involved in the expansion of the monetary base. As you know, currency is the major part of the monetary base. One reason we have a problem in using the monetary base is that a very substantial part, perhaps as much as half, of U.S. currency is held outside the United States and does not have any of the characteristics, therefore, that would relate it reliably to activity within the United States.

We in recent months have examined the monetary base very extensively for purposes of trying to see how it relates to inflation, how it relates to the economy, and have found that it is not a useful analytical tool for us.

We have concluded that M2 is by far the superior monetary aggregate to try to target, and those numbers have been very well-behaved. They are right at the lower end of even our new targeted ranges, and we find that historically the employment of M2 as an indicator of both growth and inflation is far superior to the monetary base.

Mr. MCCOLLUM. Is the value of the dollar a major factor in the monetary base being distorted? You said currencies abroad. You mean when the dollar goes up and down or the dollar is strong like it is now people sell it? Is that going to be a factor?

Mr. GREENSPAN. I don't think so. I think it is largely the fact that American currency acts as sort of a second currency in a number of countries. For example, in one major Latin American country there was an estimate of something like $5 to $7 billion in U.S. currency circulating freely.

Mr. MCCOLLUM. The bottom line is that critics and analysts should not read too much into the monetary base, to view the action of the Open Market Committee in its policies on reserve tightening or loosening. I think that is what you are saying.

Mr. GREENSPAN. I guess I could have said it more concisely.

Mr. MCCOLLUM. One last question, assuming I have the time, and I think I still do.

One of the witnesses before us yesterday in this subcommittee, an economist, proposed that the answer that really would help the economy a great deal right now in solving the inflation problem would be for the Open Market Committee to immediately raise the discount rate, not by a little bit but all the way to 8 percent in one big fell swoop.

What would happen if you did that?

He thinks that is a great idea. Go shock everybody. That is the purpose.

How do you respond to the critics or those who are telling us from the academic world—and he is from an old field you have been involved with in the past—that say that you ought to act boldly in that sense?

Mr. GREENSPAN. Mr. McCollum, I have problems in getting into that type of discussion because it is very difficult for me to give you a detailed analysis without disclosing things I am not allowed to disclose. If I were a private citizen, I could argue one way or the other.

But let me just say that we have various different tools to embark on monetary policy. Through most of the last 6 months we

have chosen to stay with open market policy and have tightened quite significantly.

We have a lot of tools that we can use in a lot of different ways, and I can say about as much as I have just said and that is it.

Mr. MCCOLLUM. Fair enough. Mr. Chairman, I thank you.

Mr. Chairman, my 5 minutes is up.

Chairman NEAL. Thank you. Chairman Gonzalez.

Mr. GONZALEZ. I had some specific questions, but this last discussion interests me considerably.

The Federal Reserve District Banks have seen a tremendous growth in currency handling. The banks have purchased new equipment to handle the increase in currency handling.

Is the growth in currency in money laundering and the drug problem? What is the Fed doing to study and monitor money laundering in the United States?

It seems to me the Fed has been a little bit short of being on top of that.

Mr. GREENSPAN. I grant you, Mr. Chairman, that we are not on top of it, but it is scarcely because we haven't been trying.

In fact, I have spent more frustrating hours trying to find out where our currency is going than you can conceivably imagine in part to respond to the question you raise but also to respond to Mr. McCollum's question because anyone involved in monetary policy has to be aware of what is happening to the monetary base and, very specifically, what is happening to currency outstanding, and since what fragmentary evidence we have suggests a significant amount of that currency is out of the country, then it is out of our purview. We don't know what it is being used for. We know a goodly part of it is used just as second currencies within countries where inflation is rampant.

The problem of laundering is a crucial one. As you may remember, the United States picked up a very large chunk of currency—my vague recollection is it was something like $20 million—about a month or two ago in a drug raid, and we have been endeavoring to figure out where it was coming from, the nature of the currency, who issued it, and the like, to see what it would tell us about that type of movement.

So all I can say to you, Mr. Chairman, is I share your concerns with respect to laundering and will try to find out what we can about it.

But I must tell you that it is extraordinary how little we know about this subject. When I say this, I am talking not just about the Federal Reserve, I am talking about other agencies of the American Government as well, including our embassies.

But we will stay on this issue, and should we come up with something which we find useful, we will of course make you aware of it as soon as we can.

Mr. GONZALEZ. I would deeply appreciate that because it has been a deep concern of mine, particularly going back, frankly, to the late 1960's, at which time I couldn't get much interest in the then nascent, what I called Latin dollar market.

For instance, our policies with respect to Panama and Noriega politically have been circumscribed by the fact that Panama became the growth center of a huge Latin dollar market, and many

of our corporate interests used that market to precisely launder money.

By the late 1960's I felt—and I spoke out on it, but of course it was a lonely voice—that it was getting mighty big. Everybody was talking about the Eurodollar market, but we were losing sight of what was growing here offshore.

I think the recent experience in attempting to handle the Panamanian situation and the person of General Noriega is a clear example of how that can impact on our national policy, and at the basis of it is your banking and financial activity.

But nevertheless, let me say that I am deeply grateful to you for your straightforward answer and candor. If there is time, Mr. Chairman, I would like to ask one question that I was going to start out with.

Reading yesterday's Senate presentation by the Chairman of the President's Economic Advisers, Mr. Boskin, he is quoted as saying "There is no economic law or economic law mandating that economic expansion die of old age."

It seems to me this is kind of unrealistic or short-sighted because the history of economic expansion seems to be more on the law of gravity. Everything that goes up must come down, or as an old friend of mine, a real knowledgeable, practical businessman, used to say, a tree cannot grow to heaven, back in San Antonio.

If Congress and the administration cannot arrive at a budget accord that meets the Gramm-Rudman target for lowering the deficit, which you refer to in your opening statement, will the Fed be forced to push interest rates higher? Will there be, as there is some speculation, a recession or a threat of a recession this year or next year?

Mr. GREENSPAN. Well, Mr. Chairman, first, let me say with respect to Dr. Boskin's comment, what I think he had in mind was that the mere longevity of an expansion per se doesn't tell you all that much about when you are going to get the next recession. It really gets to the question of the evolution of the imbalances in the system.

In other words, we have come through more than 6 years of expansion, largely because we have never gotten to the stage of imbalances which threw us over.

One way in which I like to say what Dr. Boskin is saying is that at the moment the geriatric characteristics of the recovery are not showing, but we also know that, as you say, trees don't grow to heaven and we haven't repealed the business cycle and we will get one.

When? I don't think anyone really can make reasonable judgments as to when, but it will be caused by imbalances going into the system, either inflationary expansions, speculative expansions, imbalances of inventory, unsustainable investment capacity expansion, a number of things, which then tilt us over.

All I will say is that I don't believe the business cycle has been repealed. We will get a recession at some point. My hope is that we can construct policy so that when it eventually arises—and the farther out the better—that it will be mild. I think that the same policies which will stretch out the recovery will also increase the probability that when recession occurs it will be mild.

One of the reasons why the Federal Reserve has been taking such an elongated concern about the issue of inflationary pressures emerging is that if our purpose is to keep the expansion going and to have a mild recession when it eventually occurs, the right policy is to contain inflation because if inflation reemerges a recession will move up on us much more quickly and, when it occurs it will be deeper and more prolonged.

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

Chairman NEAL. Thank you, sir. Mr. Wylie.

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

Chairman Neal has said that inflation is essentially a monetary phenomenon, and I think you sort of agreed with that, but don't we need fiscal restraints—I don't know how better to say it—but fiscal restraints to head off inflationary pressures?

Mr. GREENSPAN. Well, there is no question that the financing of the Federal budget puts pressure on the financial markets and puts pressure essentially on monetary policy to meet or accommodate the increased demands that come from Treasury financing.

Obviously, if the deficit were very sharply reduced and those pressures on the financial markets were reduced, it takes pressure off monetary policy as well.

Historically, many countries find that when they run very large deficits they create significant pressures on the financial markets. If the central bank endeavors to suppress the expansion interest rates go up. If it accommodates the increased borrowing—that is, if it allows the money supply to accelerate—then inflation takes hold, and it is basically that process by which the deficit relates to inflation.

Mr. WYLIE. I might quarrel a little bit with the word "essentially." I think inflation might be both a monetary and fiscal phenomenon, if I may use that expression.

Mr. GREENSPAN. Frankly, I would scarcely want to argue that because it is a technical question. I am just really referring to the mechanism by which it translates through the monetary system into inflation.

Mr. WYLIE. And forces you to do something to try to curb inflation, forces the Federal Reserve to try to do something? If we have a huge budget deficit, then you are forced to do something to try to curb inflationary pressures; that is what you are saying?

Mr. GREENSPAN. Yes.

Mr. WYLIE. I was interested in the article this morning which said "CEA-Fed Chief Differ on Inflation, Boskin Optimistic, Greenspan Sees Risk."

Dr. Boskin says, "I am cautiously optimistic about the economic outlook," and then the article suggests that you see some risk in the short term.

I would say that the article to me leaves the impression that interest rates might be going up, and I think that might slow economic growth more, going back to the 1980's, when we had interest rates of something like 21.5 percent and we had a very bad economic situation and bad economic conditions.

But as I read through the article, I think your statement could be characterized as being cautiously optimistic, also. I don't see

that much difference in what you have said in your statement and Dr. Boskin's statement.

Mr. GREENSPAN. I would agree with that. I would say that I am cautiously optimistic largely because I think that there is sufficient awareness of the problems out there that I think they will be resolved.

Mr. WYLIE. Now, on page 5 of your statement, you say, "Wage gains accelerated toward the end of last year." "...some signs have emerged of greater acceleration in broad measures of costs of production." That adds to your suggestion that there might be some momentum as far as inflationary pressures are concerned. Could you be a little bit more specific about that?

Mr. GREENSPAN. Yes. You can disaggregate the price level by its components. In other words, on a consolidated basis, one way of looking at the level of, let's say, final prices for consumer goods is to think in terms of an income statement which comprises purchased materials cost, labor and capital costs, depreciation, indirect business taxes, and the like, and in a sense the unit price or the unit sales, which is by definition equal to the price, is basically the sum of unit labor costs, unit materials costs and unit capital costs.

As I mentioned in my opening remarks was that throughout 1988, even though unit materials costs were rising, meaning that prices of steel and aluminum and paper and a variety of other things were rising at a rate that was about 7 percent a year, it didn't spill over into the final prices, basically because unit labor costs—that is, aggregate employment costs divided by production—were growing much more slowly.

In other words, we were looking at 7 percent increases in underlying material prices and 4 percent increases in final prices, because unit labor costs were so well-behaved.

In the last several months, there was evidence that that has moved up a bit, and it looks to be an indication that there may be some modest momentum in prices which is the reason I mentioned that in my basic copy. I purposefully left out the issue of profit margins because they tend to affect prices in a somewhat more stable way and are more related to capital, but it is fundamentally a unit labor cost problem.

Mr. WYLIE. I think that was the point at which reporters rushed to the telephones, and I thought you might want to have an opportunity to expand on that a little bit.

Thank you, Mr. Chairman. My time has expired.

Chairman NEAL. It just seems important to me that we have a clear understanding of how our economy works, that we as policymakers be precise on this question of what causes inflation and what doesn't cause inflation. I think that there is no more dramatic demonstration of the cause and effect of inflation than what has happened over the last several years. In response to those who think that inflation is caused by budget deficits, I would just like to point to the fact that since 1980 we have almost tripled the national debt and during the same period of time brought inflation down from the low double digits in 1980 to its current rate hovering around 4 percent for the last 2 or 3 years. I am not arguing for deficits. I think it is very foolish and short-sighted to run this kind of a debt, but I do think it is important to make it clear that infla-

tion is essentially a monetary phenomenon. You can make it much more difficult to control by running these debts, and I know in some economies in the world essentially it is one thing. In other words, the debt is money creation because the central banks just create whatever money it takes to finance the debt.

I would like to recognize Mr. Barnard.

Mr. BARNARD. Thank you, Mr. Chairman.

Mr. Chairman, I would like to follow up on Mr. Wylie's question about the cost of production in these later months, which is an indication that restraint rather than stimulus should be the policy.

Have we had a sufficient time to study the effects in the marketplace of prices and profits from this recent cost of increased production?

Mr. GREENSPAN. No. I think the numbers are very recent and quite fragmentary, and I should say that these numbers fluctuate. I don't want to leave you with the impression that it is inevitable that once they turn they go straight up. That is not the case.

But what is worrisome is the fact that——

Mr. BARNARD. There is a trend?

Mr. GREENSPAN. There is a trend. The purpose of our policy is to make certain that that trend does not continue.

Mr. BARNARD. Mr. Chairman, there has been a lot of publicity given toward the different aggregates that you see as opposed to what the budget of the President has proposed.

How much do you see the difference increasing the deficit? Has the Fed taken any measure to study the aggregate differences that are proposed as to what possibly you would agree upon as how much that would increase the deficit?

Mr. GREENSPAN. You mean different forecasts, I assume?

Mr. BARNARD. Yes.

Mr. GREENSPAN. Well, I would assume that were we to take a somewhat lower forecast for this year and next than the official figures, there would be some change, not a dramatic change, in the deficit.

I frankly don't know what the specific numbers are. I know what our numbers create. They do show a significant decline in the deficit, but I can't be more specific than that in trying to relate precisely how one would translate from the administration's estimates to ours.

Remember that a translation for both receipts and expenditures has a great deal of slack in it. There is—the translation on the revenue side is really quite significantly variable, and I wouldn't want to leave you with the impression that there is some ironclad lock between any nominal GNP or real GNP and receipts or with any specific schedule of entitlements and, say, defense obligations and outlays.

It varies, and it is technically a difficult thing to do.

All I will say to you is that our forecasts would probably yield a somewhat higher deficit, but I would not like to suggest that it is a "night and day" difference because it is not.

Mr. BARNARD. I would like you to, if you would, address a subject that I just in my introductory remarks about our savings rate, that I mentioned.

Do you have any suggestions as to what Congress can do to improve our savings rate and investment rates?

Mr. GREENSPAN. I have been involved one way or another both as a public official, as Chairman of the Council of Economic Advisers in the mid-1970's, and as a private citizen since, until I came onto this job, and I would say I spent a remarkably large amount of time trying to come to grips with this particular question.

Much of what we had endeavored to do on the tax side has got to be scored as less than successful if one really looks at the end result.

I have no doubt that were we to shift toward a consumption tax from the income tax, our savings rate would rise, but that creates so many other questions, priorities, and political choices that I don't view that as an immediately realistic notion.

There is some evidence that when incomes are received in lumps as distinct from flows—in other words, bonuses of one form or another—that there is a higher propensity to save out of one-shot large receipts of income, and I think that the way in which income is received does affect what the savings rate is.

I must say to you, Mr. Barnard, that that is a disputable point. A lot of economists do not agree with that proposition.

But it is going to be a very difficult thing to do, and yet, leaving aside our short-term problems with respect to monetary policy and fiscal policy, increasing domestic savings has clearly got to be our most important long-term economic policy objective.

Mr. BARNARD. In that regard, I am going to steal a question from Mr. Kennedy because I think it has application to the train that I am moving toward, the reduction in the investment tax credit that is proposed in the budget.

Do you agree that that is a direction we should be moving toward?

Mr. GREENSPAN. You mean the capital gains tax?

Mr. BARNARD. The capital gains tax. Excuse me.

Mr. GREENSPAN. I have always been in favor of a low capital gains tax. In fact, it would be very easy to get me to subscribe to elimination of the capital gains tax.

However, raising the capital gains tax in the 1986 tax legislation came as part of a broad bipartisan compromise in the Congress and the administration, which very materially lowered marginal tax rates. While I am a strong supporter of lower capital gains taxes, I think that were we to move the capital gains tax rate down and to offset the perceived revenue loss—which I frankly think is not there but I would leave that aside for the minute—were we to raise marginal tax rates, I would not find that an acceptable compromise.

Mr. BARNARD. My time has expired. I have other questions, and I hope we will have a second round, Mr. Chairman.

Chairman NEAL. Mr. Leach.

Mr. LEACH. Thank you, Mr. Chairman.

With regard to most of your testimony, there is a great theme of continuity, gradualism and restraint. But one issue in finance, partly under the province of the Federal Reserve Board, is taking on a new dimension and appears to require an abrupt departure in policy.

This issue is the LDC debt problem which the new administration has given hints it might change. First, is the Federal Reserve Board actively involved in consulting with the Treasury on what new directions the U.S. might undertake? And, second, are there any kinds of policy shifts that you are advocating.

Mr. GREENSPAN. Well, Mr. Leach, the Federal Reserve is intimately involved in the discussions which are going on to implement President Bush's request to review overall LDC policy. I think that a group of us, under the lead of the Secretary of the Treasury, will probably come up with a policy statement within a reasonable period of time. I cannot be more specific than that except to say that it will retain the same principles that we have been following in recent years, namely, that the debtor nations' economic policies are crucially necessary for restoration of economic growth in those countries and a viable functioning system.

The ultimate success of such a policy would be a situation in which financing was adequate to sustain growth and debt reduction, and ultimately allow these debtor nations to be able to enter, for example, the Eurobond market and at interest rates which they could afford to service.

At the moment, a number of them could go in the open market and voluntarily borrow money, but the open market interest rates would be so high that they would not be able to service them.

So we have to get them to a stage of viability where they would be able to enter the markets and borrow at interest rates they would be able to service.

Implicit in all of this is our recognition that the debt burdens are heavy and that we must find voluntary means by which some of these debt burdens can be reduced.

Mr. LEACH. I would only add to this that I think it is going to take a little greater departure than I think many might have suspected. I have never been a great critic of the Baker Plan.

I think it has pros and cons. It is increasingly obvious, however, that we are dealing with a political/economic issue with the political part taking precedence over the economic part as time goes on. I just would hope that as the Treasury and the Fed work on this issue that all parties recognize the need for a dramatic departure; one which isn't gradual, one which recognizes the political reality in the Latin countries, as well as one which recognizes the mood for change on Capitol Hill.

It is somewhat ironic that the two major issues of the Bush administration in its early years are going to be in your arena, both the thrift issue and the LDC debt issue, and both I think are going to take substantial changes of policy if we are going to hope to come up with an approach which will meet the problems of the day.

Thank you, Mr. Chairman.

Chairman NEAL. Mr. Kennedy, I would like to thank you very much for joining us this morning. If you don't mind, let me continue with the Members of our subcommittee, and then I will come back to you immediately. Mr. Hoagland.

Mr. HOAGLAND. Let me ask you, Mr. Chairman, what your thoughts are about the likely level of interest rates in 1990.

Where do you think they are going to go from here?

Mr. GREENSPAN. There are a few questions that I am not allowed to answer. I am always afraid that someone behind me will take a hook and drag me back if I start to answer that, and that is one of them.

Actually, in an odd way—well, let me stop right there.

[Laughter.]

Mr. HOAGLAND. Let me ask you the question a little differently. I have some figures here indicating that the Congressional Budget Office expects interest rates to be 7.1 percent in 1990 as a rough estimate, and a consensus of economic groups is expecting it to be 7.5 percent.

I wonder if you might speculate as to what the range might be, the low end and the high end.

Mr. GREENSPAN. I appreciate your desire, but I am just inhibited in doing anything even remotely close to that. So I would appreciate it if I could just abstain.

Mr. HOAGLAND. In light of these other estimates that are floating around, do you think that the President's estimate of 5.5 percent as one of the economic assumptions underlying his budget is frankly a realistic estimate?

Mr. GREENSPAN. Well, as I have said in other testimony, remember that the President's forecast presupposes that the President's budget is initiated almost immediately. If, in fact, the budget deficit dropped sharply and as quickly as is indicated by the President's budget, it is reasonable to forecast that real interest rates would fall and perhaps fall quite significantly.

Having said that, I cannot go beyond that and talk about specifics. But one of the problems that I had when I was Chairman of the Council of Economic Advisers in the mid-1970's was trying to make an economic forecast in which all of the President's initiatives were assumed to pass when you know they wouldn't. You know some will, probably some won't, maybe most won't, but you can't go out and make an assumption that certain programs which the President is requesting be initiated by the Congress are turned down and make an economic forecast adjustment accordingly.

So that you have to look at the process and recognize that unlike the parliamentary system where the Prime Minister can, with the agreement of his Cabinet, promulgate a program which will automatically go through a parliament and be implemented and, hence, the economic forecast associated with that process is far closer to what we ordinarily think of as a forecast; whereas, in this country an administration and the President has difficulty in responding to these sorts of questions and basically because of the different nature of the context of the relationship between what you are proposing and what the economic outlook.

So while I can't comment on the specific numbers, I can say that they are assuming that if everything goes as they are suggesting interest rates will come down I think that is an appropriate forecast.

Mr. HOAGLAND. Well, it sounds like part of the assumption then is that Congress will act on the budget very quickly?

Mr. GREENSPAN. Yes, that is correct.

Mr. HOAGLAND. If we look at the amount of time that has taken Congress over the last 6 years, average that out, and would assume

that it will take that long for Congress to act on this occasion, given of course the very serious issues that are raised by the budget and the amount of time that Congress needs to address that in a truly deliberative fashion, is the 5.5 percent interest rate then unrealistic?

Mr. GREENSPAN. Well, I cannot respond further without essentially getting into areas which I feel uncomfortable discussing.

Mr. HOAGLAND. Thank you.

Thank you, Mr. Chairman.

Chairman NEAL. Mr. Kennedy.

Mr. KENNEDY. Thanks, Mr. Chairman.

Mr. Greenspan, there are many people that would feel that because of the Third World debt crisis that there are—that there has been a loss of revenues to this country by virtue of the loss of market share down in Central and Latin America, that we have lost by some estimates up to $20 billion worth of markets down there and over 1 million American jobs.

You talk in your testimony about the need for reform in some of the debtor nations. I last week had an opportunity to visit Venezuela, which just in the last few days has been willing to raise their own prices by over 65 percent as well as uniform exchange rates—unified exchange rates and a number of other measures which I think by anybody's standards they are willing to create the domestic reforms you would call for, but when you talk to them about their capability of gaining access to new money, it is simply not there.

We allowed this crisis on the FSLIC side, and it would appear to be exacerbating by the accounting mechanisms which we heard yesterday were put in place that did not force the banks to take losses when the losses were readily apparent in the secondary markets.

I wonder—you are obviously aware that the secondary markets on Third World debt are much greater in terms of the losses that would be potentially taken by banks—whether or not you feel that we should be taking actions to force the banks to recognize the losses rather than simply continuing the process of round tripping that seems to be the policy of the United States toward the debtor nations today, and if you do feel that we should force those banks to take the loss, then how do you feel that we should end up assisting them with the debt crisis?

Mr. GREENSPAN. Well, Mr. Kennedy, the secondary markets in these issues are difficult to evaluate. In other words, what you will find is that the ability to ultimately recover loans which are in default is not uniform. It will vary to a significant extent, depending upon the type of relationships a particular American commercial bank will have within a certain country. It will depend on whether they have branches or what their relationships are and what their capabilities are of by employing, say, debt/equity swaps or various different activities to convert a loan claim to cash.

In other words, we will often find the recovery rates and write-offs of completed transactions that many banks get significantly higher recoveries than prices in the secondary markets reflect. As a consequence, I don't think that one can just readily assume that those markets are the standard by which one determines what ev-

eryone has to write down to because a number of banks presumably have the capability of working out much better numbers.

Let me make one more final point.

To the extent that we think that these countries' policies will eventually bear fruit, we are hoping that many of these loans which are significantly discounted will as a consequence come back far closer to par. While we are acutely aware of the risks, and indeed we participate in the process by which so-called Interagency Country Exposure Reviews Committee evaluates these various different countries' risks, I think that it is a more complex problem than I would like it to be.

But we are sufficiently in control of the issue to feel somewhat comfortable with the regulatory process and how we in fact are functioning relative to it.

Mr. KENNEDY. You have given the most optimistic view I have heard in some time on the recovery potential for Third World debt.

You recognize at the moment Argentinean debt is selling for about 17 cents on the dollar, Bolivia about 11 cents, Brazil around 11 cents, Venezuela at 38 cents. To expect that these policies are going to enable those countries to pay off the full face value——

Mr. GREENSPAN. I didn't say the full face value. I specifically said closer to the face value.

Mr. KENNEDY. Fine. The fact is—I guess the point I was trying to make was that I think the same arguments could have been made about specific banks down in the Southwest, the capabilities of recovering on certain mortgages that they had loaned in the Southwest.

Mr. GREENSPAN. I don't disagree with that.

Mr. KENNEDY. A general point I was trying to make is, are you not concerned about the level of overall indebtedness to the specific institutions that we have in this country that you are regulating and the fact that what they do each and every year is simply roll over the debt, as in the real estate loans make an interest payment to the country to enable that country to appear as though it is making the full interest payment back to the bank?

In fact what you see each year is the overall amount of indebtedness to the country and therefore the bad loan to the bank just raises—you know, just it raises at an incredible rate.

Mr. GREENSPAN. Unless I am mistaken, my recollection of the latest date show continued reduction in exposure of American banks.

Mr. KENNEDY. That is because they have set up loan loss reserves. If you look at the five largest banks, the fact is that the overall level of indebtedness has increased.

Mr. GREENSPAN. The overall level of indebtedness of the individual countries has increased, but remember that there is also an issue here that the writedowns that the banks take is not the same thing as a writedown on the part of the country.

In other words, they are taking some writedowns and in many instances it is the result of debt/equity swaps and other mechanisms which essentially reduce the exposure of a number of American banks.

Mr. KENNEDY. My time has expired, sir. Thank you.

Chairman NEAL. Mr. McCollum.

Mr. MCCOLLUM. Thank you, Mr. Chairman.

I wanted to just have a couple of quick follow-up questions, but before I do that I would like to ask unanimous consent that Mr. Bunning be permitted to submit written questions to the chairman. He had to leave earlier.

Chairman NEAL. Without objection, so ordered.

[Questions from Mr. Bunning with responses from Hon. Greenspan can be found in the appendix.]

Mr. MCCOLLUM. Thank you.

Mr. Chairman, I am concerned about the inverted yield curve, and I have heard a great deal of discussion about that in economic circles in the last few weeks.

What significance should we place on that? Does that mean inevitably that we are going to have a recession in the next year?

I am not asking you to predict what you are going to do. I don't want to do that.

But a lot of economists are saying that it has happened and we are going to have one.

Mr. GREENSPAN. I think that the relationship between negative yield curves and recessions is a fairly good relationship.

I am not saying in every case, every recession has a negative yield curve or every negative yield curve has led to a recession.

But I think you have to be careful about evaluating what is causing the negative yield curve. It could occur for a number of different reasons, and what is clear is that when you have very strong short-term credit demands relative to long-term credit demands you will tend—leaving the supply side out—to move short-term interest rates up relative to long-term rates, and the cause of that can be varied.

In other words, prior to the 1980's, for example, inventory accumulation was often a major factor creating strong short-term credit demands, and that pushed the yield curve up, short-term yields up relative to long-term yields, and the economy tilted over, not because short-term rates were high but because inventory accumulation had gotten excessive, and in fact it was the inventory accumulation which both caused the recession and the inverted yield curve rather than the inverted yield curve causing the recession.

Mr. MCCOLLUM. We do not have the accumulated inventories right now, do we?

Mr. GREENSPAN. No, exactly, and that is one of the reasons why I am somewhat sanguine that the yield curve shape is not predicting a recession.

I should say, however, that in the 1980's the movement of the yield curve and inventories has been looser than it was in earlier periods, but I don't look at the yield curve as a magical event which somehow creates a recession. There has got to be a process by which that is happening, and it is by no means clear that we are at risk at this stage as a consequence of that.

Mr. MCCOLLUM. I have a broad monetary question.

The value of the dollar continues to be the focal point of a lot of people's attention. I think the last time you came here before us in the Humphrey-Hawkins it was the same question, and it is a general question.

I am not trying to get you on the spot of targeting these things.

But generally, are you happy with the value of the dollar in relationship to other currencies? Are we generally in the ballpark?

Mr. GREENSPAN. Yes. I would say for over a year the bilateral exchange rates against the dollar have been reasonably stable, and I think that that stability has contributed in part to a rather strong international economic environment. It is the policy of the G-7 countries to support stability and, as best I can judge, we as a part of that group will hopefully be supportive indefinitely into the future.

Mr. MCCOLLUM. You in your written testimony, at least, alluded to the fact that there would be some impact, although a little difficult to foresee, on possibly the conditions that would affect monetary policy of what we do here with regard to the savings and loan industry in the next few weeks.

Do you see a significant increase in liquidity in the marketplace, for example, or an increase in the M2 or M3 as a result of anything that is proposed in the Bush plan? Would there be a problem if there were an alternative that came up that did increase it more than you can see on the horizon?

Mr. GREENSPAN. There is no question that any large plan or private operation—for example, the RJR leveraged buyout, a $25 billion operation—will be clearly visible in the various different money supply numbers, as money is moved back and forth. Obviously monetary policy is not affected by that since we know it is a special case. Similarly, to the extent that any actions are taken with respect to the thrifts as a consequence of the pending legislation they would be appropriately evaluated. Differentiating real economic forces from technical movements in funds is clearly one of the activities which the Fed has to engage in.

Mr. MCCOLLUM. Thank you, Mr. Chairman. You have reassured us on three counts and answered all three of the questions about things that I thought the public might be interested in.

We appreciate it.

Mr. Chairman, I appreciate the time.

Chairman NEAL. Mr. Chairman, in thinking about the situation we now have with the so-called Social Security Trust Fund we are now building I have some questions. I also want to remind my colleagues that you were the Chairman of that commission that helped us resolve the problems that we faced with the Social Security System at that time and I think well into the future.

The situation we have now, as I understand it, is that we are on a course that builds ever-increasing reserves to be used by the folks who will be retiring around the years 2020, when the demographic trends indicate that we will have fewer people working compared to those that are retired than we have now. The projections are that we would have something like two working people for each retired person. Would you help me see clearly the implications for this, for our budget, and for those people.

It seems to me we are kidding ourselves a bit about the budget deficit because we are using those surpluses in the trust funds in terms of looking at the overall budget. Those surpluses would lead us to believe that the deficit is smaller than it really is. Down the road I am not so sure that we are doing the people who will be retiring at that time, around 2020, a great big favor for this reason.

I think the idea involved here was to have money available for those retirees; that is to say, the working people now help contribute to a fund so that the money will be there when they retire, but for that money to be available in cash someone has to pay off the bonds, and it seems to me that the working people of that time will have to pay off those bonds. I cannot see where else the money would come from, I cannot see much difference between that and running the Social Security System as we run it now; that is to say, essentially, a transfer program. Could you help me understand this a little bit better?

Mr. GREENSPAN. I am afraid not. I am afraid you understand it as well as I do, Mr. Chairman.

One principle that one can focus on is the notion of a retirement fund in which one saves part of current income, and invests it in income producing assets, so that there is a cumulative productive activity where real goods are being produced, so that at the point of retirement there is an accumulation of goods.

I specifically strip away the money issue because what we are really doing is we are saying I currently am producing so much in the way of physical goods, and I am setting aside some for my retirement.

What you have set aside should be productive, meaning capital goods which create additional goods, and you get in effect a much larger fund at the point of retiring in terms of goods than merely the individual amounts that you set aside.

Converting that into financial terms, it means that you are investing the monies that go into any retirement fund in income earning assets which will accumulate and be a claim at the end of the period, when that person is retired, a claim to those physical goods.

What we are doing now, with Social Security, however, is taking the surplus each year and consuming it. We are not putting it into goods which are set aside. All we are doing is building up the claims.

You are quite correct, in the future somebody has to meet that obligation, and when one strips away the financial characteristics of this process, it means that the goods consumed on retirement must be produced by those who are working at that time rather than having savings and capital investment built up.

This is related to what I mentioned earlier, that our main long-term economic policy problem is the savings rate. As we move toward an increasing ratio of retirees to workers the way in which the Social Security problem would be most effectively handled is by building up enough capital investment so that there would be more capacity to produce goods to support an increasing retired population.

You either save it and invest it now in physical terms, or the next couple of generations, starting, say, in the year 2020, must support the retirees of that time out of their production.

Chairman NEAL. I believe that we are essentially fooling ourselves on this subject and perhaps ought to make some adjustment, though I am not quite clear as to what that might be at this point.

Mr. GREENSPAN. If we can dedicate future policy toward moving toward a unified budget surplus, we would be recognizing that a

goodly part of the Social Security surplus should actually turn out to be real savings and therefore real investment.

I would like to believe we could move the Social Security trust funds out of the total unified budget and handle them separately, but I think what we are going to find, largely because of the interest payments that would then be required from the non-Social Security budget to the Social Security Trust Fund, those interest payments will become so large that we will have very grave difficulties controlling the non-Social Security part of the budget.

In other words, on the existing assumptions, my recollection is that the interest that is paid from the Treasury to the Social Security trust funds comes up close to 1 percent of GNP at the turn of the century, and what that suggests is that as the Social Security surplus rises very significantly a goodly part of that rise is caused by the interest payments coming from the Treasury, and therefore we have a corresponding very sharp rise in the non-Social Security deficit. In other words, one goes up sharply; the other goes down sharply; and it is only when you combine them that you get a moderate unified budget position.

So while in principle I would like to see the trust fund of Social Security handled independently of the total budget and try to balance the rest of the budget, as a practical problem I think that would be very difficult for us to do.

So my goals are much more modest in that respect; namely, to achieve a significant surplus on the unified budget, the total budget.

I think that would be a major improvement from where we stand today.

Chairman NEAL. Thank you, my time has expired. Mr. Chairman.

Mr. GONZALEZ. Thank you very much, Chairman Neal and Chairman Greenspan.

A conjunction of two events today impel me to bring this question up, which may not be directly related to the subject matter of this hearing.

One was the delivery of your letter to me replying to my January letter concerning the order approved by the Federal Reserve Board—I believe it was on January 20—with respect to the five banks applying for permission under the Section 4(c)(8) of the Bank Holding Act, and my letter to you expressed my concern.

First, I have had a cursory review of your letter, and I wanted to thank you for it very much.

But the other event that conjoins is the front page story of the Washington Post financial page, in which a byline article by Peter Cohen headlined "Banks Have Secret Trade Cost $14 million," and it says that Manufacturers Hanover Trust "today said a vice president in its Government Bond Trading Department lost $14 million for the bank last year through unauthorized secret dealings in Canadian bonds."

My question is if they can't handle the powers they have now in that respect, how in the world can you grant them these additional powers in which we questioned the implied authority as interpreted by your counsel on the Section 4(c)(8) of the Bank Holding Act.

Your letter is very—I think very respectful of the concern, and you expressed your concern, but I think it is significant and therefore I would like to express my wishes that you would consider these events or reaffirmation of our question directed to you and the fact that the committee will be specifically looking into this.

We know that Congress has not addressed this issue particularly, but we still think that that is no reason not to take into consideration what we consider to be a policy pronunzio mento, a new departure.

The last paragraph of the first page, you say:

"We were able to make the findings that the proposals met the proper incident to banking under the conditions established by the Board to prevent conflicts of interest or other adverse effects as well as provisions of the order relating to capital in the managerial and operational structure necessary to conduct activities."

I think this event now revealed in this newspaper story should add force to our plea with you to cease and desist in any issuance of orders and in fact consider retroactively the order that you have issued thus far.

I think this clearly shows that your apprehensions as expressed in your letter, and I respect your interpretation that you feel that by setting up the firewalls that you have sufficiently safeguarded the interests, all the national policy interests.

But I will say to you that Congress has not had a chance to really examine those firewalls and that even here in these powers already granted these banks we have this very dramatic revelation of the great possibility of abuse.

So I just wanted to bring that out and say that as soon as we give a fuller analysis to your letter we will of course be in correspondence with you again.

But I think this is very significant and very troubling because in effect what you stated here and what has come under discussion in another setting is—and you mentioned it in the leveraged buyouts—this frenetic frenzy in trading equity for debt is essentially what that order really permitted these five banks to one way or the other, sooner or later to engage in it.

It just seemed to me that this story in the Post that reveals that even the bank managers were not aware of this vice president's wrongdoing is a clear signal to us that—and I just wanted to reemphasize that.

Mr. GREENSPAN. Mr. Chairman, I think bank embezzlement has been extant since the first banks. I wish we could change human nature, but I am afraid we are always going to be confronted with a minority of people involved in banks who have their hand in the till.

The procedures that the vast majority of American banks have to try to minimize this phenomenon are really quite impressive. I don't think we will ever succeed in eliminating it unless we find some extraordinary way to change human nature.

We are acutely aware of the issues that you raise and are endeavoring to construct firewalls and capital adequacy specifically as part of that operation. Hopefully our order addresses the concerns which you have and which we have.

Mr. GONZALEZ. Well, I don't think that is a good comparison to make with good old-fashioned bank teller embezzlement, because this involved high, discretionary, managerial activities in a Canadian bond market.

Mr. GREENSPAN. I understand that, Mr. Chairman.

I think that the same motives, the same attitudes which creates the simple embezzlement in earlier years are now high tech and quite sophisticated. And I read the article that you are referring to, and I must say that I didn't finish it, so I may have missed certain things.

But remember, trading in Government bonds is not newly authorized under section 20. The same sort of problems that occurred in the Canadian bonds can occur in lots of the things which we currently allow as major activities within banks at this stage.

I wish we could find ways of eliminating it. And I suspect that as new technologies arise, there will be improvements in auditing what everybody is doing on a real-time basis.

But I don't deny that as the auditing procedures improve, there are going to be a few people who are just smarter than the auditing procedures and we will get this sort of thing.

I think the crucial issue is that we keep it at an absolute minimum and not let it get to a point where it would concern us.

Mr. GONZALEZ. Mr. Chairman, I must insist, though, that that is the issue, you see. The basic issue here is that by issuing that order for the first time, a considerable banking interest will be permitted, even though indirectly perhaps, to go into the risky ventures of trading equity for debt.

To me that is really not reducing the temptation, it is increasing it. It is almost like throwing a hunk of meat to a piranha. I am very much concerned, and I didn't want to make it look as if it were an ideological matter. It just seems to me it is a basic departure because my understanding is that your predecessor, Chairman Volcker, for a considerable period of time sat on identical applications and didn't seem—I could be wrong in that information, but that is what I understood—and didn't seem to be constrained to act within 91 days.

Mr. GREENSPAN. Well, I am unable to comment on that. I am just looking basically at what we are required to do.

All I can say, Mr. Chairman, is I will certainly convey to my colleagues your concerns.

Mr. GONZALEZ. I would appreciate that. And thank you very much.

Thank you, Mr. Chairman.

Chairman NEAL. Mr. Barnard, and then we will go to Mr. LaFalce.

Mr. BARNARD. Well, Mr. Chairman, conversely I want to compliment you on the decision that the Federal Reserve made in January. I want you to know that I feel like you were carrying out the objectives of Congress. Your regulation came well within the guidelines that the Senate bill passed, I think, 95-4. And I just want to congratulate you and the Federal Reserve for an outstanding job in approving of those applications.

Now I will yield to the gentleman.

Mr. GONZALEZ. Is the gentleman saying that he is yielding to the Senate 100 percent——

Mr. BARNARD. No, I am saying this committee, this Banking Committee on which you and I serve and have served for so long, also came forth with a bill that completely set up the procedure by which the Federal Reserve operated. In other words, the bill passed the House committee. Unfortunately, because of jurisdictional problems, we couldn't get it to the House floor. My prediction is that bill would have passed with flying colors.

Mr. GONZALEZ. But the fact is it never got anywhere.

Mr. BARNARD. It didn't, not because of us. This committee passed it out.

Mr. GONZALEZ. It still did not get passed by the House. The gentleman is telling me that he is willing to prostrate himself before the awesome powers of the Senate?

Mr. BARNARD. I will certainly do it because they were right. [Laughter.]

Mr. BARNARD. They did it twice, and I wish we could have done it even once.

But I think that you did exactly the right thing and maybe that will be the impetus for this Congress to get off of its katukas and get something done because I am concerned—and you bring it out in your testimony—I am concerned with the financial structure of this country. I am very concerned about it. And I think that we are going to continue to suffer institutionally until we take some initiatives to change it.

Which brings me up to my question: Do you think we are moving fast enough in the restructuring of our financial industry to approach the European Community's decision to, in 1992, deregulate some of their financial policies? Are we moving fast enough to be able to provide reciprocity in that regard?

Mr. GREENSPAN. Leaving aside the issue of reciprocity, which is a technical problem which we are currently involved with, I do believe that the implementation of the risk-based capital guidelines, is an international agreement, will bring the competitive relationships together on a worldwide basis, and we are closely involved with our counterparts in the other countries of the G10, most of whom are European. And we seek continuing dialogue and eventually complete agreement between ourselves and our European colleagues on exactly how to get intra-inter-area regulation on a consistent basis.

Mr. BARNARD. Regulation is one thing. But I am talking about structure from the standpoint of being able to offer the services, the competing services that our foreign banks can offer and which, frankly, the marketplace is demanding in this country.

Mr. GREENSPAN. I would say that until we repealed Glass-Steagall—

Mr. BARNARD. Good.

Mr. GREENSPAN. Until we essentially at least de facto create some form of broad interstate banking which essentially gets to the Douglas amendment——

Mr. BARNARD. Amen.

Mr. GREENSPAN. I would say that we are probably at something of a disadvantage. I wouldn't want to say that we are second-class

competitors. We are not. We do have great capabilities. But I think that we would have superior capabilities with a change in structure, creating what I would consider a more viable commercial banking industry.

Mr. BARNARD. Now, what the Fed has done in the regs, you are only permitting—you are approving these applications up to 5 percent of their profits, the net worth. Right?

Mr. GREENSPAN. No; of revenues of the subsidiary.

Mr. BARNARD. Five percent of the revenues.

So, Mr. Chairman, relating back to your argument, I cannot see how 5 percent is going to greatly, greatly impair the risk of these institutions. In fact, I think that you can't characterize what the Fed has done by one institution that has problems.

Mr. GONZALEZ. Well, if you will remember, 5 percent got President Truman and President Eisenhower's advisors in a lot of trouble. I don't know if you are old enough to remember that.

Mr. BARNARD. You're talking about the——

Mr. GONZALEZ. I was being facetious.

What I am saying is I share the gentleman's concern about making sure that the Congress addresses the issue of bank powers or deregulation, whatever the point of view is.

What I am saying is that my position has been very rather rudimentary, and that is that in deregulating we make sure that we have the same care as we had in imposing the regulations to begin with.

So that in this area in which the Federal Reserve Board is interpreting for the first time that section 4(c)(8) of the Bank Holding Act and the contention is that a sufficient firewall has been created between the banking institution itself, which incidentally involves insured funds and the subsidiary that would be engaged in that activity——

Mr. BARNARD. To regain my time——

Mr. GONZALEZ.—Congress has got to set the policy.

Mr. BARNARD. Let me say this. The Fed did exactly that. They put the same firewalls in their reg that the Senate imposed in their bill and which was in our bill. So, I cannot see that they were carrying out anything contrary than what we sort of directed to be done, although we didn't get it passed out.

Mr. GONZALEZ. If the gentleman would yield further because——

Mr. BARNARD. As long as you give me the time.

Mr. GONZALEZ. I don't know that I agree with the gentleman's interpretation of the Senate-passed version as being the same or even comparable to the decision here.

Mr. BARNARD. Would you take my word for it?

Mr. GONZALEZ. Not exactly. [Laughter.]

Mr. BARNARD. Would you let Chairman Greenspan respond to the firewalls?

Mr. GONZALEZ. Yes. But that is the issue.

Mr. BARNARD. He will tell you that the firewalls in the Fed reg was absolutely exact as to what Congress included in the legislation.

Am I correct, Mr. Greenspan?

Mr. GREENSPAN. I'm sorry, I lost that. [Laughter.]

Mr. GREENSPAN. I got so enthralled with this dialogue I lost the train.

Mr. BARNARD. I don't go to sleep when you talk. [Laughter.]

Mr. GREENSPAN. I was scarcely sleeping. I was just enthralled.

Mr. LAFALCE. Would you agree that none of these problems would have happened if the Congress had gotten the pay raise. That's the issue. [Laughter.]

Mr. BARNARD. Mr. Chairman, I have read the regs very carefully. Didn't you impose in those regulations the same firewalls that we enact—which were present in the Senate bill and which was in our House bill?

Mr. GREENSPAN. Yes, with the exception of the use of the logo.

Mr. BARNARD. I was against that to begin with.

Mr. GREENSPAN. We did authorize the use of the same name.

Mr. BARNARD. That is just good common sense.

My time is expired. Thank you.

Chairman NEAL. Mr. LaFalce?

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

Mr. Greenspan, I am not a member of this subcommittee, but I did want to take this opportunity to come and have a little dialogue with you. Unfortunately I was chairing a full committee hearing in the Small Business Committee, so I could not get here until about 25 minutes ago.

Let me express my regrets. I believe it will probably be the last time we are going to be seeing Mike Bradfield, sitting behind you, as general counsel.

Mr. GREENSPAN. That is correct.

Mr. LAFALCE. When do you leave, Mike?

Mr. BRADFIELD. March 1.

Mr. LAFALCE. Let me say that I think that is going to be a very egregious blow to the Federal Reserve Board, the Congress, and the public interest. I regret that very much, and I think the public will regret that very much, too.

Mr. GREENSPAN. We certainly subscribe to those views. If you want to try to talk him out of it, please do.

Mr. LAFALCE. I am sure he is not going to make as much in the private sector as he is now.

Mr. GREENSPAN. Certainly the spiritual values are significantly less. [Laughter.]

Mr. LAFALCE. Chairman Greenspan, regarding some of the previous dialogue that took place, let me just say that of course Mr. Volcker couldn't act. He was under a legislative dictate not to act. There was a legislative moratorium, so he couldn't. As soon as the legislative moratorium expired, there was an obligation pursuant to the terms of the Competitive Equality Banking Act to interpret existing law, not to interpret the bill that was passed by the Senate, not to interpret the bill that the House Banking Committee passed, but the law that was on the books. And you had a mandate to interpret that. You did interpret it. And in a manner almost identical to the way you interpreted that existing law in the past that had been upheld and sanctioned by the highest courts in the land.

For anybody to think otherwise is, in my judgment, not to have a basic understanding of the law.

With respect to some other comments regarding 1992. This morning I had a meeting with Sir Roy Denman, and I am very worried. You skirted around the issue of reciprocity, and you suggest that, if Europe does go to a reciprocity standard rather than national treatment, and if we do not change our banking laws, the United States could become a third-rate power.

It is that bad. We have to be very, very careful about that. If Europe then would apply the reciprocity laws to the United States firms incorporated within Europe, that just aggravates the situation even more.

But my main concern right now is the following issue. It has come to my attention that changes may recently have been made regarding the procedures governing Federal Reserve lending from your discount window. It is my understanding that—please confirm this or correct this or otherwise respond—the presidents of the Federal Reserve district banks have agreed with you to make advances to both insolvent S&Ls and the Federal Home Loan Bank System as part of the effort to handle the funding problems of the insolvent thrift institutions. In doing so, the Federal Reserve would accept FSLIC paper as eligible collateral for its advances. It is my understanding that the advances are to be approved centrally rather than by the district banks themselves. And that this approach differs from past procedure.

I would appreciate your responses to these questions:

What, if any, changes have been made or are being contemplated in the policies and procedures governing Federal Reserve lending from the discount window as part of the effort to handle the funding problems of the insolvent thrift institutions?

Specifically, what impact would such changes have on the quality of the paper the Federal Reserve may be accepting as eligible collateral?

What would be the respective roles of the Federal Reserve Board and the district banks in authorizing any such lending?

Would those procedures comport with the intent of the 1951 accord between Treasury and the Federal Reserve regarding Federal Reserve purchase of Government paper?

Would those procedures bring about a fundamental change in the relationship between Treasury and the Federal Reserve? Wouldn't the new procedures be akin in a certain sense to Third World practices?

Mr. GREENSPAN. Well, Congressman, as part of the overall thrift initiatives which the Secretary of the Treasury is outlining today, we have certain——

Mr. LAFALCE. Today? You mean February 22?

Mr. GREENSPAN. Today. He is at the Senate Banking Committee today.

Mr. LAFALCE. OK.

Mr. GREENSPAN. We are involved in constructing certain liquidity fallbacks. We will be releasing the details relatively shortly.

Mr. LAFALCE. Well, it is my understanding that these types of judgments have been made, and these judgments would give me cause for serious concern.

Mr. GREENSPAN. If you would like to give us your list of concerns, I will respond to them in detail.

Mr. LAFALCE. I have put them in letter form and have read them off. I think this is a fundamental change in Fed policy. And if so, if you are even contemplating it and contemplating implementing it in the near future, in fact, if you have already made a decision, I think you have some obligation, Mr. Chairman, to share with us the competing considerations.

Mr. GREENSPAN. We do, but I would not characterize it in the terms in which you have just characterized it. It is an extension of existing procedures and existing law.

Mr. LAFALCE. Almost of a different kind as opposed to degree.

Mr. GREENSPAN. Why don't you wait and see. It is better I give it to you exactly rather than vaguely on the issue you are raising.

Mr. LAFALCE. I will await your response.

Thank you.

Chairman NEAL. Mr. McMillan?

Mr. MCMILLAN. Thank you, Mr. Chairman.

I am likewise not a member of the subcommittee, but I wanted to come by and ask the chairman a couple of questions.

I was examining some of the Senate hearing proceedings yesterday, and I was curious. I think Senator Heinz was engaging you in some questions on the Federal funds rate. Coincidental with the high budget and trade deficits we have seen in the 1980's. And he was inquiring as to why that Federal funds rate was so high.

Your response to that—and why it has been so historically high—your response to that was there were inflationary expectations built into that; it was being driven by that.

My question is: Then how can that be the case, since by the nature of the Federal fund rate, these are overnight loans and thereby would not incur that inflationary risk? Maybe you can clarify that for me. I was just curious.

Mr. GREENSPAN. That is an interesting question because clearly the issue was unambiguous, say, for 1-year paper and out. And you will often find that the implied inflation premium in debt instruments carries all the way back to short-run paper.

I think the reason why this occurs is that you can arbitrage continuously even though you might say it is overnight paper. There is an implied annual rate of inflation even overnight. And so that embodies itself in the levels of interest rates.

It is true that in general, this being a period that is quite different, the average yield curve rises. In other words, the lowest rates are the shortest term. It is not clear whether in fact that is a risk premium increase or any other number of things.

There are also some people who think that inflation premiums don't embody themselves fully in those shorter rates. But I frankly doubt it. I think they are there and they are comparable to 5-year, 10-year, 20-year rates.

Mr. MCMILLAN. My concern was that maybe the inflationary card was being overplayed a little bit. When you look at history and see what Great Britain is going through right now with its surplus in their budgets, that has not had the coincidental reduction in interest rates and inflation that you predict for our own economy.

Mr. GREENSPAN. I think it is a different situation in Britain. As the central Government surplus arose, the savings rate collapsed,

came sharply down, so that in a sense they were offsetting one another. The British numbers are very unusual and atypical.

Mr. MCMILLAN. When you look at the United States in the 1980's under President Reagan, for 8 years we saw unprecedented deficits but also very low inflation.

Again, I am not sure that the correlation is there that you are predicting for our own economy.

Mr. GREENSPAN. I think the process is complex, but I think it is there.

Mr. MCMILLAN. Let me ask one final question.

Under one of your predecessors, Chairman Martin, for almost 20 years, actually, 18 or 19 years, there was a 1 to 2 percent real Federal fund rate that was in place there for 19 years.

Why does the Fed not want to pursue those targets that worked very well from 1951 to 1969 of a real Federal fund rate of 1 to 2 percent as opposed to the currently historically high rate that we see today?

Mr. GREENSPAN. We would be delighted if we thought it was implementable. In other words, it is not strictly an arbitrary judgment on our part that we prefer higher rates. On the contrary, if we had the capability at this stage in the total system of bringing real long-term and short-term rates down, and inflation premiums to zero, that would be the ideal system.

In other words, I think high interest rates inhibit economic growth.

Mr. MCMILLAN. Have we have had any experience in trying that in the last several years?

Mr. GREENSPAN. Sure. There have been a number of countries which have endeavored to do that, and failed.

Mr. MCMILLAN. Thank you, Mr. Chairman.

Chairman NEAL. I would like to commend—there is a report that we issued, and also there was testimony we received yesterday, Tom, that is very fascinating on this subject, very thoughtful, really complete. And I would commend it to you. We will get you a copy if you would like. I think you would really enjoy it.

Mr. McCollum, and then we will go to Mr. Vento.

Mr. MCCOLLUM. I just have a follow-up sort of pregnant question that has occurred to me since I have been sitting here, Mr. Greenspan, that we didn't ask you this morning. Nobody on the panel did.

You opened up your testimony by commenting on the CPI this morning, 6 percent, 7 percent, I guess, is the average of the year on that, and nobody asked you were you surprised by this figure?

Mr. GREENSPAN. Not fully, because obviously we had the producers' price index earlier. And one can translate the producer price index into the consumer price index for the goods parts.

I would say that it was a shade higher than I would have expected, but not a great deal.

Mr. MCCOLLUM. Would you be surprised if there were a similar increase in the CPI next month?

Mr. GREENSPAN. I would just as soon not respond to that.

Mr. MCCOLLUM. Fair enough. I just wanted it on the record that we didn't fail to do our job in asking you those two questions.

That is all I have, Mr. Chairman.

Chairman NEAL. Mr. Vento?

Mr. VENTO. Thank you, Mr. Chairman, for inviting me to the oversight hearings on monetary policy.

Chairman Greenspan, what would you say should be our major goals over the next year dealing with the dollar value?

Mr. GREENSPAN. I think, Mr. Vento, that we have had over the last year, what I would consider to be a successful degree of exchange rate stabilization. And as I indicated earlier, I think there have been positive benefits that have accrued from that with respect to economic stability in the world. We—in this case being the Group of Seven—will be proceeding to sustain that degree of stabilization.

Mr. VENTO. Well, it has been somewhat uneven within that Group of Seven, hasn't it, in terms of the various trading partners? Canada, our major trading partner, remains a problem in our mind.

Mr. GREENSPAN. The bilateral exchange rates have fluctuated. Even within the EMS there have been fluctuations. The Italian lira has gained quite considerably relative to its European trading partners in the most recent period. And there have been periods when the dollar has strengthened, gone up, gone down, and there have been fluctuations.

But I think it is appropriate to describe the total system as one which has a very substantial degree of stability, enough stability to create a level of beneficial incentives to the system.

Mr. VENTO. On a different note, Chairman Greenspan, during the 1980's, I guess, as Mr. McMillan implied, we had these tremendously large deficits that nearly tripled the total national deficit from $1 trillion to $3 trillion. And the fact is that economically—at least on the surface—nothing seemed to happen.

But one of the phenomena also that has accompanied that has been this real interest rate, the difference between inflation and real interest rates, has been that the margin has been considerably higher than historically what it had been before that.

Mr. GREENSPAN. I think that is very much the point. As best I can judge, the increase in the deficit in the 1980's has increased real interest rates and that has in conjunction with the decline in savings, has significantly slowed net investment in the United States.

In fact, net investment as a percent of the gross national product has been declining, and it is now at levels which I consider unacceptably low. That of necessity slows the rate of increase in productivity and of necessity lowers the growth in the average household's standard of living.

So, I think it is mistaken to say that we have had this extraordinary increase in the deficit and nothing happens. I think that we have seen very material changes as a consequence of that.

Mr. VENTO. I think whatever the reason for the inflation rate being low, the interest rates have not been low. But on the other hand, as we now step into a period apparently where the consumer price index is rising, I guess, in a sense, obviously there is a tendency on the Federal Reserve Board to begin to move the interest rate up.

I think the concern is that I think when interest rates get a high as they were in the late 1970's or early 1980's, that they become, I think, somewhat—I think it becomes unworkable. I think, in fact, that they ran up too quickly at that time and add to the problem rather than detract.

I don't know what the right balance is, but I think that the signals coming out of the Federal Reserve Board, whether you want them to come out of the Federal Reserve Board or not, the signals coming out are that you are prepared, it seems to me, with a trigger finger, and the Board is, to raise those interest rates, based on the month-to-month changes in terms of the CPI.

Is that the impression that you want to come out of the Federal Reserve Board?

Mr. GREENSPAN. Well, I certainly don't think that we, so far as policy is concerned, are responding to individual numbers per se. We don't respond except when some significant new piece of evidence occurs.

I would say to you that our policy is based on a much broader appraisal of what is going on in the economy and the processes which are changing it. And it is fairly rare that an individual statistic by itself makes a major change in the overall appraisal.

So, I would not want to argue that in fact we follow the individual statistics. What we are looking at and what we respond to is process. And as I have said earlier, to the extent that we perceive that the process is moving us in an inflationary direction, it is our judgment that if we can suppress that, we will end up with lower interest rates in the end rather than higher.

More importantly, the capability of suppressing destabilizing inflationary forces enables us to prolong an economic expansion and also when the inevitable recession hits, since the business cycle has not been repealed, that recession will be mild.

The general thrust of our policy is directed towards stability, towards preventing excesses from accumulating as they did in 1979 and 1980.

Mr. VENTO. I understand that you want to suggest that you are behind the curve in terms of what is happening, not the cause of the curve.

Mr. GREENSPAN. No, I wouldn't want to say that we are behind the curve. I would say that we are endeavoring to respond concurrently and in advance, when appropriate, to market forces as we perceive them to be evolving.

Mr. VENTO. I guess what I am trying to convey is that whether you like to be perceived this way or not, you are being perceived that way today, I think, in terms of obviously even in the sense that are differences between the new administration and the Federal Reserve Board, I am sure, which are of great concern to you.

But the fact is that with the high real interest rates that we have had, I would think that that would give you some greater degree of flexibility with regard to interest rates. In other words, to try to use up some of that, the real interest rate, a buffer that has existed for some time, rather than moving into a monetary policy mode in which interest rates go higher.

I think the real concern I have with that—and I am certain it is one that you have given no small amount of thought to—is that we

lose our capacity to have an impact if we in fact eat up or raise or limit the monetary policy, raising rates indirectly or directly or however you explain your effect on interest rates.

But the fact is, using up that capacity simply leads to even higher rates in an effort to try to slow down the impact of an economy if you use it at the wrong time, because it is very hard to go up and down without somebody reading some signal out of it.

Right now, I think we have less flexibility with monetary policy to some extent in this type of environment where we have $3 trillion debt and we have the trade problems and other things, than we would otherwise would have.

I am concerned that we not over-use this capacity. It is high and will have a very negative impact, I think. And, I am concerned about it.

Thank you, Mr. Chairman.

Chairman NEAL. Thank you, sir.

The theme of these hearings is to try to help us all come to a little better understanding of what is going on in the economy and how it works and everything.

Chairman Greenspan, would it be fair to say that the high interest rates that we experienced during the late 1970's, early 1980's, until we really got a handle on inflation, were the result of the inflation? That is, clearly when any lender or investor realizes that there is a particular level of inflation, they are not going to lend money at lower than that rate, and certainly they have got to lend money at a little higher than that rate or they would, in effect, be giving it away. As a general statement, it seems to me sensible to think that any time that you have inflation in the economy, you are going to have interest rates higher than that rate of inflation. And if you look at that particular period of time, it is clear that those high rates were because of that high rate of inflation.

It seems to me, furthermore that the historically high real rates of interest now are due to not only the rate of inflation that we have, but some expectation that we really haven't gotten inflation under control—that investors and lenders have seen that we have not had a commitment in this country to controlling inflation historically and that there is still the worry out there that we won't control it. We now have inflation creeping up a little bit, and clearly you have responded in an appropriate way, I think. But still there is that perception, that worry, that inflation is not under control, and that in today's interest rates there is an inflationary expectation.

Isn't it also fair to say that even though you cannot attribute inflation to budget deficits, you certainly can attribute a number of other evils to budget deficits. The trade deficit, it seems to me, is a result of budget deficits and that the high real interest rates are partially explainable in terms of the budget deficit. That is, if we either did not have the budget deficit or if we had a clear plan, clear, credible plan to control it, that real interest rates would come down.

I wonder if you would comment on that series of statements.

Mr. GREENSPAN. Mr. Chairman, I think that one can look at inflation as affecting total nominal interest rates in two ways:

One, the degree of instability that inflation creates increases the risk premiums involved in interest rates increasing real interest rates.

But over and above that, to the extent that the current inflation rate is projectable into the future, the average expected inflation rate embodies itself as an addition to the real rate as an inflation premium to get a nominal rate. So that inflationary instability affects not only the inflation premium but also the underlying real rates as well and creates much higher levels of nominal interest rates than the mere change in inflation expectations would seem to indicate.

That is true not only in the United States but it is true in most any country one observes. And it is especially interesting to observe what occurs in some of the countries with very high rates of inflation where the difference between the nominal rate and the then-current rate of inflation is a noncredibly large rate of real interest.

One of the problems that is involved in many of the debtor countries who are plagued by heavy inflation is the difficulty of getting capital investment financed and going when one is dealing at high real interest rates, real rates very substantially above those that exist in the industrial world, for example.

Chairman NEAL. I wonder if you would go on and say something about the relationship of the budget deficit and interest rates. I am talking about the on-budget deficit and the current level of interest rates.

Mr. GREENSPAN. While there is a good deal of dispute among economists and statisticians about the relationship between budget deficits and real interest rates, it is very difficult to come away from any analysis of budget deficits without concluding that they raise real interest rates.

Without getting into the details of the analysis, essentially what is involved is that a central Government, or in our case the Federal Government, has the capability of preempting any amount of credit it perceives it needs to finance the difference between receipts and expenditures.

In a sense, the demand elasticity is such that no increase in interest rates will prevent the central Government from going in and borrowing, whereas rises in interest rates will eventually crowd out the private borrowers because there will become levels of interest which they would find intolerable—and that includes State and local governments.

As a consequence, the greater the proportion of Federal borrowing relative to total borrowing, other things equal, the higher real interest rates. While evidence is very crude in, say, looking at our budget deficits and our estimates of long-term real interest rates, which are difficult to make, I think one sees a clear pattern of rising real long-term rates as we get into the 1980's, a period of large, expanding budget deficits.

I think that, in turn, has had the effect of foreshortening the average life of the GNP. And by that I mean the average service life of the goods we produce. As the budget deficit has gone up and real interest rates rose, we produced relatively fewer very long-lived assets.

In fact, the average has shrunk very materially, and we see such things as the long-term commitments for research in the private sector fall relative to development, which is by definition the short term, sort of pattern of expenditures.

So, what is involved in this process of the very large Federal deficit is to enforce a foreshortening of the time frame which American production is involved with, which is another way of saying we don't have a long enough time preference and that, in turn, is another way of saying that we are not saving enough.

The whole process is interrelated in a way which I find frankly rather disturbing.

Chairman NEAL. That would be the key, wouldn't it? To me, that is the flaw in our system of Government. It is the most fabulous system in the world, but there is a pervasive incentive to look at the short term everywhere. It is true in our Government—our short-term election cycles. It is true in business—there is certainly a strong incentive to look at quarterly, semiannual, and yearly returns. You indicate that one outcome of it is that we don't save—we don't look to the longer term. I don't know what to do about it. I think you have indicated a certain frustration also.

Mr. GREENSPAN. I would say this, Mr. Chairman. Secretary Brady feels much the same way and is concerned about it, and he has initiated at the Treasury Department studies to see what in fact one can learn about policy implications of this whole process. And we will endeavor to assist where we can. But I think it is a very worthwhile endeavor.

As I said earlier, I think the problem of savings—more generally, savings and investment—is a crucial domestic economic problem that we have over the long run.

Chairman NEAL. Mr. Vento?

Mr. VENTO. Thank you, Mr. Chairman.

Chairman Greenspan, 10 years ago we talked a lot about crowding out in terms of the credit markets. Why don't we see that phenomenon occurring today, which is a process that—there seems to be an abundance of credit, it anything.

What is the phenomenon?

Mr. GREENSPAN. Actually, Congressman, I think we are seeing crowding out. In fact, it is the process of the deficit crowding out private demands, which is the cause of the rise in real interest rates. In that sense, I think it is more relevant now than it was when the issues first arose, and they arose, I think, more than 10 years ago.

Mr. VENTO. I said we talked about it at that time.

Mr. GREENSPAN. That's right.

We talked about it, and I think there was a good deal less crowding out back then, before 1977, than there is now.

I think that one measure of crowding out and perhaps one of the very few ways in which one can even get a handle on this, is to try to determine what is in fact happening to real riskless interest rates.

Mr. VENTO. I thought perhaps one reason was because the difference between inflation and the rate, the real interest rate itself, makes it less attractive to borrow and so you have an abundance of

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credit. If you have inflation at 5 percent and real interest rates at 11 or 12, it obviously has an impact in that area.

So, the other—and you may care to comment on that, I don't know—but the other question—and I don't know if it was asked; I obviously walked in here just moments ago, and I apologize for that—was the issue with regard to the financial institutions problems and the tendency in terms of those troubled institutions bidding up the deposits and the payment and so forth, and the impact of that, that that is going to have.

Now, we are making a decision obviously to work more aggressively in terms of closing troubled institutions or failed institutions or failing institutions. And I think that is appropriate.

What I heard Mr. LaFalce allude to is the fact that you are now going apparently to work within the powers of the Federal Reserve Board to do some lending or some opening up of the discount window, in a different means or manner than has been the case in the past, to financial institutions under existing powers of the Federal Reserve Board, according to you.

Mr. GREENSPAN. I don't want to——

Mr. VENTO. I don't know if you want to comment on that. But I am just asking. I guess my concern is what is the—it gets back to the bidding up the price of money and it gets back to what the effect of both the anticipated congressional action is, the regulator action, and your action with regard to discount windows, which apparently you are not ready to talk about today. You are letting Mr. Brady take the lead in that?

Mr. GREENSPAN. Well, we are quite aware of the issue and have been trying to monitor as best we can the question of the spreads on deposit rates at various different types of institutions, especially in the southwest. And one of the things that clearly is a concern is that as you move into these so-called GAAP insolvent institutions, the mechanism of funding is a continuing issue, and it is one where there has been a good deal of discussion.

So, I would say that, without getting into too much detail, we are obviously aware of that phenomenon, and it is something which disturbs us, as it disturbs the institutions themselves.

Mr. VENTO. You think the existing plans put forth have a potential to reduce the spread issue, as you refer to it?

Mr. GREENSPAN. I would say eventually, sure. As you, the Congress, move expeditiously to implement the administration's program, I would assume the result will be to bring those spreads down quite significantly.

Mr. VENTO. Higher interest rates themselves, of course, would help these institutions by and large, wouldn't they?

Mr. GREENSPAN. I'm sorry?

Mr. VENTO. Higher interest rates by themselves would help these institutions, wouldn't they?

Mr. GREENSPAN. Well, one of the problems that we have with a number of these thrifts is the so-called maturity mismatch; namely, they hold longer-term assets, on average, and shorter-term liabilities. And as interest rates go up, clearly the profit margins fall, and in fact that has been one of the major problems that the financial system has with mismatched balance sheets.

Mr. VENTO. That was especially true in this inversion. It was especially true in the early 1980's. I don't know that it is the case today. But your statistics indicate that that still persists?

Mr. GREENSPAN. True. Not as much as then, but it still does.

Mr. VENTO. I thought it was much less of a problem.

Well, I appreciate at least that you are able to refer to my questions tangentially, but I understand—I just think that it is a real concern, and I am very interested to learn. I know that the Federal Reserve Board dismissed out of hand any suggestion that they would try and absorb some of the loss through the Federal Reserve discount window. And I am fascinated by this reference that Mr. LaFalce made.

Mr. GREENSPAN. I think what you are referring to is my comment on a suggestion that the income of the Federal Reserve be used to solve the S&L problem. In other words, instead of our diverting our income to the Treasury, we divert it elsewhere. And I have argued that that was just playing with the books because essentially it has precisely the same effect on the deficit since our payments to the Treasury are part of budget receipts. And if those are lowered, it increases the deficit.

Mr. VENTO. That is not what I was referring to. I was referring to the suggestion that the discount window be utilized to lower the overall costs of money to troubled or failed or failing institutions as a means of rectifying their difficulty over a period of years.

Mr. GREENSPAN. No, that is not——

Mr. VENTO. Manipulate monetary policy or interest rates to them to give them——

Mr. GREENSPAN. That is a different issue from what we are discussing here.

Mr. VENTO. That is the issue I was discussing. You were discussing something different. I said you dismissed that out of hand and obviously don't want anything to do with it. But I don't know, but it sounded like perhaps that is something that was going on.

Thank you, Mr. Chairman.

Chairman NEAL. If there are no further questions or comments, this subcommittee will stand adjourned, subject to the call of the Chair.

Mr. Chairman, thank you, sir, for being with us again and for staying with us for such a long time.

Mr. GREENSPAN. Thank you very much.

Chairman NEAL. We are adjourned.

[Whereupon, at 1:04 p.m., the hearing was adjourned, subject to the call of the Chair.]

REVIEW OF THE REPORT OF THE FEDERAL RESERVE ON THE CONDUCT OF MONETARY POLICY

Wednesday, March 1, 1989

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON DOMESTIC MONETARY POLICY,
COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS,
Washington, DC.

The subcommittee met at 10:05 a.m. in room 2222 of the Rayburn House Office Building, Hon. Stephen L. Neal [chairman of the subcommittee] presiding.

Present: Chairman Neal, Representatives Hoagland, McCollum.

Chairman NEAL. I would like to call this session of the subcommittee to order at this time. Today we conclude our hearings on the Federal Reserve's February 1989 Monetary Policy Report to Congress.

Last week, Chairman Greenspan testified that he felt the goal of monetary policy should be price stability and that we should move toward that goal over a time period no greater than 5 years. That response from the chairman of the Federal Open Market Committee was extremely important: it establishes a framework for evaluating monetary policy in terms of specific concrete results over a realistic time period.

Our panel today has been asked to examine and evaluate the Fed's monetary policy report. Our three witnesses are: William Melton, senior economist for IDS Financial Services and author of a book entitled "Inside the Fed: Making Monetary Policy"; Joel Popkin, president of his own economic consulting firm and a noted expert on wage and price behavior; and Burton Zwick, senior economist for Kidder, Peabody, Inc.

Two other witnesses, Robert James, chairman of MMS International, and Alan Reynolds, senior economist for Polyconomics, Inc., accepted our invitation to testify but then had to withdraw for reasons beyond their control. Both, however, have completed their prepared testimony which we will make a part of the permanent record of this hearings.

[The prepared statements of Mr. James and Mr. Reynolds can be found in the appendix.]

Chairman NEAL. It is a pleasure to welcome our panel this morning. Thank you all very much for helping us on this subject and we will put your entire statements into the record. I would urge you to summarize, if you will; that will give us a little more time for questions and answers.

We will go left to right starting with Mr. Popkin.

STATEMENT OF JOEL POPKIN, PRESIDENT, JOEL POPKIN AND CO.

Mr. POPKIN. Thank you for inviting me here today to give my view of the outlook and problems our economy faces in 1989 and the appropriateness of the policy the FRB proposes to pursue this year.

The forecast on which it is predicating its monetary policy this year is that non-farm economic growth will slow to 2 percent from 3.4 percent last year and inflation will accelerate by ½ of 1 percentage point.

That forecast underlies and is presumably interactive with this year's FRB policy objective of reducing money supply growth, M2, by 1 percentage point to a 3 to 7 percent range from a 4 to 8 percent range in 1988. M2 actually rose 5.3 percent last year, which is about the mid-point of the range that Fed policy has targeted at this year, the 3 to 7 percent range.

If it were—if policy were in fact to come in at the lower end of the 3 to 5 percent range, say at 3 percent, that would be about 2 percentage points slower than monetary growth last year. This is not a very restrictive monetary target.

The FRB forecast and its policy response, I think, underscore the basic dilemma that the monetary authority faces in 1989—even if it achieves slower growth for the year, such a so-called "soft landing" will not keep inflation from accelerating further.

That's not a new development. Throughout the 1960's and 1970's, except for the two OPEC-induced periods of skyrocketing oil prices, the reduction in economic growth, or even a garden variety recession lasting 6 to 9 months, did little to reduce inflation. The best such recessions accomplished was a temporary halt in the acceleration of the rate of inflation.

To reduce the inflation rate typically requires a very restrictive monetary policy, one that the Nation seems only willing to tolerate under unusual circumstances—such as the double-digit inflation of 1979 to 1981 attendant to the second OPEC price increase.

Except under such circumstances, which only food and energy commodities are important enough to trigger, inflation, once begun, continues to drift upward, not dramatically, but inexorably. It is the result of price-wage interactions that are difficult to reverse unless unemployment rates rise close to double digits or capacity utilization rates fall below 80 percent.

Some illumination of this difficulty is provided by considering that when the Fed slows the economy or puts it into recession, the first thing that happens is the productivity growth slows or turns negative. Thus, even if wage rate increases don't accelerate, unit labor costs shoot up. Unless the economy is in a steep recession, some of that rise in unit labor costs will pass through into prices and will contribute to some acceleration, further acceleration in the inflation rate. This explains why the FRB anticipates in its 1989 scenario that inflation will actually accelerate this year, despite its policy aim of gradually making monetary policy more restrictive.

But the FRB's scenario for 1989, in my opinion, is not likely to eventuate anyway. In fact, it appears that near-term wage and price developments are likely to force the FRB to a policy stance more restrictive than it contemplated in its latest Monetary Policy Report. Price reports almost as discouraging as those of January will occur more often, money growth will be slower than targeted and interest rates will go higher.

This prediction may come as a surprise, especially to those who think that the FRB has tightened considerably already. They point to the 2.5 percent rise in the Federal Funds Rate and comparable increases in all but the longer term rates since March 1988.

But what is lost sight of is that despite that rise in interest rates, it was not until last July that most rates regained the peaks they had achieved in October, prior to the stock market sell-off. Thus, for 9 months FRB policy was not as restrictive as it had been in the fall of 1987.

During that 9 month window, October 1987 to July 1988, the unemployment rate fell from 6 percent to 5.4 percent and capacity utilization in manufacturing rose from 82 percent to 84 percent. Prices of industrial semi-manufactured goods ranging from wood pulp to roller bearings, which had begun to accelerate around the middle of 1987, rose at a 7.4 percent annual rate in those 9 months.

That 9 month span was the gestation period that resulted in the rebirth of inflation. Only since July, when interest rates regained earlier peaks, did FRB policy break restrictive ground. Little wonder monetary policy still has a way to go before it can halt inflation's acceleration. And in the course of traveling those extra miles, FRB policy is more likely to induce a recession, which, in my view, will occur sooner rather than later.

FRB policy and the shifts in it—from tightening through October 1987 to loosening just after the October stock market decline, to further loosening in the winter of 1988, to modest tightening through mid-1988, and to greater restrictiveness since then—clearly does not describe a cohesive monetary policy.

Perhaps the policy variation reflects a substantial divergence of views among the FRB Governors and between them and the district bank presidents. I recall few other periods fraught with as much disagreement among monetary policy makers.

Whatever the reasons, there is too much variation in monetary policy. Some years ago, a Nobel Laureate in Economics, Milton Friedman, proposed that the monetary authorities be instructed to pursue a constant rate of growth for money supply. While I am not a monetarist, I do think the Fed policy should move in that direction.

One step would be to abandon the policy of targeting a range of acceptable monetary growth rates and making frequent changes to the ranges that are targeted. Instead, the target would be a growth path with a constant band about it, perhaps expressed as a standard deviation about the level of the money supply. Moreover, the path would be changed only infrequently.

It is difficult to see why a narrowing of the FRB's latitude to affect money supply growth would not work better than the present FRB approach. The certainty offered by moving toward a more narrow rule, and the discipline it would impose on the mone-

tary authorities, seems preferable to the current intervention policy that usually results in inflation followed by recession.

Moreover, such a rule sidesteps the need to forecast and it avoids the need for the Chairman to pursue a policy that is acceptable to the majority of governors and the bank presidents who comprise the FOMC when their views differ widely.

Thank you.

Chairman NEAL. Thank you, sir, very much.

[The prepared statement of Mr. Popkin can be found in the appendix.]

Chairman NEAL. Mr. Melton.

STATEMENT OF WILLIAM C. MELTON, VICE PRESIDENT AND CHIEF ECONOMIST, IDS FINANCIAL SERVICES, INC.

Mr. MELTON. I am vice president and chief economist of IDS Financial Services, an American Express Company. I am responsible for the IDS economic forecast, and I manage the cash assets of the IDS mutual fund group, which currently total about $3 billion. I appreciate the subcommittee's invitation to participate in this review of the Federal Reserve's Conduct of Monetary Policy. I will discuss several salient aspects of Chairman Greenspan's recent testimony and the associated Monetary Policy Report, and I will offer some observations on various ideas for improving monetary targets, including one that you, yourself, floated in your statement some weeks back.

I found Chairman Greenspan's testimony and the Monetary Policy Report a thorough, candid assessment of our economy, the risks of the future and the role that the Federal Reserve can play in enhancing the future.

I agree emphatically with his view that a 4 percent inflation rate, let alone a higher rate, is too high. I often remind people myself that a 4 percent inflation rate compounded for 10 years reduces the purchasing power of the dollar by almost ½. That is not my idea of stable prices and it is comforting to know that Chairman Greenspan shares this view.

Most reassuring of all, the testimony reflects a conviction that the Federal Reserve should focus its efforts on solving problems that it potentially can solve. Chairman Greenspan was absolutely correct that monetary policy cannot resolve a structural problem such as, for example, the savings and loan crisis. I believe that one of the ways we got ourselves into trouble in the past was by asking the Federal Reserve to deliver more than it reasonably could.

What we can, and should, ask the Federal Reserve to deliver is stable prices. Admittedly, short-run control of the price level is a technical impossibility, while even longer run control may be difficult in the presence of economic and financial shocks. Nevertheless, it is within the Fed's power to achieve a reasonable approximation of price stability, provided that this objective is kept at the forefront.

If this is done, and if the public, including Congress and the administration, understand and support the objective, the reward may be increased credibility of monetary policy and a reduced economic cost of achieving stable prices.

To borrow a phrase from Chairman Greenspan's testimony, I believe that monetary policy is "on track" in focusing its attention on price stability.

The analysis of the economy contained in the testimony and the Monetary Policy Report reflects the Federal Reserve's usual high technical standard. The key point in the analysis is that accelerating inflation is the main risk facing the economy now. For the next several months, at least, the risk of recession is quite low. I agree with the general thrust of the analysis, though my own economic forecast differs in several respects from the Federal Reserve's.

The main discrepancy concerns the outlook for inflation. It seems that there are two main reasons for this discrepancy—in particular, the higher IDS forecast for inflation:

The first, is the Federal Reserve's assumption that both food and oil prices will moderate during the course of the year. I am less optimistic.

Second, is the assumption that fiscal policy will achieve the Gramm-Rudman-Hollings target for fiscal 1990. In that connection, I would note that the administration's projection for the fiscal year 1989 budget deficit is already over $170 billion, compared to the Gramm-Rudman-Hollings target of $136 billion.

Perhaps Congress and the administration soon will discard their excessively generous economic assumptions and get down to the hard work of deficit reduction, but I personally would not bet the ranch on that outcome.

Thus we should recognize the possibility that the Federal Reserve, despite its repeated expressions of concern and numerous policy tightenings, may turn out to have been too optimistic regarding the inflation situation.

This possibility has been highlighted by recent inflation reports. As you know, in January, the Producer Price Index rose 1 percent and the Consumer Price Index rose 0.6 percent. Note that a 5 percent CPI inflation rate—which is the high end of the Federal Reserve's central tendency range—implies an average monthly rise of about 0.4 percent. Only two or three more monthly readings like January would make a 5 percent inflation rate virtually impossible to achieve this year.

The bottom line is that Chairman Greenspan was exactly right when he said that inflation was the main risk. He may even have understated his case.

In my opinion, the Federal Reserve's implementation of monetary policy in 1988 merits high commendation. It is easy in retrospect to argue—to criticize the various initiatives that were taken, and when they were taken—in particular the decision to ease policy in January—but on the whole, I think the policy was implemented effectively.

Also I think we can say beyond a reasonable doubt the Federal Reserve's initiative in tightening monetary policy, occurring as it did right in the middle of the Nation's presidential campaign, went a long way to enhance the credibility of monetary policy.

Although the concept of policy credibility is employed frequently by economists, it is extremely hard to gauge. I have two main reasons for thinking that the Federal Reserve's credibility rose perceptibly last year:

One is that numerous conversations with other investors have convinced me that they were very impressed that the Federal Reserve had the courage to go ahead with repeated tightening moves, including a discount-rate hike only days prior to the Republican convention in complete defiance of the cynical political wisdom.

Equally impressive was the fact that both presidential candidates apparently concluded that there were no votes to be gained by campaigning against the Federal Reserve. As a result, despite the tightenings, monetary policy was a non-issue in the campaign. This certainly made at least some investors realize that future inflation probably would be lower than they had thought it would be earlier.

Second, survey evidence indicates that inflation expectations dropped significantly late in the summer. This is shown in the first chart that I have attached to my testimony which displays the average 10-year inflation rate expected by institutional money managers surveyed by Richard B. Hoey.

Of course, it may be that other factors contributed: the OPEC cartel was in disarray at the time, oil prices were softening and there were other things going on. Nevertheless, it seems to me that there is a convincing case that monetary policy deserves most of the credit for the decline in long-term inflation expectations that occurred around that time.

There are some other comments I could make on a more technical level concerning the Federal Reserve's implementation of monetary policy. That is contained in my testimony and I am going to skip some of the details of that.

But there is one issue that I would like to highlight and that is the question of the Federal Reserve's policy of gradualism. During the last year or so, with the sole exceptions of the August discount-rate increase and the discount-rate increase announced last Friday, all policy changes appear to have been calibrated in ¼ percent adjustments of the Federal funds rate.

In addition, we know from the recently released minutes of the December 15 through 16 FOMC meeting that at that time a staggered policy tightening was decided upon, involving an immediate tightening move to be followed by another around year-end. The rationale for this apparently is a concern to avoid rattling the financial markets.

My personal opinion is that such an elevated degree of concern is excessive. Nobody ever promised financial market participants a quiet life, and the Federal Reserve is under no obligation to deliver it. More fundamentally, monetary policy during the 1970's gave gradualism a bad name and the Federal Reserve today runs some risk of investors possibly beginning to contemplate a repetition of the inflation acceleration that followed the earlier gradualist policy.

Is the Federal Reserve behind the curve in adjusting its policy stance to resist inflation? My best guess is yes, but not a great deal behind.

On one level, the mere fact that inflation is accelerating suggests that monetary policy has been too slow to react. However, as I noted earlier, monetary policy acts with a lag. We will not see the full results of earlier tightenings for some months to come. For the same reason, it would be unwise to overreact to short-run inflation

developments; much more important to a successful long-run outcome is a persistently disinflationary stance.

I expect that further tightening moves will be needed before the Federal Reserve succeeds in reversing the recent acceleration of inflation.

Many economists have assumed that credibility of monetary policy requires rigid adherence to a policy rule. This is plainly a false assumption, especially when the linkages between policy instruments and the desired outcomes for policy objectives are highly uncertain.

A recent case in point is the fate of the M1 policy target. For years, monetarists argued that tight control of M1 growth would produce major economic benefits, including enhanced policy credibility. However, virtually everyone now agrees that rigid adherence to an M1 target would have been a disaster in the 1980's.

Fundamentally, we want a target to do two things: first, we want it to provide useful guidance to the members of the FOMC, so that they can improve the quality of their policy decisions. Second, we want the target to be readily understood by the public at large, so that the Fed's objectives will help the public to form their own expectations of inflation. The M1 target failed because it was neither a good policy guide nor readily understandable by the public.

Can we find targets that both impart sound guidance to the FOMC and communicate effectively with the public?

One promising idea is to establish a target for the growth of prospective nominal GNP, perhaps on a four-quarter basis, as McNees has suggested recently. Such a target, in my opinion, would have a number of advantages:

First, and foremost, it would make the Federal Reserve's objectives far clearer to the public than monetary aggregates targets alone are currently capable of doing. As things stand now, the use of the aggregates targets is embedded in a morass of dauntingly complex money demand relationships. Few individuals are capable of understanding these relationships, and thus few can translate the adopted target into a desired outcome for the growth of spending.

Similarly, a prospective nominal GNP target would formalize the tradeoff between inflation and real growth and would tend to focus policy discussions on GNP potential and price stability, while avoiding an attempt to determine the division of nominal GNP into real output and inflation.

Of course, a nominal GNP target is hardly a panacea. There are a variety of problems that could be associated with it. However, all of these problems currently exist in one form or another with monetary aggregates targets.

The main advantages of a prospective nominal GNP target are two: first, it would be far more comprehensible for the public and probably for policymakers as well. Second, because the nominal GNP target need not be affected by the vagaries of money demand, there is a good chance that the Fed could retain the numerical target parameters for years at a time. Thus, a prospective nominal GNP target would have considerably more potential for molding expectations than the monetary aggregates targets have.

A concrete example of just how difficult it can be to use the monetary aggregates to anchor the policy process was provided in Chairman Greenspan's testimony. He reported the result of a staff study that endeavored to sift out the implied long-run price level, measured by the GNP deflator—in essence, the idea is to see where the price level should settle down after GNP reaches its potential and temporary influences on M2 demand have had time to dissipate.

As the Chairman noted, in the past a positive gap between the estimated equilibrium price level and the actual price level generally has preceded an acceleration of inflation, and such a gap began to emerge in 1985. This indicator thus buttresses the Chairman's concern regarding future inflation.

Unfortunately, I think that this kind of analysis, though interesting and technically impressive, will never provide a very effective guide for policy makers, given the uncertainty pertaining to any estimate of M2 demand. Still less will it constitute an effective device for communicating with the public.

I now turn to the idea of specifying annual caps on the permissible increase of the CPA, a suggestion advanced by you, Mr. Chairman, in your Review of the Course of Monetary Policy in 1988.

The main attraction of this proposal, as I see it, is precisely its ease of communication. Congress and the public clearly could understand the inflation implication of such a target vastly easier than they can understand the existing monetary aggregates targets.

However, it appears to me that such a gain in clarity probably would come at a high cost. The fact is that we all care greatly about other things in addition to inflation—real growth and employment, to mention only two. It is not, in my opinion, sound policy to exclude all of these from the Federal Reserve's target. Indeed, any attempt to do so would probably founder on well-placed public skepticism regarding the Fed's ability to adhere to such a target.

I think a prospective nominal GNP target incorporates about the best combination we are likely to obtain between the twin functions of sound policy guidance and effective communication.

I mentioned at the outset of my testimony that it is important that the Fed focus its attention on problems that potentially it can do something about and not be enticed into trying to provide short-term palliatives for problems that are, at root, structural in nature.

Nevertheless, I do want to applaud the emphasis that Chairman Greenspan accorded what I regard as the outstanding structural problem facing our economy today, and that is the saving problem. A major source of the shortfall of saving is our grotesquely large Federal deficits.

Greenspan noted that "household saving is abysmally low in the United States." He did not go into details, but in 1987 our personal saving rate reached its lowest ebb in four decades, though it turned up marginally last year. Some have argued that our saving rate will rise significantly in the future, but the best academic research on the subject suggests exactly the opposite conclusion.

Because of my concern regarding this situation, I have taken the liberty of attaching to my written testimony a recent presentation of mine.

Unfortunately, the Federal Reserve does not have the means to solve the saving problem for us. We have to do that. The Fed will earn gratitude enough if it continues this decade's progress toward price stability.

Thank you, Mr. Chairman. That concludes my statement.

[The prepared statement of Mr. Melton can be found in the appendix.]

Chairman NEAL. Thank you, Mr. Melton.

Mr. Zwick, may we hear from you at this time?

STATEMENT OF BURTON ZWICK, VICE PRESIDENT AND SENIOR ECONOMIST, KIDDER, PEABODY AND CO.

Mr. ZWICK. Mr. Chairman, Members of the committee, thank you for inviting me to appear before you. I am pleased to discuss the Fed's Monetary Policy Report to Congress.

Signs of accelerating inflation are accumulating, and the intention to curb inflation that I infer from the Federal Reserve Board's Monetary Policy Report to Congress is extremely welcome.

I infer, partly from Greenspan's statement, that "the Federal Reserve remains more inclined to act in the direction of restraint than toward stimulus." The lowering of the 1989 growth target for M2 to 3 to 7 percent from 4 to 8 last year also suggests a determination to curb inflation. Even if M2 velocity rises at almost the 2.5 percent rate of the past 2 years, the 5 percent midpoint of the 3 to 7 range implies nominal GNP of only about 7.5 for 1989. The Board's central tendency forecast for nominal GNP, 6.5 to 7.5 percent, is even lower.

Their 2 percent target for non-farm output growth also suggests a determination to fight inflation. Growth in the non-farm sector is likely to approach 3 percent in the first quarter, so reaching the 2 percent target means pushing growth down to 1.5 to 2 percent during the remaining three-quarters of the year. This slowdown would be enough to keep utilization from rising and appears consistent with their 5.25 to 5.5 percent year-end target for the unemployment rate.

Keeping utilization from rising is extremely important, because utilization is already at levels that are likely to cause inflation to accelerate. Capacity utilization in the manufacturing sector is almost 85 percent, and married male unemployment has fallen to only a 3.1 percent rate. These utilization rates are very close to the levels reached during 1978–1979 when an overheating economy contributed to a sharp acceleration in inflation.

Moreover, last year's 5 percent growth in the Employment Cost Index and the most recent CPI and PPI readings suggest that inflation has already reached the Board's 1989 target of 4.5 to 5 percent. We believe that their inflation forecast is too low. Even if the economy is forced into a recession later this year, as we are forecasting, we expect inflation to move slightly above 5 percent this year. Should the non-farm economy continue to grow anywhere near its

recent 3 percent rate, inflation is likely to move closer to 6 percent by the end of 1989.

Since inflation is likely to be higher than the 4.5 to 5 percent rate the Board is forecasting, the Board's intentions, as implied by their M2 and nominal GNP targets, are likely to result in a more severe slowdown than they acknowledge. We believe that their efforts to curb inflation will probably result in a mild recession, which we expect to begin before the end of this year.

Even though a sharp slowdown, if not an outright recession, seems the most likely consequence of the actions required to curb inflation and meet the M2 target, I was especially encouraged to hearing Chairman Greenspan indicate that "Backing away from policy adjustments needed to contain inflation will not solve the thrift problem, make the debt burden of heavily leveraged firms lighter, speed the process of international adjustment, or contribute to a fundamental solution of the economic problems of the developing countries. In fact, the thrift industry's problems, as well as the external debt problems of the developing countries, were exacerbated by the inflation of the 1970's." A recession is never pleasant, and one can hope that the tightening necessary to slow the economy and curb inflation can be achieved without inducing a recession. Nevertheless, sufficient tightening to curb inflation now is almost certainly preferable to allowing inflation to accelerate, forcing a more severe tightening later.

From the perspective of a business and financial market economist forced to make judgments on the basis of Fed policy, let me now discuss Federal Reserve Board efforts to convey what they intend to do.

During the 1970's, the Board conveyed their intentions primarily through very precise monetary targets, which they sometimes missed by wide margins. The resulting loss of credibility created difficulties for both the Fed and market participants.

In recent years, they have widened their monetary targets and placed greater emphasis on other monetary indicators—the yield curve, commodity prices, the dollar. They also acknowledge their focus on various goal variables—inflation, employment and GNP. Given the current state of our knowledge, this seems much more appropriate, and I cannot imagine how else they could proceed.

Their policy statements are necessarily less precise than before, but much less susceptible to contradiction. Like most market participants, I would like to know as much as I can about where the economy and interest rates are going and how the Fed is trying to influence these events. I believe that the Fed's statement for 1989 is about as straightforward as it can be. The current statement provides me with a conviction that they will tighten until clear signs emerge that the current trend in inflation has been reversed.

I conclude with additional comments about the dollar and the Federal budget.

With regard to the dollar, I suspect there is little need to dwell on the problems of conducting monetary policy on the basis of stabilizing the dollar. Until nations coordinate their policies more closely, efforts to stabilize currencies will come into conflict with domestic policy objectives. Whenever these conflicts arise, either in

the United States or the other G–7 nations, domestic objectives invariably prevail.

While the Board should reject a fixed exchange rate objective, I do not believe they should ignore foreign exchange movements completely. Our current account deficit has not yet dropped to a sustainable level, and some combination of dollar depreciation and demand restraint will be required to reduce the current account deficit further.

Ignoring the dollar declines completely would signal a willingness to rely more heavily on dollar depreciation than demand restraint. This would be particularly unfortunate in our fully employed economy, since further dollar declines are more likely to increase inflation pressures than increase U.S. exports.

Additionally, I believe that the Fed has an implicit understanding with other central banks to allow subsequent dollar depreciation to be orderly. Should the Fed show a willingness to permit uncontrolled declines in the dollar, these central banks would feel betrayed and could conceivably liquidate a portion of their dollar holdings. By causing an even sharper drop in the dollar, this would force the Fed to tighten—as in 1979—much more sharply than I am advocating for the next few months.

Turning finally to the Federal budget deficit, I believe that the shrinkage in our budget deficit from over 5 percent of GNP in 1986 to about 3 percent currently is an extremely positive development, and reducing the deficit to 1 to 2 percent of GNP within the next 4 years would eliminate the deficit as a concern for either the economy or the markets. I believe this can be achieved without a major tax increase. Should the spending cuts necessary to cut the deficit without a major tax increase fail to materialize, I would prefer living with the deficit a while longer rather than raising taxes substantially.

However, this argument for accepting deficits rather than raising taxes substantially should not be interpreted as the view that deficits do not matter. It is true that there is little evidence, either over time or across countries, that deficits cause higher interest rates, higher inflation or anything else. However, this does not obscure the accounting reality that for the United States or any other country with a given private saving rate, an increase in the Federal budget deficit requires an increase in foreign borrowing or lower investment. Larger foreign borrowing results in long-term debt service and possibly more foreign intervention in our affairs than we would like. Reduced investment cuts into the long-run growth of our economy and living standards.

Either way, it seems to me, we should strive to lower our deficit closer to the 1 to 2 percent of GNP level we experienced in the 1970's. It goes without saying that these should be genuine cuts in our public borrowing requirement, not budgetary legerdemain, for example, to avert sequestration under Gramm-Rudman.

Thank you.

Chairman NEAL. Thank you, Mr. Zwick.

[The prepared statement of Mr. Zwick can be found in the appendix.]

Chairman NEAL. Dr. Popkin, in your testimony you talk about inflation drifting upward, not dramatically, but inexorably, and then you go on to say:

"It is the result of price-wage interactions that are difficult to reverse unless unemployment rates rise close to double digits. . ." and you go on to talk about capacity utilization. It seemed to me that the demographic facts of our Nation now put us at a point where we are already beginning to experience some labor shortages. It seems to me we will experience more, if we follow those trends out: you have fewer working-age people compared to retired-aged people and so on over time. This indicates to me that we have the opportunity to lower inflation significantly and keep it down without increasing employment. These circumstance, it seems to me, are fairly unique to this time in history.

If you look at the long term, and I would like to ask for others to comment on this also, the best conditions that we can generate for relatively-full employment, it turns out, is zero inflation. Some people talked about the trade-off. They said well, gee, you know, we can't reduce inflation because that would bring more unemployment. And that may be true temporarily but the data I see indicates over time that the best possible conditions for full employment are low inflation. I'm trying to get at that argument. And it seems to me that it is an argument that we have lived with in this country for a long time and it seems to me it is now time to discard it.

Mr. POPKIN. I think there are two aspects of the point you made: one is what I consider to be the long-run point, the demographics, the fact that in the long run an economy with zero inflation typically has high productivity, costs are low and you can plot out a scenario of zero inflation under those conditions.

My problem is how do you get there? My experience has been—and this goes back to the days when I was in the Government, the late sixties and early seventies and part of the Troika forecasting exercise. And we used to sit down and look at the inflation rate of 5 percent and we would say how are we going to get it down, we know we have to get it down. And we used to plot out this very nice scenario: GNP growth going from 4 to 3 to 2 to 1 and inflation coming down 5 to 4 percent. And it looked very nice on paper.

In fact, you could still see that in the back of the President's budget document where they have to make those projections for Social Security costs. Everything is very nice and it also always comes down to equilibrium.

My experience has been that a lot happens between the short run and the long run. We just have tremendous difficulty getting from the short run—from the short run to the long run.

It seems to me that, and I think the other speakers who have cited this as well, that if you are too slow in recognizing inflation and you let that inflation genie out of the bottle it turns out to be much harder to get it back in than you think it might be. That was the experience of the sixties and seventies; I see nothing changing, nothing really changed. It is as though either we keep inflation flat or if it starts to accelerate let it go to 10 percent, have your big crunch and get it back down. There doesn't seem to be any effective policy in that middle range, and that is the discouraging thing.

So I really don't know how you get from the short run to the long run and I agree with your long-run scenario.

Chairman NEAL. A pretty good description of our economic history has been to let inflation go out of hand and then we have a crunch to solve it. And it seems we are doing the same thing again right now. But I don't think it is inevitable or necessary.

Inflation is a monetary phenomenon. Everybody agrees, the Fed can bring it down. The Fed created it in the seventies, the Fed brought it down from over 10 percent to 4 percent. In the late eighties into the early nineties they should bring it down from 5 percent to zero. They have it within their power to do it.

Now they shouldn't do it overnight, I would like to see them do it over 5 years, to follow the plan that you have suggested: bring it down roughly 1 point a year over the next 5 years until it gets to zero. Make that the stated announced policy goal. Let them be judged on the basis of how well they do that. We are hiring them to do that.

And thought people say well there is a price to pay for that, no question there is a price to pay, but there is a price to pay that is even greater for not doing it would be my argument.

Mr. POPKIN. Sure.

Chairman NEAL. You say you would make a little more unemployment temporarily than you would if you allowed inflation to continue. That is entirely possible. I am not even sure of that, frankly, because of the demographic situation we find ourselves in now.

But let's say that we do. The argument is clearly that if you don't stop it now you are going to have a lot more unemployment later.

I think the Fed needs some help. We ought to help them on the fiscal side; we ought to have the same kind of plan over 5 years to bring the budget deficit down to zero. I would say that in addition to that we ought to limit Federal spending for that same period of time to no more than 20 percent of GNP. It should be accomplished on a path: say to come down ½ percent a year as the economy is growing. I don't think that even this is a very tough program. The benefits, it seems to me, would be enormous.

As I see it, the benefits of that would be quite incredible: we would go to zero inflation; long-term interest rates of 3 to 4 percent; short-term rates even lower; there would be a commitment to at least 80 percent private economy, and taxes would be capped at 20 percent of GNP. It seems to me that you would have the foundation for an economy that would be the most dynamic that we can possibly imagine.

What would you think?

Mr. POPKIN. I think that is an objective that in the long run is feasible. The thing that worries me about it is that as you implement a policy what is going to happen—the longer the timeframe that you project for this policy to take effect, the greater the likelihood that some event is going to throw that off-course. There is a vulnerability there: another OPEC, another drought.

Chairman NEAL. Exactly.

Mr. POPKIN. Some attempt to raise taxes that are measured in our Consumer Price Index raise the inflation rate, thereby really it

is a policy that requires a very steady hand and some good fortune. But I would say it is worthwhile pursuing.

Chairman NEAL. You're right, obviously we cannot predict the future. There could be any number of shocks. The point would be though that we would be in a stronger position to deal with a shock if we put ourselves on this course.

Let's say that a recession emerges as a result of this or something else. If we have inflation heading downhill then we are in a stronger position to deal with a recession. The Fed could deviate from its path for a little while, we could deviate from ours temporarily, deal with it and then get back on course, much as the Fed deviated from its anti-inflation path following the stock market crash. They did the proper thing. They said we will pump out what's needed. That didn't last long—it wasn't needed long—and then they were back on track again to fight against inflation.

Mr. POPKIN. I think the first critical point on that scenario will be whether or not one can reverse the acceleration in wage rate increases that has happened over the last couple of years in response to prices.

In the eighties, in the early eighties people learned they could not expect wage increases today that were as large as the wage increase they got the year before.

All through the sixties and seventies the psychology was my wages ought to go up by more this year than last. In the early eighties, people were disabused of that expectation.

Now that expectation, in my view, has crept back into the marketplace and it is underpinned by tight labor markets and it is also associated with the fact that over the last 2 years wages have not kept pace with inflation.

So you have got a problem there and I think that is going to be the first major hurdle on such a path.

Chairman NEAL. Mr. Melton.

Mr. MELTON. Mr. Chairman, if I may, I would like to comment on your question.

I agree with almost everything that Joel Popkin said, so let me just try to introduce my own nuances:

If I get your drift correctly, Mr. Chairman, you are forcing us to confront a question of how we can minimize the cost of achieving something like zero inflation, a zero inflation rate, how can we do this in a way that presents the least burden to the economy? And you also are trying to drag out of us a statement about what the economic benefits of a zero inflation rate would be.

I very much agree with what Joel Popkin said: think back just a matter of a short number of years and recall all of the really crazy things that were going on as people tried to adjust their behavior, their economic activities to deal with an inflation rate that was not only high but that in many cases people assumed would be even higher in the future.

How many of the problems that are on the headlines of the newspapers today had their origin in that problem, in that situation in the 1970's?

The S&L crisis fits that description. Problems in the oil patch, and the LDC bank debt problem fit that description. Problems with agricultural lenders, in Minnesota, where I live or in Texas, where

I grew up—they fit that description. You can go right on down the line. I am sure that each of us has our own personal stories about some of the crazy things that we did in our own lives to try to cope with that situation.

So I emphatically agree and I think that all of the historical evidence would show that an economy that operates with something approximating stable prices—maybe not 0.0 inflation every single year, but something approximating a stable price level—would tend over time to have a higher productivity growth rate for the very simple reason that most of us would be spending our time doing things that would produce real goods and services and not just running around in circles trying to create our own personal solution for the economy's inflation problem.

So as far as the objective is concerned, as far as the economic cost of inflation is concerned, that is something that has to be minimized. I think most people realize that when they confront it. The trouble is that many people do not keep that in the forefront.

I think that has been a problem recently because our inflation rate as measured by the Consumer Price Index for the last 2 years has been a 4.4 percent increase, December over December, of each of those years. Many people look around and they say where's the inflation? What's wrong with 4.4 percent? I think they tend to have that attitude because if you think back inflation expectations have been very slow to come down.

The chart that I attached in my testimony shows that until just very recently institutional money managers who are supposed—they don't always deliver, but they are supposed—to be attuned to these kinds of developments, and they are still expecting inflation of 5.5, 6 percent in the next 10 years. Put yourself in the shoes of one of those people: if you saw a 4.4 inflation rate that wasn't a disaster, that was great.

Chairman NEAL. It seems to me you are making my argument.

Mr. MELTON. I am making your argument. That's exactly what I am doing, Mr. Chairman.

Chairman NEAL. What's the problem? Let's do it.

Mr. MELTON. OK.

The question then becomes let's do it but how can we do it in a way that we minimize the cost in the economy. That is really the issue.

Chairman NEAL. How do we do that?

Mr. MELTON. To my knowledge, Mr. Chairman, economic theorists and practitioners have come up with exactly two ideas that can help to minimize the cost, as Dr. Popkin said, in getting here from there:

One is to work on people's expectations. I think this is very, very important. I can cite you lots of cases of small business people and not-so-small business people that I have personally talked to who really changed the way they did business once they began to understand that you weren't going to have 10 percent or 15 or some other kind of percentage inflation indefinitely. Expectations are very, very important.

How do you send that kind of a signal? I think one important way to send a signal is by establishing with a monetary authority a target that people can relate to and that they can understand. As I

indicated, that was the greatest single merit that I saw in the proposal that you floated a few weeks back: namely people could understand it. There were some problems, but it certainly had that great merit.

Expectations formation: that is one way we can minimize the cost of getting there from here.

The second plan, and this was mentioned by all—in all the testimony this morning—that is to start early, that if there is an inflation problem building up for Heaven's sake don't put off until next year doing something about it. Get in there.

Really, I think Chairman Greenspan is very much inclined in that direction. Whether the Federal Reserve has moved far enough, I think most of us on this panel think the answer to that is no. But that is certainly one of the ways that you can minimize the ultimate cost to the economy.

Chairman NEAL. I am taking more time than I am allowed. Bill has agreed to let me continue so you can comment.

Mr. ZWICK. Very briefly. I agree totally that zero inflation or something close to it is the long-run objective. Gradualism, at least in theory, makes sense. But I think that, in our one experience over the last couple of decades of bringing inflation down in the early eighties, gradualism is not what did it. The Volker Fed moved hard and they moved fast when they saw an opening. And my guess is that the next time that we perceptably lower inflation again, it will probably be the same way. Hopefully, it won't be in response to a crisis.

It would be nice to think that, if inflation got into the 5 to 6 percent range, sentiment would be such that there would be support for sharp tightening by the Fed. Short of that, I am not terribly optimistic about bringing inflation down much below the 4 to 5 percent range.

Chairman NEAL. I think we ought to insist on it, myself. I'm going to yield to Mr. McCollum.

Mr. MCCOLLUM. Thank you, Mr. Chairman. Those are interesting observations and I think you do stimulate a lot of discussion and I appreciate that in my chairman.

I am curious about a couple of things:

We have critics of the tightening actually out there. Despite the fact that you gentlemen all agree that it is a good idea, it seems to me an observation that the critics seem to rest their criticism on is the fact that they don't see basic commodity prices going higher. And while they see food prices going up, they see oil and gold and other basics simply have not gone running away. And they think the Fed may be overreacting, even right now, that until you see the price of gold shoot up, we shouldn't be doing this.

What do you say to that?

Mr. MELTON. If I may, let me offer a quick comment on that.

First of all, going down the list of prices, oil prices have risen in the spot market very sharply compared to last October; currently in the spot market we're up to about 40 or 45 percent. So that is a strong increase. Now it hasn't all carried into contract prices to the full extent, but that is the way it has been going here lately.

In the area of non-ferrous metals, we have seen upward price pressure both in aluminum and copper, also in ferrous metals.

There have been some exceptions, but for the most part price increases are what we have been seeing.

In addition, the kind of companies that come through IDS and talk about their pricing—in aluminum and paper we are seeing more price increases coming down the road.

So I think that fits the pattern that you would expect to see given the kind of capacity utilization rates we were talking about here a minute ago, high capacity utilization rates.

So I think as far as the verdict of commodity prices is concerned, that supports the idea that we have an inflation problem.

Now the one exception, the major exception that I can think of to that generalization is the one you mentioned, Mr. Congressman, and that is that gold prices have been relatively weak lately.

I am one of these people who think that gold is a very, very flawed indicator of inflation expectations. For some people, buying gold functions as a kind of insurance policy against inflation because you have got something that is real, it is going to hold its value and so forth. The only trouble is that the major gold producing powers in the world are the Soviet Union and South Africa and both of those countries have major problems of their own that are not related to inflation.

As I understand it, most of the weakness in gold prices here lately has been a result of the fact that the Soviets need money and this is one thing that they can sell easily and they have been selling it. The result is weakness in the price. I don't think that tells us much about inflation.

Mr. POPKIN. I would basically agree with that; I would describe it a little differently.

The commodity inflation is the first signal that you get that inflation is on the way. We really started to have that back in 1987. And the issue now is that that commodity inflation got pushed through into the prices of semimanufactured goods and, together with the falling unemployment rate and increased wage pressures, has now moved the scene of the inflationary pressures from commodity markets forward to wage costs and to manufactured good costs. In other words, the base of inflation is now broadened.

Because, as I am sure you would agree, wages comprise an awful lot of our Consumer Price Index and once they start going up, even if they only go up a ½ percent or a percentage point more each year, you are affecting a broad base of the CPI with that. So we are at a different stage of inflation now.

In my own experience, the only two kinds of commodities that can have a dramatic effect on our Consumer Price Index are farm commodities and energy commodities.

Mr. MCCOLLUM. I saw you made that point in your statement.

Mr. POPKIN. They are the only two that really have enough weight. As Mr. Melton said, gold does not have a heavy weight in the CPI, it is essentially jewelry, a jewelry component.

So I think that I in particular see some leading indicator natures of commodity prices. But I think we are beyond that. We are into the kind of inflation now that is a broad-based cost inflation and demand is still strong enough to let it pass through the final prices.

Mr. MCCOLLUM. Mr. Zwick, I would like to ask you about inventories. When Chairman Greenspan was before our committee last

week, he said that despite his concerns over inflation and the CPI index, the one bright spot he saw in the whole thing was the fact that we do not have a build-up in inventories, and he took that to be somewhat of an indicator that this was not necessarily the bulging inflation—that he wasn't sure, he just put a big question mark up there.

What should we read into the lack of inventories being built up?

Mr. ZWICK. I don't think we have yet reached the 1970's type situation where people are speculating on large price increases and hedging. We don't have the cyclical excesses. Partly for this reason, the recession that we are talking about later this year should be mild. Also, inventories and commodities in general are a declining part of our economy. And, as Mr. Popkin mentioned, commodities inflation has already spread beyond commodities and toward wages.

When I worry about inflation now, I think more about the service economy. The service economy is three times as large as the manufacturing sector, per se. That is where I see inflation starting to edge up. And that is a little more difficult to deal with than the commodity-related inflation.

Mr. MCCOLLUM. I remember asking the Chairman about that, if there was an accurate measurement in all of the devices for that—not in this hearing but in an earlier one—and he did have trouble with that.

You, in your testimony, Mr. Zwick, commented on the current services account deficit, our trade deficit, and you indicated that you thought we had to do one of two things: either to devalue or bring down the value at least of the dollar or to reduce, I guess, demand and you showed a preference for reducing demand.

I want to clarify the demand you are talking about. I assume it means the demand of American producers and consumers for foreign products. Is that the demand you are talking about?

Mr. ZWICK. Demand in general. Our trade deficit, by definition, is the excess of what we spend over what we produce domestically. And what we have to do is to reduce demand. We can cut our trade deficit by cutting demand directly. Alternatively, we can reduce demand through a further decline in the dollar which raises import prices and crimps purchasing power.

Of the two forms of direct demand restraint that I am talking about, one would be the monetary restraint, which we are looking for over the next 6 to 12 months as part of a recession within the next year. That will certainly dampen demand and help our trade problem some. But we know that that can never be a permanent solution, because eventually we're going to come out of that recession and demand will be back up.

What we then need is to reinforce that interim cutting of demand from monetary restraint with some more sustained cutting of demand through reducing the Federal budget deficit. Whether one views the Federal budget deficit as too much spending or too little taxing is a matter of taste, but either way it does add to total domestic demand.

We believe that sustainability of the current account deficit and our Federal budget deficit are somewhere in the 1 to 2 percent of nominal GNP range.

Mr. MCCOLLUM. Where does increasing exports come into this? If we increase them dramatically wouldn't that also reduce the credit accounts deficit?

Mr. ZWICK. Absolutely. But I think at this point when we are operating near full capacity, a more realistic way of helping our trade problem is not to have further outside gains on the export side but to cut imports.

Mr. MCCOLLUM. You would have to increase capacity before you could have increased exports, right?

Mr. ZWICK. That is correct.

Mr. MCCOLLUM. In order to have increased capacity you have got to have some time in here.

Mr. ZWICK. You have to have increased capacity to reduce imports as well. Either way, we need more domestic production relative to our spending in order to cut the trade deficit.

But I think in an economy that is at full employment, as I think we all agree, the more realistic way of helping the trade situation is to cut down on our demand for imported goods.

Mr. MCCOLLUM. One last question to Dr. Popkin, if I could, Mr. Chairman.

It was stated by a witness before Chairman Greenspan came in an earlier hearing last week that to solve this inflation problem what the Fed ought to do is to raise the discount rate dramatically—not ½ a percent, but he suggested taking it all the way to 8 percent in one fell swoop, which of course they didn't do, they raised it ½ a percent last week.

I asked Chairman Greenspan about that and he ducked that one—it's the only one I heard him duck during the hearings—he just said I'm not going to answer that as to what his opinion was. I really didn't expect him to tell me what he was going to do with the discount rate but it would be nice to know what impact that dramatic of an increase in the discount rate would have, if any.

What is your opinion?

Mr. POPKIN. I guess you put me in a position where I have to be more presumptuous than Chairman Greenspan, but I don't mind that.

My view of that is that it would throw the economy—larger increases in the discount rate right now would also imply much higher interest rates than we have now. I think it would throw the economy into a recession. I think that that would make some start in slowing inflation. But throughout the sixties and seventies we have never gotten a lot of bang for the buck inflation-wise out of most of the recessions or slow growth periods that we have had.

In fact, we have been so frustrated from time to time we have turned to wage and price controls because we were not getting enough cyclical response against inflation from what we were doing.

If one wants to make a dent quickly into the inflation rate, restrictive monetary policy—very restrictive monetary policy is the only way. However, it is my sense that the public resolve to take that when the inflation rate is 5 percent just isn't there.

Mr. MCCOLLUM. Wayne Angel said before we go into recession we have to have negative monetary growth. He wasn't worried about

the targets going down, even the monetary growth going below 2 percent; he says it's got to go negative.

Do you agree with that?

Mr. POPKIN. I think if interest rates go high enough the money growth will go negative.

Mr. MCCOLLUM. Then we will have a recession.

You don't think we will have one until that happens?

Mr. POPKIN. I think we have actually done enough tightening so far to threaten the likelihood of—I am looking for a recession even perhaps a little earlier than Mr. Zwick is, I am looking for it around the middle of the year, a mild recession.

Mr. MCCOLLUM. Will there be negative monetary growth at that point, in your opinion?

Mr. POPKIN. The latest figures I looked at are fairly flat rates. It is fairly flat right now. It wouldn't take much to put it in a negative area.

Mr. MCCOLLUM. Thank you.

I am just being shown the monetary growth rates. I guess they did dip down and now they are up at the end of January to about 4 percent again, according to this chart. But they did get below 3 percent back in I guess December. So there's still some growth there. It hasn't gotten anywhere close to 2 percent yet.

Mr. POPKIN. When interest rates start to rise and business expectations change, there is an increasing reluctance on the part of firms to borrow for expansion, and that feeds into the money supply.

Mr. MCCOLLUM. I'm just curious—and I thank the Chairman for his indulgence. That gives me some guideposts of what you think so I can look out at the next few months with you.

Thanks a lot.

Chairman NEAL. Getting back into the area of expectations, it seems to me now while we have inflation at 4.5 to 5 percent, something like that, the prime rate at 11.5 percent as of last Friday.

So that real short-term rates are 6.5 percent at least. Traditionally real interest rates have been about 3 percent.

Mr. MELTON. Long-term U.S. Treasury securities, yes, sir.

Chairman NEAL. So you've got another 3.5 percent in there of something. It must be inflationary expectation.

It seems to me that we must get on a course both on the fiscal and monetary side. I think clearly we need to help where we are, but we can do that over a period of time, too.

If there were a credible program out there for reducing inflation over a 5-year period. We need a commitment on the part of the Fed to that, and on the fiscal side we must be committed to bringing down the percent of the GNP that Federal spending takes—it wouldn't take a whole lot. Also balancing the budget over the same period of time seems to me is important to this whole expectation framework.

Once that program were announced credible and were seen as heading in that direction, almost immediately you would begin to have beneficial effects in terms of lower interest rates. That aspect of the plan would improve over time, and you would then get nominal and real rates pretty close to the same thing. I don't know how

to predict all of this very precisely. But would you agree with that? What would you say?

Mr. MELTON. I certainly would, Mr. Chairman. I know it is not my function here to make your arguments for you, but in this particular case I guess I will make an exception:

If you followed the testimony this morning I talked a good bit about savings problems. Bert Zwick spent some time giving some emphasis to problems with our international payment pattern. All of these things are related.

If we had fiscal discipline tied with monetary determination to move toward a stable price level as you are describing, I think you would solve a lot of these very conspicuous problems, by definition the national saving rate would be rising under those circumstances.

So I would feel a lot better off as far as the saving problem and, at the same time, the pattern of international payments would be vastly improved—and that is what Bert Zwick was focusing on.

Really our problem at this stage is that I think the economy is trying to operate at a very high capacity utilization level. We are not investing much. We are running our consumption faster than we should be. And then we ask the Federal Reserve, Chairman Greenspan, to fix it for us. They don't have the kind of instruments to fix those kinds of problems. That is in essence the way I see the problem.

Chairman NEAL. I cannot see any area of our economy that would not be improved by such a policy. The employment level would be improved, savings would be improved, productivity would be improved, our competitive position in the world would be improved. I don't see any down side to this kind of policy initiative over time. Do you, anyone?

Mr. POPKIN. To get back to this issue of wages, when you set these targets for reduction in CPI or reduction in growth, you're also implicitly asking the working people of American to take a bet on your scenario. And they have got to say, well, OK, I'll go along with it, I'll take a percentage point less wage increase this year. And that, to me—that is the hard one to bring along. That is not unlike some of the issues that were faced in the days of either mandatory or voluntary wage and price controls in the early seventies, it's almost like a social contract: who signs for labor?

Chairman NEAL. This would be seen as an unknown to a lot of people. So far, everyone I mention it to agrees so I have not been able to come up with anyone who will disagree, but I will keep looking. You would have to build the intellectual case for it and make that case to labor and say this is the promise. We are not there now. We are going to have to head down this path in a little while. There may be some bumps on the road, but when you get there it is going to be better. And not only that, but it is going to stay better than you have seen it. Our real flaw is that in our system it is very hard to take the long view of things. All the incentives are for the short term.

I am not saying this is easy. I realize that many of people are going to say you just can't do it: interest rates will go up a little bit or whatever. We will run into criticisms, but it seems to me that

the best we can do is to make the argument and when people disagree try to deal with those disagreements.

I don't know. We have not faced the problem. Any time you talk about doing something that tries to look out beyond 6 months or so you run into people who don't want to do it.

Mr. ZWICK. I think the early eighties is the laboratory case where we lowered some broad-base underlying inflation rate from about 8 percent to maybe 4.5 percent. It took a very severe recession to do that, although before the fact most econometric evidence suggested that even that severe recession would not achieve those results. But we did get a marked reduction in the inflation rate.

To lower the current 4.5 percent rate down to 1 or 2 percent, would probably take another barn burner. Could we muster the political support for doing that? That is a political judgment.

Chairman NEAL. I don't see the evidence that there would have to be a very significant recession to get there. I say that because demographic trends have changed, there is not a surplus labor force.

I am not suggesting doing it quickly. There was the argument at the time about the soft landing and the timeframe for all this and finally it was decided to go ahead and get it over with and maybe that was the best decision and maybe not. I don't know. I don't think that is the only way of doing it. I have suggested something over 5 years where you are gradually reducing inflation. We need a commitment—something that we all stick to? I think we can. But that is quite different from saying we're going to do it in the next 2 or 3 months.

Mr. Hoagland.

Mr. HOAGLAND. Well gentlemen, I have not had the advantage of hearing your statements, and I apologize for that. I have gotten part way through Mr. Melton's testimony and I have enjoyed it very much, as far as I've read it.

But Mr. Melton, I would like to get you all off on a slightly different subject, and that is some of your reflections on how the budget deficit affects inflation. How the budget deficit affects inflation and how interest rates in turn affect the budget deficit.

Mr. ZWICK. I will start on that a little bit. The empirical evidence (that certainly Alan Reynolds would be able to cite it if he were here) is that you cannot find very much evidence either across time or across countries to suggest that deficits are related to anything. Economists have been working hard on that one for a decade now, because their prior notion is that it probably does have an effect.

But as I tried to say just briefly in my statement, what budget deficits do is to create a savings-investment imbalance. Mr. Melton talks about that at length in his testimony as well. As it puts pressure on our demand relative to what we produce, it aggravates our trade problem and creates pressure on the Federal Reserve to monetize. Both of those represent increased risks that inflation will move higher.

But having said that, I do think that, in contrast to the monetary inflation discussion that we have been having, where we haven't moved very far in the last 3 or 4 years, we have made a lot of headway in terms of reducing our budget deficit relative to GNP. If we

could just do about half again that much over the next 3 or 4 years, I don't think the budget deficit would be much of a problem.

What I would caution against is going for the big tax increase, and I think that that is where the American public is: they do not sense a need for the big tax increase. I would rather live with the deficit at current levels a little longer than go for a sizable tax increase.

Mr. MELTON. If I could follow up on that, Mr. Hoagland, the main reason why economists—as Bert Zwick is pointing out, the main reason that economists have had difficulty isolating the impact of budget deficits on interest rates is really two things:

First of all, if you are comparing across countries, saving rates in the private sector are vastly different from one country to another. And what really should matter in determination of interest rates is how much an economy is saving.

Now if there is a large budget deficit, that is going to be what economists refer to as dis-saving and it is going to tend to reduce the overall saving rate for that economy. Nevertheless it is perfectly possible that the private sector can be saving at such a ferocious rate that all of this just gets soaked up and there is plenty of saving left over.

But it does caution you that you shouldn't make an easy comparison between, for example, the United States and Germany or some other European country. It is true that our deficit as a percentage of GNP is lower than theirs, but their private sector saving rate is so much higher than ours is that, as a result, they have a lower level of real interest rates. The same thing is true in Japan and you can cite a number of other examples as well.

Second, when we were just focusing on the United States and trying to see the impact that deficits have had on interest rates in this country, we have the same kind of problem because deficits historically have tended to get large during a recession and that is precisely the time when the private sector credit demands would disintegrate and thus free up more saving for investment purposes or free it up for use by—in financing the Federal deficit. So there again it gets hard to find a relationship.

However, there is exactly one period in our recent economic history when we have had large deficits that were not related to a recessionary kind of phenomenon, and that is really in the 1980's.

If you just look at a chart of real interest rates, you will find the real interest rates in the 1950's—short-term interest rates—in the early part of the 1960's were very close to zero. For long-term securities they were higher than zero, about 3 or maybe 4 percent. In the 1970's they were not much different from that, a little lower. But in the 1980's they have been vastly higher. I think the burden of proof strongly supports the proposition that deficits had something to do with this. I think they had to do with it as a component of the overall saving problem.

I would just stress for everyone that, yes, as Bert pointed out, it is absolutely true that we have made progress on the deficit problem in the last several years, the fiscal 1986 deficit was $221 billion. Fortunately, we noe have a lower number to reckon with than that.

But nonetheless, while we have been making that kind of progress, we haven't seen progress in the overall saving rate. In fact, the national saving rate—aggregating Government savings, saving by households, saving by business firms—aggregating the whole thing into what economists refer to as gross national savings, the 1987 gross national saving as a percentage of gross national product was the lowest it had been since 1945. That is well over four decades.

So in that context, yes, we were making progress at the Federal level but we were falling behind on the private sector side. So last year we got a little better than that but not a whole lot.

So that is one of the reasons why making a nice, concise easy-to-follow relationship between deficits over here and interest rates over here is difficult. As Bert was pointing out, there are other variables that are also involved.

Mr. POPKIN. Let me just pick up on the point of savings, the national savings rate and then try to get back to responding to your question that way.

A point that I think is lost sight of often, and I sense that in the Federal Reserve's analysis of the consumer saving rate, is that the Federal Reserve's own figures show that American households have debt equal to only about 15 percent of their assets. American households are very, very solvent. The national savings problem is not a problem of households, it is a problem of the corporate sector and it is a problem of the Government.

I don't think that American consumers who have homes that have asset values, who have pensions, who have planned for their retirement, should be bad-mouthed, if you will, because they want to buy something at a lower price because it is available as an import and they want to add something to the enjoyment of their life. There is no indication to me that the typical American household has short-shrifted its planning, its saving for the future.

In fact, some of the proposals I have seen to close our deficit which involved a value added tax or national savings tax would be totally ineffective in this kind of context, because the real problem structurally in the income distribution in the country is that the increasing inequality of the distribution of income and wealth arises because younger people, those ages 20 to 34, are not earning as much in real terms today as 20 to 34 year olds were earning in 1973. Us older people are doing better than we ever expected we would.

And to think about a national sales or value added tax in that context, it is the younger people with the young kids who are working hard and have to spend more than what they take in, and they're going to have to pay those kinds of taxes. The older people who have the assets, they can spend at their discretion and they're not going to be deterred from spending by the imposition of a tax.

So I think it gets—it is exactly the wrong way to close the deficit.

With respect to the impact of interest rates on the deficit, I think it exacerbates the deficit. Interest rates are a cost to the Government, a substantial cost. The debt service is one of the highest budget components, as you know. Also, rising interest rates imply a weaker economy and a lower tax yield. So revenues fall and at least interest expenditures go up.

With respect to the causality the other way, the effect of the deficit on interest rates in the economy, I think that in part the higher interest rates do reflect the need to attract funds from abroad and finance the national savings problem, which I point out is a corporate and government problem, not a consumer problem.

But I also am enough of an realist to think that whenever a government is spending more than it is taking in that is, in a sense, creating jobs. The problem is at what level is that occurring and, if it is occurring when the economy is already at high levels of capacity utilization, it adds to the inflationary pressures.

Mr. MELTON. Mr. Hoagland, could I maybe add one comment to that?

There are various ways to measure saving. If you measure net saving, the practice is to subtrack out depreciation on equipment and factories and so forth. You do that from the corporate sector exclusively. And that is one way to make the corporate share of saving look like it has been getting weak.

But even apart from these kinds of statistical considerations, I think the data really does support the proposition that consumer saving has been very, very weak. And I am certainly—I wouldn't want to bad-mouth anybody, I think that people most of the time make decisions in their own best interests as they understand them, as well as they understand them. And if we all make mistakes sometimes, that doesn't mean we should be bad-mouthed as a result of that.

The facts are that the personal saving rate is calculated by the Department of Commerce. It was, in 1987, the lowest it had been since 1947; in other words, the lowest in 40 years. Last year it was only a little higher, 4.2 percent versus 3.2 percent.

Now we know—economists get paid to know this kind of thing, so we know that there were some distortions in that and I don't think that you should just tell yourselves that the saving rate necessarily was exactly $3.20 out of every $100 of after-tax income. Nevertheless it was very low, even despite the distortion.

So I think the proposition that something has happened on the household level is one that we have to focus on.

I would mention one factor that is allied to this, and I discussed these relationships in the speech that I attached to my testimony and I will not try to reiterate all of this, but I do want to highlight one point:

One of the most interesting demographic phenomena that has been going on recently is the change in labor force participation.

Now most of us, when we pick up the paper, we think, well, labor force participation has gone up, and it has. That is because of the ladies. If you look at labor force participation among men, especially among senior men, it is going down.

I was telling one of the staff people earlier this morning that it seems like about every 2 or 3 months in my company I go to a coffee and cake party for somebody who is taking early retirement. It happens all the time. This time last year my head trader decided to retire at age 60. This is an on-going phenomenon.

I would not want to bad-mouth anybody. I think people have to take charge of their own lives and do what they want to do and

live the best kind of life they can and you shouldn't bad-mouth that.

But on the national level, we do have a linked phenomenon of a low individual saving rate and a deteriorization as far as labor force participation on the male side of it and especially among senior age groups.

Mr. HOAGLAND. Do I hear you all saying that perhaps a no tax increase policy which may result in another very large deficit in the end would be better for the economy because a substantial tax increase could—the cure could kill the patient, in effect?

Mr. ZWICK. Let me respond to that. I'm not sure that I heard either of the other two participants say quite that.

Reducing our budget deficit as a share of GNP back to where it was in the early seventies, that is, 1 to 2 percent of GNP, over a 4-year period—to pick a recognizable political timeframe—would mean a Federal budget deficit of about $100 billion because at that time nominal GNP—because inflation has not yet fallen to zero—will have grown to perhaps $7 trillion by then. That is a budget target that I think is realistic and it doesn't require major tax increases.

The CBO baseline shows the deficit below $150 billion over that period of time—so we are really talking of cutting the deficit by less than $50 billion. The defense budget is about $300 billion. If the defense budget grew 1.5 percent per year slower than the overall economy, we would realize $5 billion of budgetary savings per year. After 4 years that would save $20 billion annually.

If we could raise excise taxes by $15 billion—which I do not consider a major tax increase—that would be 35 of the 50. And, as the budget came down as a share of GNP, real interest rates should come down about 75 basis points. Martin Feldstein talks about 200, I would settle for 75—that would provide $15 billion of additional savings on the interest line of the budget.

This $50 billion package strikes me as very do-able and it doesn't require a tax increase. That is what I would propose. I think that trying to go any lower through sizable tax increases would probably be counterproductive. More likely it probably wouldn't work anyway because it would remove some of the spending restraints that Congress is now under because of the Federal budget deficit.

These comments, though, are abstracting from further deterioration in the personal savings rate. If Mr. Melton is right that the personal savings rate is continuing to deteriorate, we would need correspondingly more improvement to make up for that offset.

But I think we are on a reasonably good track, although Congress and the new administration have a nut to crack between now and fiscal 1990 to keep us moving down this road.

Mr. POPKIN. I don't want to be interpreted as being opposed to any kind of tax increase. I specifically mentioned opposition to a sales or value added tax and Bert's comments——

Mr. ZWICK. Were broader.

Mr. POPKIN. That reminded me that I also in principle am against the excise tax, because a lot of excise taxes are really sales taxes. And if you raise—put on a gasoline tax, there are a lot of young families that are going to be paying a lot more money to drive their kids to the babysitter, and so forth, and to get to work.

So I would include excise taxes, along with sales taxes and value added taxes, as not the proper route to go given the structural problems in the economy. I will not say anything about other routes such as income tax increases.

Mr. ZWICK. Let me respond and make a distinction, at least in my mind, about the excise taxes I am referring to versus value added or sales taxes.

The economist-preferred solution is some sort of a consumption tax. The problem I see with a consumption tax is that it is the most elastically-upward source of tax revenue I can think of. And I would worry about—you set it at 1 percent this year, you go up ½ a percent next year because you need another $20 billion or whatever that would yield. So that is a very basic problem that I have with either consumption or value added taxes.

I don't see that as a problem with a 10 cent a gallon tax on gasoline or something like that, a few selected excise taxes that are not very elastic upward. And to get $15 billion that way to avoid having to go back and re-open up various aspects of the whole tax reform and start tampering with marginal tax rates, it seems to me this is a much better way to go to pick up that $15 billion or so.

Mr. MELTON. If I may, let me make a very short comment:

Back last August, I guess it was, in IDS we made some projections for Congressman Frenzel, who is from our area, and I'm sure you are all aware he was serving on the National Economic Commission and had an interest in what the economic impacts of various deficit reduction strategies might turn out to be.

We examined a variety of these and just to summarize the results for you very, very quickly, yes, as my colleagues on this panel have suggested, the best way to go about reducing the deficit is on the expenditure side and this came through very clearly in the simulations that we did using the Washington University Macroeconomic Model.

However, another result that came through that was maybe a little surprising to some of us was that what really mattered was that you reduce the deficit and thus freed up saving and thus had a high productivity growth rate. The most effective way to do that was on the expenditure side.

But even if you did it wih a mix—partly on the revenue side, partly on the expenditure side—or, most surprising to me, even if you did it totally on the revenue side by whatever device, income tax surcharge, value added tax or something else—even if you did it that way, which was not the optimal way to go, but if that was the way you went, you still had a substantial improvement in terms of the economy, saving rate, investment rate, productivity growth rate and so forth.

So that I think that it is important to fight for the best kind of program you can, get the most optimal policy that you can. But I do think it is important not to lose sight of the fact that deficits and, in particular, low national saving rates are a real economic drag and sometimes a plan that is not perfect may be a lot more better than what you've got.

Chairman NEAL. Could you provide us a copy of those projections?

Mr. MELTON. I would be delighted to.

Chairman NEAL. I think they would help.

Mr. ZWICK. Just one reaction I would have:

I agree with almost everything that Bill has said. A concern that I would have—and I suspect that ex-President Reagan would have—is what happens to spending once you've raised those revenues. I'm not sure that you can implicitly assume that increased Federal spending will not absorb most if not all of those revenues. That is a real concern I have with any major attack on the Federal budget from the revenue side.

Mr. MELTON. That is a valid point. You understand the scenarios I was talking about assume that every nickel that you raised on the revenue side would solely and exclusively go to deficit reduction. That is an important qualifier.

Chairman NEAL. I would like to go back to this idea of a nominal GNP target. Mr. Melton, you supported that idea. It says in your report: "I prefer a target based on prices," implying that we should hold the Fed to a results-oriented set of behaviors. In other words, what we are looking for is results; you're looking for one thing, I'm looking for something a little different but the idea is that the Fed's job is to meet a goal, to meet a performance standard, to meet a result. That is common it seems to me to what we are trying to do here.

Now if there is general agreement that that is a good idea, how do we achieve it? Would you think we should legislate something like that? Should we talk with the Fed, ask them to announce and stick with the policy?

Mr. MELTON. The next logical step would be to say that—you have been reading some of the articles, there are a variety of economists who have floated this idea, quite apart from myself—you have been reading these articles, you think there is something to it, you would like to hear testimony from the Federal Reserve to get their reaction.

Then assuming that the idea still seems to have some attraction, as I think it probably would, you could ask them to—if you wanted to get your feet in the water before you took a dive—you could ask them to submit a target suggestion or monitoring range, if you wanted to be that way about it, that would be consistent with what they thought their monetary targets were.

And you understand, that is different from the central tendency ranges. The central tendency ranges may or may not be consistent with the targets if some of the FOMC members think the targets won't be met.

Chairman NEAL. I used to think that a money rule idea was an ideal approach. However once we went through eighties, the relationships between money and economic growth doesn't seem to hold up as we had anticipated. It just seems not reliable enough. It seems like a GNP target would be all right. I think people really could understand lower prices and lower interest rates and that sort of thing and that is the target that I believe that we could build some support for.

Mr. POPKIN. I was going to say as between these two policy alternatives: one, a nominal GNP rule and your rule, Mr. Chairman, of the target on price, I really prefer the target on price. And the reason is this: nominal GNP consists of two parts, price and output.

By targeting nominal GNP, which is the sum of both of them, you could not insure that you are going to affect price or you are going to affect quantity. In some years you're going to get a result in which the price might go up and then the quantity down, some years the reverse. And that will create a lot of confusion over that kind of thing. I think it is between those two rules and objectives. If it is set just on the price level that would be preferable.

Chairman NEAL. You're still not wild about the idea?

Mr. POPKIN. I did in my testimony support a more rigid monetary growth rule, but I am inclined toward a reduction in the—anything that reduces the latitude that the Fed has to try to divine the future and figure out what to do, because that has rarely worked well. I think more direction is needed.

Mr. MELTON. Mr. Chairman, my attitude on that is I suppose if I were building a house—I don't know a lot about plumbing but if I were building a house I would hire a plumber to put the pipes in and I would tell him where I wanted them: I want one bathroom, two bathrooms or whatever it was, and I would tell him I didn't want any leaks in the bathtub. And then I would expect the plumber to deliver on that.

Now I understand a joint might leak here or there if it hadn't been tested right away, but eventually we would get a water-tight bathtub as a result of this.

I think that is probably the proper approach you ought to have for monetary policy. I think your discussions and your concerns ought to focus on what the economy's potential is, how close we are to price stability and when are we going to get there? I think those are really the main concern that you ought to have right up at the top of your agenda.

As far as the plumbers are concerned, whether that means an M2 growth rate of 3 percent or 6 percent, as long as the joint doesn't leak I am willing to let the plumbers sort that out.

Chairman NEAL. I couldn't agree more. That seems right on target. We must give the Fed a clear goal and expect them to get there. They are the pros, they have got the best cadre of economists, they have the ability to do it, they have proven that they know how to do it. They have done it before under similar circumstances, there is no reason they can't do it again. I think we ought to hold them to it.

May I go back to your comments about taxes again? This is an area where most economists seem to be in agreement, though it is desirable to bring the deficit down and it is most desirable to do it on the spending side. Certainly Chairman Greenspan agrees.

Why don't you all like a consumption tax. I'm not saying I like it either but I don't have a good reason for not liking it. It seems to me, that given the situation we are in we need to do something—we need to be more serious about getting the deficit under control. If we can't do it all on the spending side—I don't have any problem giving that the priority—but if we need to have some revenue, what do we do?

Mr. POPKIN. Well my position is predicated on the reality that men and women 20 to 34 years old right now are earning some—for males, 20 percent less than males of the same age earned in 1973 in real terms. Now there has been a lot of discussion that has

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flowed from that as to whether that is the loss of middle-class jobs or what have you. But without getting into that issue, it is a statistical fact that that has occurred.

I think that a consumption tax would fall inequitably on that group, that those are the people who spend a lot and most of their spending is, if you will, necessities: it is for the kids, it is for getting back and forth to work. And they are the people, you're going to take money out of their pocket and put it into the Government's pocket.

The older people who are doing the saving, if they want to go out and buy a fur coat, I don't know that a consumption tax is going to deter that. I don't think——

Chairman NEAL. It generates some revenue.

Mr. POPKIN. It will generate some revenue, but it will not dramatically in my view alter their savings pattern. I don't think a person of means is going to save more because he has to pay more taxes in spending the money.

Chairman NEAL. I'm not optimistic about changing behavior, but still it does produce revenue.

Mr. POPKIN. My opposition is on the grounds that it will make worse an income distribution problem that has been emerging in this country over the past 10 years.

If I were pushed to it, I would favor going to the 33 percent marginal bracket instead of the 28, for example, over—I think that would be something that would not be as adverse to the structural problems of the economy—that the economy faces.

Mr. MELTON. Let me make a quick comment. I am in the middle between Bert Zwick, who is advocating consumption tax and Joe Popkin, who is opposing it. So I am the honest broker here.

Let me summarize quickly some of the advantages and disadvantages:

To start with the advantages, almost every economist that I can think of supports the proposition that in general for a given dollar amount of revenue if you can raise this with the lowest possible tax rate, do that, because you won't create as many economic distortions, you won't make people do as many crazy things as you otherwise would.

The advantage of a VAT is that you could raise a lot of dollars with a very, very low and thus very non-distortionary tax rate. That is a major advantage of the thing.

And on the—the other major advantage is that we need to do something, now it doesn't necessarily have to be a VAT, but we need to do something to reduce the extent of Federal dis-saving.

Now on the negative side of the ledger there are several things, and I am not going to talk about administrative problems here but just focus on the more conceptual ones.

First of all, it is going to go right into the Consumer Price Index, because the way the BLS samples prices for computation of the CPI is exactly the way they should, namely, they go out and see what kinds of prices are being assessed. And so any excise tax is going to flow right into the CPI unless there is some instruction given that you don't do it that way.

So you risk the possibility that some people, when the tax was first phased in, might say Holy cow, inflation is really breaking out

because they didn't understand all of the mechanics of taxes and that sort of thing. So that is a problem.

Another one that is maybe a little bit more subtle is that in the simulations that I had mentioned earlier and which I will be happy to provide the committee copies of I found to my surprise—as an economist, I was surprised, I thought that a value added tax would from the first year increase the personal saving rate. It just seemed to me that that was likely to happen.

Joel Popkin has been raising the possibility that it may not work exactly that way and that is exactly what happened in these scenarios.

What in essence is going on is that people tend to maintain their established consumption patterns. And when something like a tax increase comes through the very first thing that happens—what has to give way is probably not going to be consumption so much as savings. Now that is not necessarily where you end up 10 years or 20 years down the road, but in year 1 and year 2 you can actually find that this thing has a depressing impact on personal saving rates. The impact in terms of raising the national supply of savings is positive, but there is this offset on the personal saving level.

I would just summarize again, performing my honest broker function here, I would summarize that like any other measure that we take to rein in our Federal dis-saving, there are going to be advantages and disadvantages.

I personally think that it would—I would think that the advantages vastly outweigh the disadvantages.

Chairman NEAL. What are the advantages using a value added or sales tax as opposed to an income tax increase?

Mr. MELTON. My preference, given those two choice that you presented, my preference would be for a value added tax. However, I do think one could reasonably make some exceptions for food and some other expenditures that are especially important to people with kids.

Chairman NEAL. Dr. Popkin, what would your feeling be if there were a sales or value added tax of some kind, if food, medicine, and maybe transportation were exempted?

Mr. POPKIN. That certainly makes it more equitable.

I would then come back to the question of—it seems to be that as we introduce more policy tools we complicate our society. We have a tool that has lasted us for better or for worse since 1913 and that has been the income tax.

A value added tax, incidentally, as I understand it, is an administrative nightmare for firms to fill out those kinds of forms.

So for other reasons besides the structural thing, I would tend toward—if you have a tax system that does bring in revenue and you need more revenue, you use it.

Chairman NEAL. I don't disagree with you at all. We had a very healthy economy with a marginal tax rate when it was much higher than it is now. I don't particularly like paying taxes myself, but I believe the argument that raising the marginal tax rate will throw the economy in a tailspin is absolute nonsense. I'm not recommending we go back to it, but even when the highest marginal rate was 70 percent, we had for much of that period of time a very booming economy.

As a matter of equity it doesn't make any sense to me at all that we have the 33 percent surtax that is added to middle-income people and then it drops back down to 28 percent for income over $150,000 a year. That's absurd, it seems to me. That affects a very small number of people but there are big bucks there.

Mr. ZWICK. I would like to say that whether it is consumption tax, value added tax, income tax, how much of the increase in tax revenues are you actually going to bring down to the bottom line in budget deficit reduction?

Chairman NEAL. If we're going to make the kind of things that I would like credible, I think we've got to do a couple of other things. We need a firm commitment on the part of the Fed to bring inflation rates down about 1 percent a year. We would give them an escape clause: if there is an emergency deal with it and then get back on task. Five years doesn't seem to be magic it could be 7 years, it could be 4 years. The sooner the better it seems to me but it's not magic.

But we must also be credible. We have just gone through a period that was billed as the most conservative administration in this century, and they tripled the national debt.

Frankly I don't think Democrats have a fabulous reputation in this area either. And so I personally think we know enough about our economy to know how it works well and so on and we need to put some limits on ourselves. What I would do is put a firm limit of 20 percent of GNP for spending by the Federal Government in balanced budgets, but I would have escape clauses in there, too, so that it's not too rigid, and would not tie the hands of Government.

What I would like to see concurrently with our verbal commitment to this kind of plan is a constitutional amendment that puts these limits on Federal spending. Then you are there forevermore unless someone comes along later and says let's change it, we didn't like that. I can't see that happening. This kind of mix does produce the highest possible employment and the lowest interest rates. And I don't think we're going to be credible unless we have something like that.

Mr. ZWICK. Just in that regard, Mr. Neal, I think you will get a little bit of a test later this calendar year as to just how a balanced budget amendment might proceed because, as you know, the Bush plan has sort of a flexible freeze scheme and he has indicated a few priority areas for spending. But there is the vast area that is undefined as to where the cuts are going to take place.

Chairman NEAL. I see a problem with the Bush plan so far. I think their intentions are good, but there is no scheme for getting from here to there. They just come in and say this year we want to meet the Gramm-Rudman-Hollings. They don't tell us much about how they're going to do that but just that they want to do it. They want increased spending but they also want to reach the goal. But beyond this fiscal year it's just a blank. And then they are carping away at the Fed, which I don't understand at all. Maybe you have some insight into that.

Bush, in his first week as President, criticized the Fed. He said inflation was not so bad, and to pay no attention to it. We had Secretary of the Treasury Brady before us. I asked him questions about this and he said the same thing. Boskin and others said don't

worry about inflation either. There again they are playing a dangerous game. This is exactly what was going on in the mid-1970's. It got away from us then and it can get away from us again. I don't understand what they're up to.

There is no long-range plan in evidence, though maybe there is behind the scenes somewhere. It seems important to me as a part of this that there be a plan, that we are on course, that we have goals, that we are moving from here to there. They need to be publicly announced and they should be firm.

If you're not spending more than 20 percent of GNP there is no reason to tax for more than that. If there is more than that, then you can pay down the debt. Greenspan recommended that we need surpluses for a few years to deal with savings. I don't know how realistic that is, but I understand his point. That may help increase the savings rate. We don't seem to be able to do it any other way, that's the frustration of it.

Do you have any ideas about why the administration is so soft on inflation these days?

Mr. ZWICK. I think I can speculate—and I'm sure my colleagues have some ideas as well. They are bringing in a fiscal 1990 budget that is in compliance with the Gramm-Rudman requirements. They assume low interest rates and a strong economy. Greenspan is almost explictly disagreeing with their forecast (or suggesting a need for policies that are likely to make their forecast not materialize at this juncture). Perhaps they feel a need to be critical of policies which most reasonable people would think almost have to make their economic assumptions invalid.

I am not sure, that is just one possibility.

Mr. MELTON. I, myself, don't have a problem in principle with budget projections being formulated with a conventional—with a conventional assumption of a 3 percent real GNP growth rate or something of that nature. The reason is that if everything falls apart and we end up with a recession then we will be glad that we weren't trying to control the deficit tightly because we know that that cannot be done under those circumstances.

So I don't have a problem with a procedure such as that followed by your own congressional budget office when they formulate their baseline estimates.

Now having said that, I must say that I find a striking contrast in the administration's style of proposals here so far in the last month. The administration, I think, is taking a very commendable leadership role in trying to address the Federal Savings and Loan Insurance Corp. crisis.

We can all argue—we can stay up half the night arguing about specifics of the proposal, but I think most of us would agree that the proposal is at least a very good first throw as a concept for addressing the thing. And we may have differences, but at least it gets us going.

You contrast that with a budget proposal that is very long on new spending ideas and that consigns the cut-backs to a black box. That is a very different style.

Now in addressing FSLIC, the administration really got out front and was willing to take some flack and take some knocks and get

something going. I really didn't see the same kind of style with respect to the budget proposals, and I think that is a problem.

Mr. POPKIN. I am inclined to go along with the explanation that the damage it does to the economic scenario is really primarily that if the administration is concerned that it not get off the track it will have to make a lot of changes in its plan.

Mr. HOAGLAND. Gentlemen, I have a 12:20 appointment and I hate to have to leave, this has been such an interesting hearing. But let me respond to the concerns I think all of us feel about the desirability of applying all new revenue directly to deficit reduction:

The major problem with that is that it leaves unmet so many agends out there: our school children are falling further and further behind in their ability to compete academically with our trading partners and competitors in Europe and Japan. In standardized test scores, you know, we are slipping further and further behind in math and other critical areas.

In the last 10 years the number of minority high school graduates going on to the college, who have been qualified and wanted to go to college has slipped from 49 percent to 36 percent, according to one study that I have seen.

Fewer than 20 percent of our eligible children in Head Start programs—the Head Start eligible ones, one study shows that the Government shells out $4.50 later in education costs, welfare costs and so on.

In child nutrition programs, I had four school administrators in my office yesterday from Nebraska talking about how devastating the 30 percent 1981–1982 cut in child nutrition programs has been to the young children in Nebraska that are not being adequately fed at home. And just on and on.

I just don't think we can define away the social needs through the next decade as we talk about these budgetary concerns. That is the other side of the equation that we really haven't dealt with today that we here in Congress hear about how many times a day, Steve?

Chairman NEAL. Plenty.

Mr. HOAGLAND. It is a terrible, terrible problem.

Let me personally thank you all three for having made such an excellent presentation. I am taking your tomes with me and intend to read them carefully on the airplane.

Thank you.

Chairman NEAL. I agree with my colleague, Mr. Hoagland, we need to address the spending. There are a number of programs that we need to spend money on. It seems to me that we need to set some priorities. It's not that we frankly have a choice. It seems to me, based on our historical experience, if we say we have to spend every penny that we are spending now, even if that produces deficits and so on, the result of that will be, because of other dislocations that it causes in our economy, that later on we will have to cut back on those things. Isn't that the point?

It is the same argument against not doing anything because it will cause unemployment. Yes, there may be some unemployment in getting from here to there. But what we know is that if we don't fight inflation now we know there will be higher unemployment

later. We know there is going to be a recession some day. I just don't see that it is even a trade-off. We do it now or we do it later. That is the trade. It is not that we're going to escape unpleasantness entirely, I don't know how we can possibly do that.

Would you comment on this question of what I guess economists used to call the "soft landing?" I think, Mr. Zwick, you indicated you don't think that that really is quite possible or it is unlikely. In other words, what is most likely is that we get to a crisis situation and then put on the brakes and throw the economy into recession, grind inflation out that way. Is there anything inherently wrong with the idea that we could do it in a phased way over a period of years?

Mr. ZWICK. I think it is—though the economy and maybe the world as a whole doesn't work in a perfect continuum. And when we have moved into at least a mildly overheating situation with the economy—through the most recent readings the economy is still growing at 3 percent—it doesn't seem as though it is possible to slow the economy meaningfully and have that slowing stop at just 2 percent, the way we would all like.

Although I am not certain—I believe the utilization rates are too high, I am not sure that 2 percent is sufficient, we may need to go down below 2 percent for a while to get utilization down a little bit.

The problem seems to be that once you start to slow the economy down, the multiplier effects seem to take hold at some point and it is just very hard to stop it. And anything short of a deep recession—the question that many people ask me about our forecast which has only slightly negative numbers for several quarters—prompts people to say "Why so mild? If you have a recession, why not a full blown recession?"

I don't really have an answer to that. It seems when we slow the economy down it just doesn't seem possible to avoid a recession altogether.

Chairman NEAL. It overshoots.

Mr. ZWICK. You overshoot a little bit.

Mr. POPKIN. There is one reason I think to be hopeful about the soft landing, that a soft landing can eventuate that was mentioned earlier. Chairman Greenspan said the inventory situation is under control. Typically inventories are a large source of instability. A lot of our cyclical fluctuations come from inventory cutbacks in a recession. If inventories aren't too large, they won't have to be cut back so much. That is an optimistic——

Chairman NEAL. It could be different this time.

Mr. POPKIN. That is an optimistic factor, I would think.

Mr. MELTON. I would agree with much of that. One possible exception to the generalization about inventory control is in the retail sector. In the manufacturing area, inventories are being controlled more effectively than they have been since the early 1960's. That is a very impressive performance and I agree absolutely with what Joel Popkin was saying.

I would add one additional factor that also suggests that when we have a recession—and we're going to have one someday, I don't know if it is exactly when I forecast it is going to be, but someday we're going to have one—that when this occurs that probably our exports will continue to grow relatively rapidly, even though the

recession is still underway. Export demand is not sensitive to whether there is a recession in this country or not. It is not sensitive to whether our interest rates are at 5 percent or 10 percent or something else and that could prove to be a very stabilizing source of continuing aggregate demand that would limit the downside of a recession.

So I personally find the plausibility of the soft landing—I think it is plausible. I don't think you can take it for granted, but I do think it is plausible.

Chairman NEAL. I missed something in what you just said. What was it that would help——

Mr. MELTON. I am saying that when we have a recession, whenever that may be, it seems likely to me that our exports from the United States to other countries will continue to grow at least relatively rapidly and that that would give us protection on the downside.

Chairman NEAL. And on the employment side.

Mr. MELTON. That we have not always had.

Chairman NEAL. I want to thank each of you very much for coming this morning and helping us out. Please stay in touch with us if you have any further thoughts on this or anything else. We welcome them. And I thank you again.

The subcommittee stands adjourned.

[Whereupon, at 12:22 p.m., the hearing of the subcommittee was adjourned.]

APPENDIX

February 21, 1989

Statement by

Clopper Almon

Professor of Economics, University of Maryland

College Park, Maryland 20740

before the

Subcommittee on Domestic Monetary Policy

Committee on Banking, Finance and Urban Affairs

U. S. House of Representatives

February 21, 1989

SUMMARY

The effects of alternative monetary and fiscal policies on employment, inflation, and the Federal deficit are examined. A small econometric model is used which is available without charge to the committee. The main results are:

1. Only low rates of M2 growth are compatible with holding the line on inflation. To hold inflation at 4 percent requires an M2 growth which declines gradually from five percent now to 2.5 percent by 1994. An M2 growth rate of 3.0 percent now declining gradually to 2.5 percent gets inflation down to 2 percent by 1993 and holds it there. An M2 growth rate of 6 percent leads to inflation rates rising to 8 percent by 1995.

2. The low growth rates of money supply are not disastrous for unemployment. By 1995, the unemployment rate of the policy which gives 2 percent inflation in that year is only one percentage point above the unemployment rate given by the policy which leads to 8 percent inflation in the same year.

3. The low-inflation monetary policy leads to the lowest interest rates and, by 1993, to the lowest federal budget deficit.

4. Even given the most favorable monetary policy for deficit reduction -- the tightest -- a freeze on purchases of goods and services is not sufficient to even approximately balance the budget by 1993. However, a tax increase of one percent of personal income, applied now, would balance the budget by 1995. Coupled with a $20 billion (1982 $) cut in expenditures, it would balance the budget by 1993 and yield a $50 billion surplus by 1995.

5. By 1995, the levels of unemployment and real GNP are virtually the same with or without the tax increase and expenditure cuts. Personal consumption and government consumption, however, are definitely reduced by the tax increase and spending cut, respectively.

6. The choice faced by Congress is therefore NOT between unemployment and deficit, but between the level of present consumption and the debt -- much of it to foreigners -- which we pass on to posterity.

Speaking as taxpayer, voter, and citizen, the author urges the Congress to avoid encumbering our republic with heavy foreign debt burdens because our generation wouldn't pay for its consumption.

Chairman Neal and members of the committee, my name is Clopper Almon; I am a professor of economics at the University of Maryland. I appreciate very much this opportunity to be with you.

When Chairman Greenspan appeared before this committee last July 28, he urged a tight fiscal policy. "Ideally," he said, "we should be aiming ultimately at a Federal budget surplus." Mr. Barnard then asked the natural question: "How detrimental would ... an increase in taxes be?" Mr. Greenspan answered that he would rather talk about cutting expenditures than increasing taxes; but, in fact, he offered no analysis of the effects of either cutting expenditures or increasing taxes. I would like to try to answer Mr. Barnard's question after first showing some of the effects of various rates of growth of the money supply.

I want to emphasize the effects of various policies, not what I think the policies should be, though I cannot pass up the opportunity to say something at the end about what I hope policy will be. In general, you will see that macroeconomic policies that have pleasant effects in the short run -- say the first one or two years -- have unpleasant effects in the long run -- say five years and over -- and vice versa. Two illustrations of this proposition are well known to you. The easy money of the early and mid seventies turned into the double-digit inflation in the late seventies and early eighties which was cured only by the sharp recession of 1982. The easy fiscal policy of the last six years first stimulated the economy but now saddles the government with huge debts and mounting interest payments.

While these historical experiences have lessons which should not be forgotten, they do not answer Mr. Barnard's question, which has to do with the future. To give an answer, I will use a model of the economy, a description of the economy in terms of equations combined into a program which runs on a personal computer. Such models are a bit in disrepute at the moment, so I should first say why I use one and what I think can be learned from it.

When computer-based models first appeared, they somehow inherited the aura of inexorable infallibility associated with computer arithmetic. When it became apparent that the forecasting record of forecasters using models was far more human than infallible, it became popular to turn up one's nose at models. Even within the academic community, there was criticism of some points of some models which was widely interpreted to invalidate all models. The proper attitude lies between the extremes of blind faith and bewildered mistrust. I use a model as a check on my thinking. I know what I believe to determine investment, consumption, inflation, and so on. To check my understanding of these parts of the economy, I must ask, first, can an equation embodying my view of how each part works quantitatively explain how that part has worked in the past. If not, I have to revise my ideas; if so, that equation can -- tentatively -- become part of the model. Secondly, I must ask if these parts, when put together, work like I think the economy works. If not, I have to

go back and work further on the parts in light of difficulties encountered with the whole. Only when I finally get something which works sensibly and fits history fairly well both in the parts and in the working together of the whole, do I venture out to say what I think the effects of this or that policy would be.

I know that this process of checking corrected and clarified my own thinking about how the economy works. Even so, the model certainly does not *prove* that my understanding is correct. Alternative models with consideration of other factors might give just as good explanations of the past yet different answers about the effects of policy changes. Compared, however, to views which have not been put to the test of systematic modeling, I would prefer one which had been subject to that discipline.

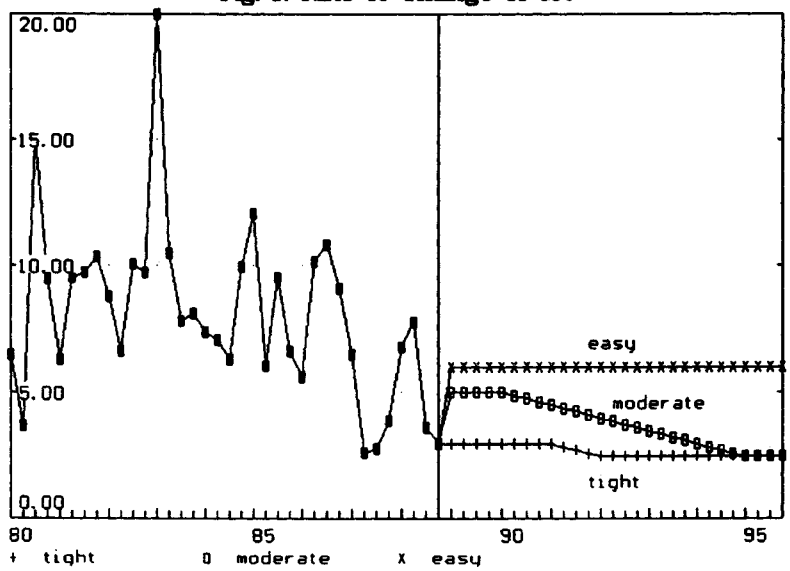
The model I will use is called QUEST, which abbreviates QUarterly Economic STructural model, a name chosen to emphasize that the model avoids equations which say principally that whatever has been happening will go on happening. (In slightly more technical terms, it avoids lagged values of the dependent variable in the regression equations.) It does so because I have found that such equations fool me into thinking that I have found an explanation of some subject when, in fact, I have not. In this respect, QUEST is very different from, say, FAIRMODEL and many other current models. I have given a copy of QUEST to your staff director and urged him to experiment with it. You could probably run it on the machine used in your office to type letters. It is easy to use; some 500 students at the University of Maryland and elsewhere are using it this year. It is available without charge for use at any college, university, or congressman's office. And if there are results which seem implausible, it is a simple matter to estimate equations of your own, put them in place of mine, and see what difference they make. Thus QUEST becomes a vehicle in the search for understanding of how the economy works.

One feature of QUEST is slightly unusual and bears directly on the results I will show you. It is that money supply works not only through interest rates but also through a variable called "availability." Roughly, this availability is how much M2 exceeds the M2 required for the current GNP at the historical average M2 velocity. When this availability is positive, it should be easier to get a loan than when it is negative. This variable appears in the personal saving equation (increasing availability reduces savings) and in the equations for investment in producer durable equipment and residential construction. Interest rates also depend on availability as well as on the inflation rate, the current rate of change of M2, and the share of fixed investment in GNP. The Federal deficit was not found to influence interest rates directly, but only indirectly by pushing up GNP relative to M2. A full description of QUEST as it stood last June may be found in my book *The Craft of Economic Modeling* (Ginn Press, 1988).

Let us turn first to domestic monetary policy. I have run QUEST through 1995 with three different assumptions about monetary

policy, which, for this simple model is summarized in the rate of growth of M2. All three of these runs assumed that federal purchases of goods and services were "frozen" in constant prices and that tax laws were unchanged. One run, called "Easy money" assumes a steady M2 growth rate of 6 percent per year; another run, called "Tight money", assumes an initial rate of 3 percent edging downward to 2.5 percent by 1993; the third, "Moderate money", starts like "Easy" and gradually slides down to "Tight". The three assumptions, together with some of the volatile history of the rate of change of M2 are shown in Figure 1. You will note that the "tight" scenario lies

Fig. 1: Rate of Change of M2

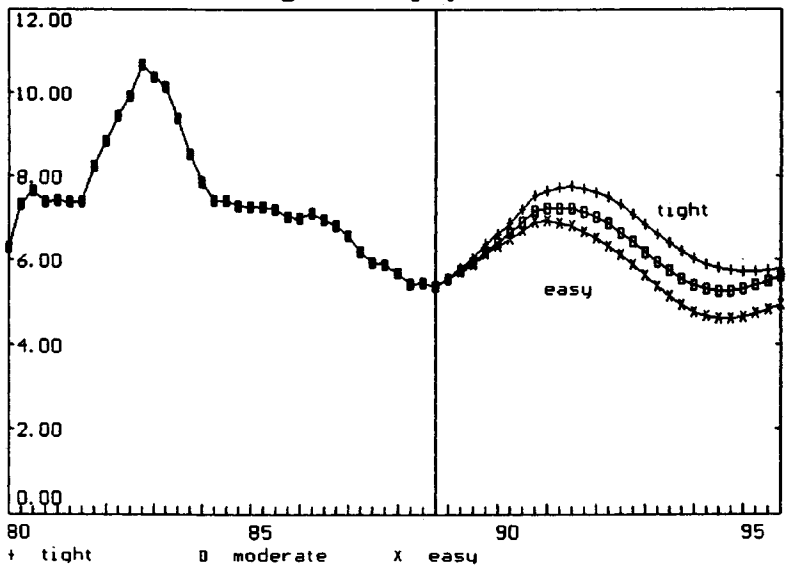


entirely below the lower limit announced in the last Humphrey-Hawkins report.

The consequences of these three scenarios for unemployment, inflation, interest rates, and the federal deficit are shown in Figures 2 - 5.

From figure 2, we see that all three scenarios show a rise in unemployment over the next two years. There are two factors back of this mild "growth recession". The first is the slowdown in the rapid rate of growth of exports. This slowdown, which we had been expecting for this year, was already visible in the last quarter of last year. It is a result of the stabilization of the dollar at what appears to have been too high a level. Yes, that means that I agree with the many witnesses you have heard who believe that the Louvre agreements were a mistake. Our projections out to 1995 assume that the fall of

Fig 2: Unemployment

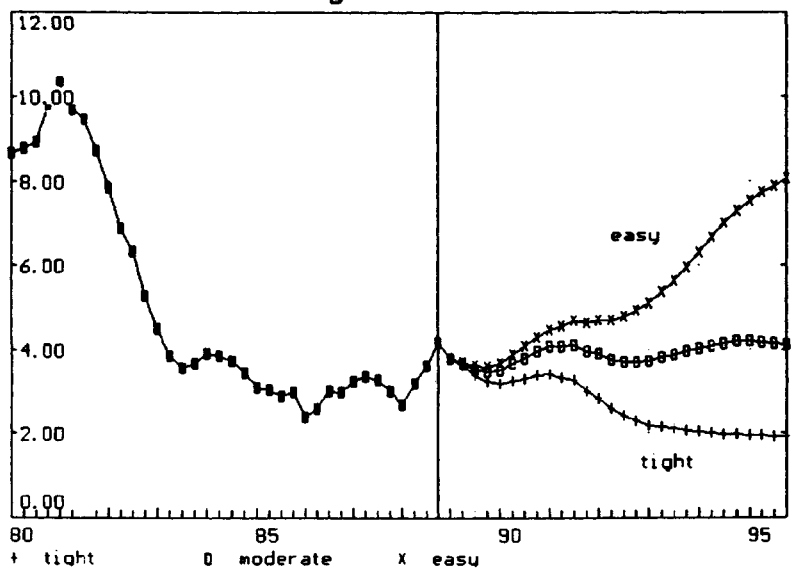


the dollar will soon be allowed to continue. But for exports in the next two years, given the lag with which exports respond to exchange rate changes, the damage has already been done. The export forecast uses the growth in foreign demands for US products derived from our inter-linked system of interindustry models for the US and six of its major trading partners.

The second factor back of this modest rise in unemployment is a slowdown in investment, especially in producer durable equipment. This investment has been running very high. All that it takes to make it drop is a slowdown in the rate of growth of industry. Given the already high employment level and the halt in the fall of the dollar engineered at the Louvre, such a slowdown and the consequent drop in investment -- as calculated by the model -- seem not unlikely. At the same time, I want to emphasize that I do not think there is much that the Congress can now sensibly do to avoid this cyclical rise in unemployment. I should also point out that I am at the low end of the spectrum of forecasters. Although I will call this one the way that I see it, a decent respect for the opinions of others compels me to say that you should not bet your bottom dollar on this forecast. Nothing that I really want to say this morning would be changed if that growth recession were not there. In fact, without out, there would be all the more reason to pursue the rather austere policies which I believe are favored by the results we will see.

As expected, the easy money scenario gives the lowest unemployment throughout the forecasted period. Notice, however, that by the end of the period the "tight" line and the "moderate" line come together, and that the spread between the "tight" and the "easy" lines has begun to narrow. If we continued the forecast further into the future, they would come back together, for six percent growth in the money supply is not "easy money" when inflation gets up to eight percent per year.

Fig 3: Inflation



The strikingly different consequences of the three money scenarios for inflation are shown in Figure 3. The "moderate" line in the middle maintains inflation in the GNP deflator at about its present four percent. In fact, the moderate M2 growth rate was chosen as the fastest growth which did not lead to an acceleration in inflation. It was precisely this consideration which led to choosing "moderate" as a steadily declining rate. The "easy" rate of M2 growth, which is low by the standards of recent years but high by comparison to real growth, gradually leads to an accumulation of money supply which sets off an accelerating inflation which would, by 1995, almost completely undo the accomplishments of the early eighties in eliminating inflation. It is noteworthy that this "undoing" is caused by a rate of growth of money supply which is slow by comparison with anything we have seen in the last ten years, except for the last four months.

Thus, what "tight" money means in terms of the growth of M2 depends on inflationary expectations. A rate which would have been unbearably tight six years ago is now irresponsibly easy. Only the "tight" line in our figure shows a continuation of the gradual elimination of inflation such as we had from 1983 to 1987. This policy would get inflation down to two percent by 1993 and hold it there. Actions of the Fed in the last three months of 1988 would suggest that it might indeed be embarking on such a policy.

The impacts of these three policies on interest rates -- specifically on the rate on new issues of ninety day Treasury bills -- are shown in

Fig. 4: Treasury Bill Rate

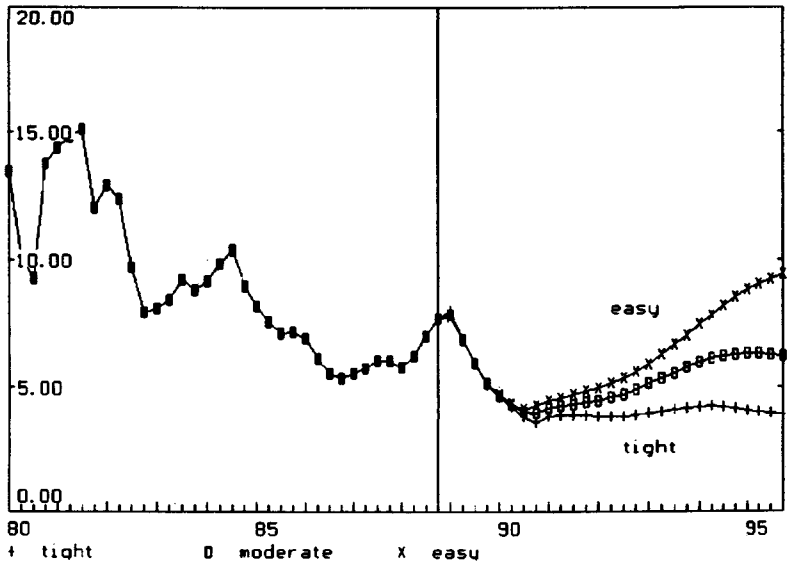
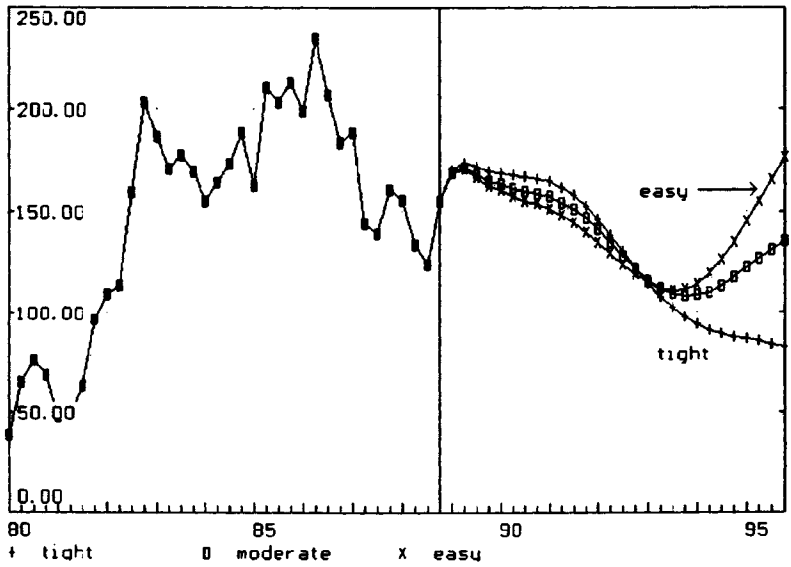


Figure 4. All three scenarios anticipate a drop in short-term interest rates in the third and fourth quarters of this year. This drop is a consequence of the earlier-mentioned drop in investment spending. Our equations embody our finding that interest rates have little effect on non-residential investment, but that the level of this investment has significant impacts on interest rates. Consequently, weak investment leads to falling interest rates. Also, rates seemed to have risen somewhat in the last quarter as a result of unexpectedly small growth in M2.

Beyond the first few quarters, the effects of the different monetary policies on interest rates are perhaps counter-intuitive. Tight money produces the lowest interest rate. The reason is not far to seek. At the present high levels of employment, excessive growth in money turns almost immediately into inflation, and this inflation is quickly mirrored in interest rates. I do not hold that this proposition is true always and everywhere, but I do think it is true here and now. The way to low interest rates is through monetary restraint.

The low interest rates associated with tight money have major significance for the proper preoccupation of this Congress -- deficit reduction. Figure 5, showing the Federal deficit (national income accounts definition), reveals a feature not seen in the previous graphs

Fig 5: Federal Deficit

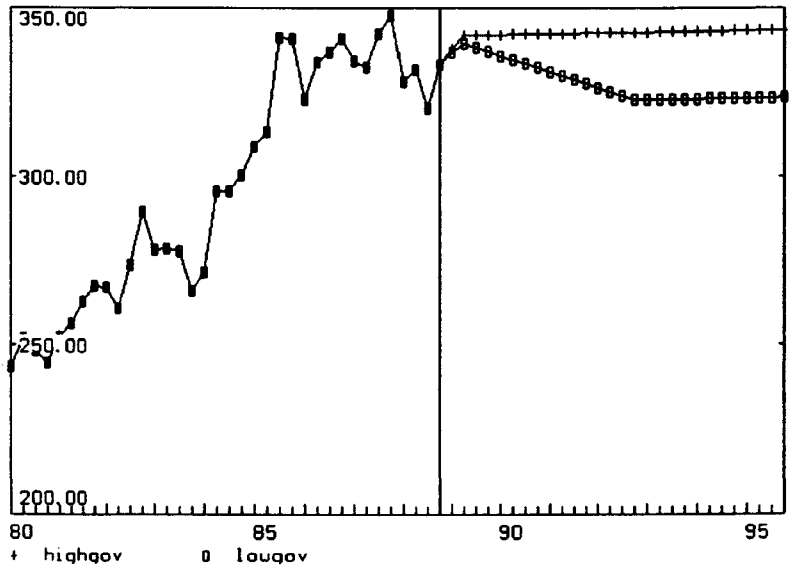


-- a cross-over. Between now and about 1993, tight money -- because of its slightly restrictive influence on the economy -- produces slightly higher deficits. After 1993, the interest rate influence dominates, and by the end of the experiment, the deficit -- because of interest payments -- is some $80 billion lower under "tight" money than under "easy".

I must now confess that I like the "tight" alternative the best of these three because the further reduction in inflation rates and the

reduced interest payments seem to me to outweigh the minuscule difference in unemployment in 1995. In any event, I am going to choose this alternative as the background monetary policy against which to analyze four alternative fiscal policies. Since the objective of the alternative fiscal policies is to reduce the deficit, the "tight" monetary alternative is the most favorable one under which to study the fiscal policies.

Fig 6: Federal Government Purchases (1982 $)

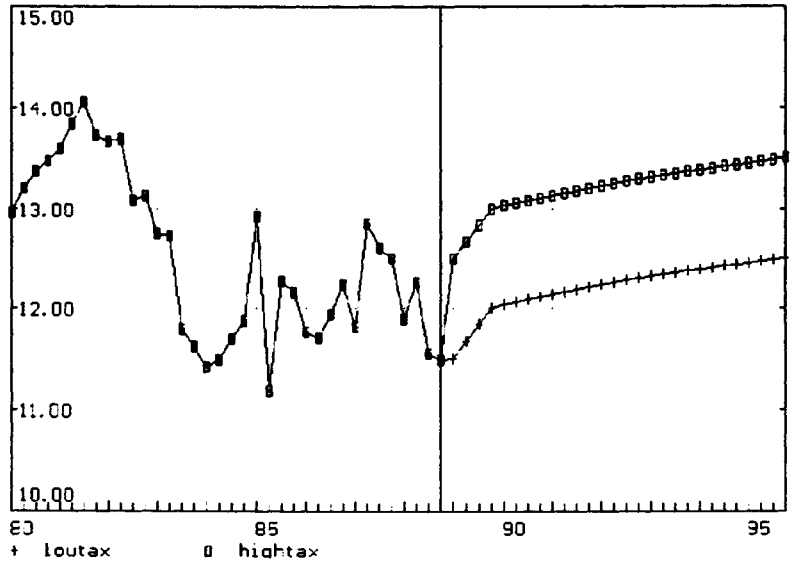


Four alternative fiscal policies will be considered. The first is the one used in the monetary experiments: purchases of goods and services constant, no change in transfer programs, and no change in tax laws. The second cuts purchases of goods and services by $20 billion (in 1982 prices) over two years and then holds them at that lower level. The third alternative increases the average personal income tax rate by one percentage point, say from 12 percent to 13 percent. Such a move would eliminate approximately half of the original Reagan tax cut. The fourth alternative does both. The alternative programs are shown in Figures 6 and 7.

In the graphs, the names will appear as

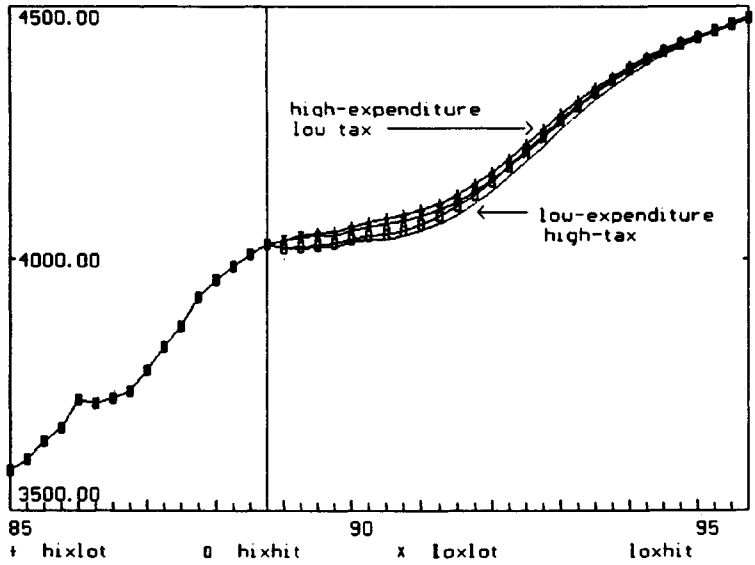
hixlot	high expenditure - low tax = the base case
hixhit	high expenditure - high tax = tax hike only
loxlot	low expenditure - low tax = expenditure cut only
loxhit	low expenditure - high tax = both measures

Fig 7: Average Federal Personal Income Tax Rate



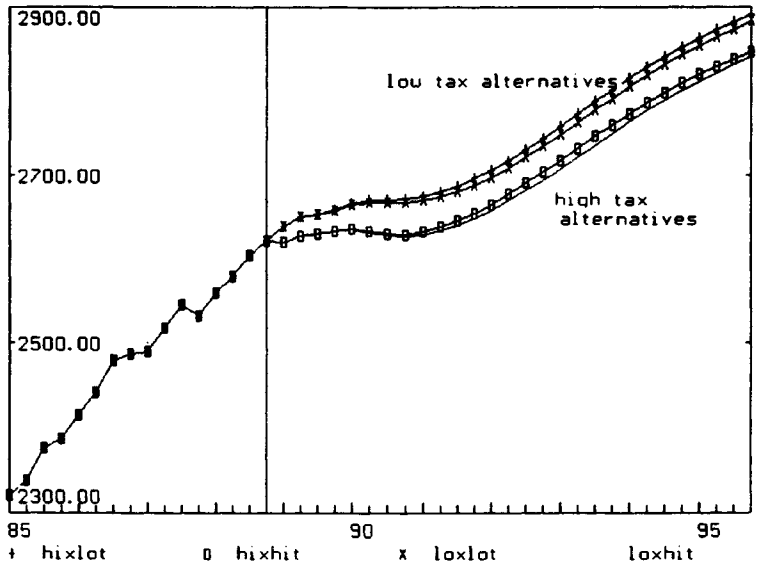
The reduction in expenditures is a smaller in magnitude than the tax increase. In view of the massive expenditures which now appear necessary for maintaining our nuclear production capability, very substantial cuts in other aspects of defense procurement would have to be made to achieve even this much reduction. On the other hand, if we bite the bullet and increase taxes, then we may as well do a good job of it.

Fig 8: Gross National Product (1982 $)



The remaining figures all deal with how the economy looks under these four scenarios. Figure 8 shows real Gross National Product in 1982 prices. The differences are in the direction which a Keynesian would expect; higher taxes and lower expenditures produce a lower GNP. But by 1993, the differences are minute, and by 1995 virtually invisible. The economy adapts to fiscal policy and, if there are no upsetting shocks, moves gradually towards a high level of employment. How that adaptation occurs I shall try to show. That it occurs is a fact of fundamental importance. It implies that we can have a high level of employment and product with a frugal fiscal policy -- and a low or even negative deficit -- or with a prodigal fiscal policy -- and a high deficit. The choice Congress must make is between our level of consumption and the public debt which we pass on to posterity. Only *changes* in fiscal policy affect the level of employment and output -- and that only temporarily. In case that proposition leaves you trying to classify QUEST (and me) as Keynesian, Monetarist, Rational expectationist, or whatever, let me try to disown all labels. QUEST is quite Keynesian in the short-run, but by the end of seven years it looks quite Classical or Monetarist. The "irrelevance of fiscal policy" has the ring of rational expectations, but QUEST is not explicitly a rational expectations model.

Fig 9: Personal Consumption Expenditures (1982 $)



The cost of the low-expenditure options have already been seen in Figure 6, which shows a reduction in government expenditures. The cost of the tax increase is seen in Figure 9, which shows personal consumption expenditures in constant 1982 dollars. Consumption is reduced by approximately the amount of the tax increase.

If personal consumption expenditures are uniformly and permanently lower in the high-tax alternatives, how is it that GNP can be almost unchanged? The answer must lie in the behavior of exports, imports, and investment. Let us look first at the foreign sector. It depends heavily, of course, on the relative price of imports and the relative prices of our exports abroad. QUEST makes changes in the relative price of imports depend on the long-term real interest rate and the trade balance.

Fig 10: Real AAA Bond Rate

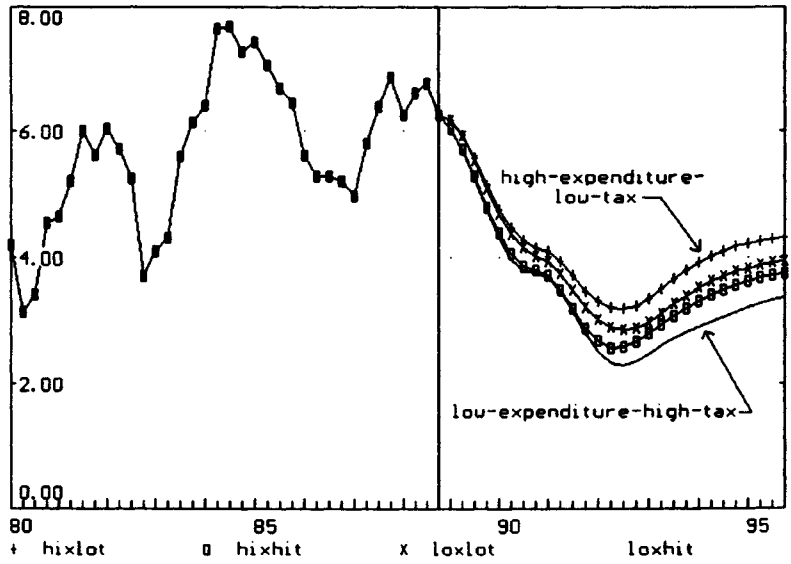
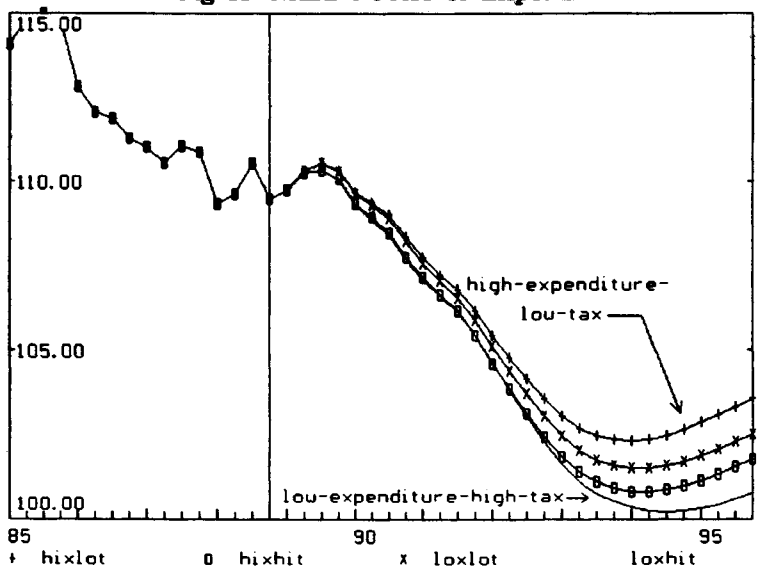


Figure 10 shows the course of this long-term, real rate, namely Moody's Aaa rate reduced by the rate of increase in the GNP deflator. The austere fiscal policies gradually move this rate nearly one percentage point below its value under the relaxed fiscal policy. I should point out that this result occurs even though the interest rate equation itself has no variable for fiscal policy. Rather, given the level of M2, money is tighter when easy fiscal policy pushes up GNP.

The lower real interest rates under the austere fiscal policy reduce the incentive to foreigners to hold dollars, and therefore produce the lowest dollar and highest relative prices of imports. Figure 11 compares the relative prices of (non-petroleum) imports under the four alternatives. QUEST uses this relative price as a surrogate for the

Fig 11: Relative Price of Imports



prices of foreign goods relative to domestic goods in both the export and import equations. Figure 11 makes clear that, at least according to QUEST and me, we are in for further decline in the value of the dollar. Agreements among central bankers to support the dollar, such as the Louvre accord, merely delay the relief of the American exporter, of the American manufacturer competing with imports, and of third-world countries with dollar-denominated debt. Such agreements benefit principally foreign manufacturers and banks having dollar-denominated loans, American tourists, and American importers. Presumably the Fed entered into this agreement because it felt that the dollar was low enough and now only needed a little stabilization while imports and exports adjusted to the current exchange rates. I think the Fed was premature in concluding that the dollar had made the required fall.

The effect on imports of the various fiscal policies are shown in Figure 12. The effect on exports (not shown graphically) is slightly smaller and, of course, in the opposite direction.

Fig 12: Imports

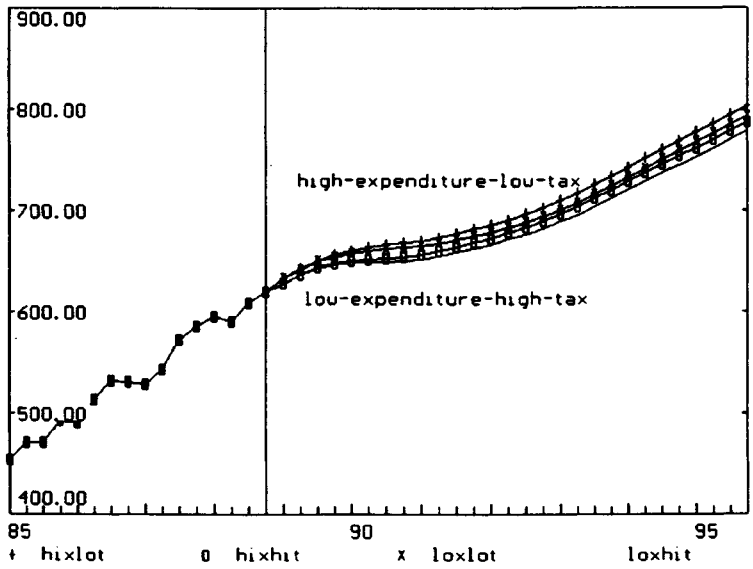
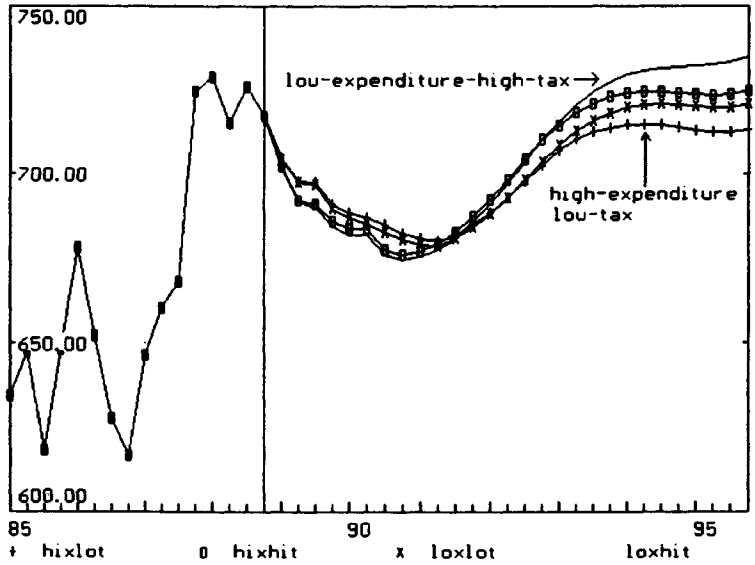


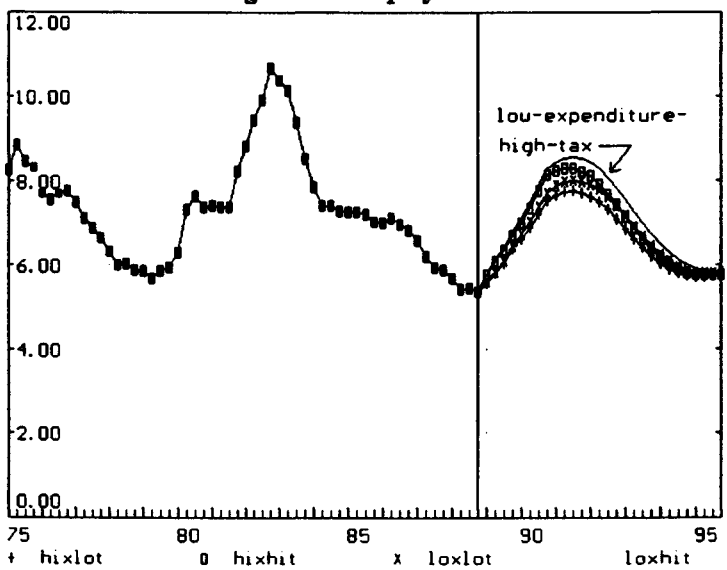
Fig 13: Investment



The graph showing investment, Figure 13, is particularly interesting because it shows a cross-over. Initially, the frugal fiscal policies slow growth and reduce investment, which depends heavily on the rate of growth of the private economy. But after an initial adjustment, growth resumes; and investment revives. It then benefits further from the relatively good availability of money and real interest rates, and rises to higher levels under the most austere of fiscal policies than under the loose fiscal policy. Partly this result could also be interpreted as "crowding out" under fiscal ease. This graph also shows the weakness in investment growth under all of the scenarios which is responsible for the "growth recession" which I expect in the next few years.

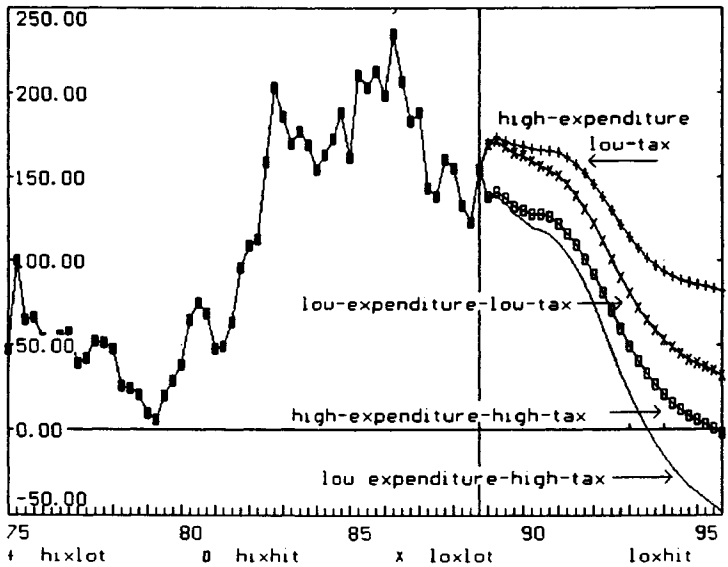
More than anything else, Mr. Barnard probably had unemployment in mind when he asked how detrimental a tax increase would be. If so, Figure 14 has his answer. At its maximum, the spread

Fig 14: Unemployment



between the unemployment percentage under the most austere and the easiest fiscal policy comes to about one percentage point. This maximum occurs in 1991, inconveniently timed to correspond with the trough in the anticipated "growth recession". The good news, however, is that by the end of 1995 there is no difference in the unemployment rates among the four scenarios. And that common rate is below anything we have experienced in the last decade. As with GNP, so with unemployment; the rate towards which the economy gravitates in the long run is independent of the tightness of fiscal policy.

Fig 15: Federal Deficit



The final graph, Figure 15, shows the federal deficit (National Accounts definition). It stands in total contrast to that invariance property of unemployment. The tightest fiscal policy -- the one with both a tax increase and an expenditure cut -- produces a balanced budget by 1993 and a 50 billion surplus by the end of 1995. The next tightest -- the tax increase only -- gets to balance in 1995. The easiest -- which is still a strict overall expenditure freeze and includes no tax relief for capital gains -- does show some reduction due to the growth in the economy. It still leaves a deficit of some 80 billion dollars. Remember that this deficit includes the surplus in the Social Security Trust Fund, which is, in 1995, still growing. Once it starts shrinking, you can imagine what will happen to the deficit.

If I may now step back from reporting on the results of a model and speak plainly about how I feel about the situation we face, I must say that it troubles me deeply to be part of the generation which encumbered with heavy debts the American republic which we inherited in sound financial condition. At present, debts of the federal government are, as far as I know, still all denominated in dollars. As our debt to foreigners grows, there is likely to be an increased temptation to opt for lower current rates by denominating the debt in

another currency. As soon as that happens, we can soon find ourselves in the position of Mexico not to say of Peru. I don't want our grandchildren to look back to our day and say, "They could have prevented this whole mess by taxing themselves one percent more of their income. But they didn't, and now we are just a client country of our foreign bankers. What a pity that they were so occupied with reading lips that they couldn't see what was happening." The cost of preventing that condition is slight. If expenditures, primarily military expenditures, cannot be sharply reduced, then I think a tax increase is the only responsible policy.

More specifically to the concerns of this subcommittee, I believe that stable, slow growth is the appropriate monetary policy.

I cannot pass up the opportunity to mention only briefly the concern that I and many taxpayers feel over the S&L mess. Insuring banks which are free to compete in the rates they pay depositors practically insures that "bad banks drive out good banks." The best plan seems to be a division of the banking system between unregulated, uninsured banks and closely regulated, insured banks that are subject to something like a Regulation Q automatically tied to market interest rates. Barring some such changes, the best efforts to eliminate deficits by cutting expenditures or raising taxes in the ranges we have discussed today can be brought to nought by a few incompetent or unscrupulous or unlucky bankers. I hope that you will press Chairman Greenspan to insure that that does not happen.

For release on delivery
10:00 A.M., E.S.T.
February 21, 1989

Statement by

James F. Smith
Professor of Finance
University of North Carolina Business School
Chapel Hill, NC

before the

Subcommittee on Domestic Monetary Policy

of the

Committee on Banking, Finance and Urban Affairs

U.S. House of Representatives

February 21, 1989

Good morning! Mr. Chairman and other members of the Subcommittee, it is a pleasure for me to appear before you today to discuss the outlook for the U.S. economy, as requested in your letter of invitation.

The American economy is the largest, strongest, most diverse economy ever to exist in human history. At the end of 1988, the U.S. economy produced $4,989.9 billion of goods and services in current dollars at an annual rate and $4,029.2 billion in 1982 dollars, the current base for inflation adjustments. For all of 1988, the increase in real GNP was $148 billion or 3.8 per cent. This was the strongest growth rate since 1984 and the increase in real GNP alone was larger than the total output of goods and services for all but 16 of the other countries in the world.

The next two largest economies in the world, those of the U.S.S.R. and Japan, are each less than half the size of ours. In 1987, world economic output was estimated at $17.1 trillion, so the U.S. represented 26.5 per cent of that at $4,526.7 billion. While this was down considerably from our 30.3 per cent share of 1960 and our over 50 per cent share of 1946, it almost exactly matched our share of world output in 1938. It has taken the rest of the world this long to catch up from the devastation to lives and productive assets that occurred during World War II.

The current economic expansion is now in its 75th month. Last year it broke the old record for the longest running peacetime expansion in American history, which had stood since the Washington Administration (1790-1796). This August will be the 81st month of this expansion, which will move it into second place on the all time list, surpassing the World War II expansion, which began in July, 1938, and peaked in February, 1945. The question before us today, of course, is whether this expansion is likely to equal or exceed

the current record holder, the 106 month expansion that began in March, 1961, and did not peak out until December, 1969.

The Bush Administration, like the Reagan Administration before it, forecasts continued economic growth for the next five years. The Congressional Budget Office has a similar forecast, although with somewhat less growth. While these forecasts may turn out to be correct, they are quite out of line with the expectations of the large majority of economic forecasters.

In my twenty years of experience as an economic forecaster, most of it in the business world, as you can see from the attached biographical sketch, I have always stressed the importance of looking at the future based on a set of scenarios. One scenario should be a baseline on which plans can be set and there should be at least two other scenarios for which contingency plans should be developed. These alternate scenarios should not be a best or worst case, but rather the two most likely alternates. The current forecasts of CBO and the administration would be a high side alternate for me and the low side alternate would include much worse inflation leading to a severe recession such as we experienced in 1973-1975 or 1981-1982.

My baseline scenario or most likely forecast for 1989 has real GNP growth of 4.2 per cent with inflation at 4.1 per cent as measured by the implicit price deflator for GNP or 5.6 per cent as measured by the consumer price index (CPI). As this strong growth and rising inflation occur throughout 1989, they cause the Federal Reserve to severely restrict the availability of credit. This causes a sharply inverted yield curve (the bond equivalent yield on 3 month Treasury bills is above the yield on 30 year Treasury bonds) throughout the latter part of 1989 and early 1990. This rise in rates causes

declines in housing market activity and automobile sales, a lot of defaults on junk bonds and other financial market instruments, and plunges the U.S. economy into a recession in May, 1990. This should be a relatively short, 1950's type recession of 9 months or so, after which inflation will be subdued a great deal and a strong rebound will take place. This pattern results in real GNP growth of 1.5 per cent for both 1990 and 1991, but the quarterly patterns within each of those years are sharply different.

A full 88.3 per cent of the respondents to the November, 1988, economic outlook survey of the National Association of Business Economists (NABE), which is attached, expect a recession in the United States by the end of 1990. A new report from the NABE forecasters will be released on February 27, and it is my expectation that the concern about 1990 will be even more evident in that survey.

There can be no doubt that the U.S. economy has started off 1989 with a bang. The January employment report showed that 865,000 more people were in the labor force than in December and that 702,000 new jobs were created. The payroll survey, which excludes people who are self-employed or working in family businesses, jumped by 408,000 jobs from December. Furthermore, the fraction of people over age 16 in the United States who wanted to work hit an all-time high of 2/3 in January. Similarly, the proportion of the working age population with a job hit a new record of 62.9 per cent for January, up sharply from 62.0 per cent a year earlier.

No one knows why the labor force participation rate has grown so strongly during this expansion, and until the reasons are known, it is not possible to talk intelligently about the inflationary effects of economic

growth. If we had the same employment figures we saw in January, but the same labor force participation rate of 1980 or 1981, the unemployment rate in January would have been only 2.5 per cent and wage pressures would have been far stronger than they are now. Most economists have underestimated labor force growth throughout this expansion and are continuing to make this basic error in 1989. Since growth in real GNP is constrained by growth in the labor force, the capital stock, and productivity in the long run, it is very important to improve our understanding of the decision process by which consumers decide to look for jobs.

Despite the negative effects of the Tax Reform Act of 1986, which constituted the biggest increase in corporate taxes in American history, we are in the midst of a boom in business fixed investment. This investment increase is being driven by strong orders for durable goods, which rose by 10.8 per cent in 1988 to $1.433 trillion. Total factory orders in 1988 rose by 9.7 per cent to $2.66 trillion. These orders will keep factories humming all across America throughout 1989.

Real business fixed investment rose by $42.1 billion or 9.5 per cent in 1988 to a record $487.2 billion. My forecast is for a similar increase in 1989, which will help to enhance productivity growth in the future.

After the surprise of the strong employment growth in January, economists were shocked by the 1.0 per cent increase in the producer price index for finished goods, which is a 12.7 per cent annual rate. The subsequent rise in the prime rate to 11.0 per cent was no surprise at all.

The elimination of the effects of last year's drought, which reduced growth in the last three quarters of 1988, will add a full 2.5 percentage

points to growth in the current quarter. Because we expect real GNP growth of 3.5 per cent for this quarter, that means that my forecast for 1989 starts off with a robust figure of 6.0 per cent for the first quarter. While my forecast for the remaining quarters of 1989 has smaller growth rates of 2.8, 4.4, and 4.6 per cent, respectively, the big kick at the beginning of the year is enough to produce 4.2 per cent real growth for the full year. The fourth quarter of 1989 is 4.6 per cent above the fourth quarter of 1988.

Given the obvious strength in the economy and the very bad news on inflation, the Federal Reserve has little choice but to tighten significantly. It must make clear its dedication to reducing inflation. Now would also be a good time to sharply increase the discount rate to 8.0 per cent. Since the only real function of the discount rate is as a signalling device, they should send a very strong one and forget about raising it in increments of only 0.5 per cent. As stated above, it is my expectation that this tightening will lead to the recession of 1990.

Is there anything you and your colleagues in the Congress can do to postpone this recession? Of course, this is possible, although it is inevitable that we'll have another recession someday. Not even the U.S. Congress can repeal the business cycle.

To postpone the recession, you'll have to give the Federal Reserve some support in fighting inflation and inflationary expectations and thus surprise the "bond market vigilantes." To do this, you will have to agree by late April or early May on a credible program to significantly reduce the rate of increase in Federal spending. You can't do anything about interest on the national debt and everyone agrees that Social Security is off limits, but you

have plenty of tempting targets for the elimination of programs, spending freezes, and increases in spending below the rate of inflation. You can also pick up revenue by reducing capital gains tax rates. Since the largest part of capital gains comes from the sale of houses and not from stocks and bonds, you shouldn't be unduly worried about the distributional effects of such a tax cut.

One thing you should not do is structure the bail out of the savings and loan industry so that it's all off-budget and costs taxpayers $10-$15 billion more that way. Even if you have to amend the Gramm-Rudman-Hollings legislation to accomplish this, it's worth the price.

Another thing Americans do not need is any new taxes or any increases in old taxes. We do need an effort to go through the proposed $1.16 trillion budget with an eye to cutting $50 -$60 billion out of it. You can get an analysis of 122 different spending reduction options in the study, Reducing the Deficit: Spending and Revenue Options, which was published by the Congressional Budget Office last week.

If you and your colleagues and the Administration can agree on a budget, preferably one for two years, that dramatically reduces the rate of increase in federal government spending and comes in with a believable deficit under $100 billion for fiscal year 1990 and under $64 billion for fiscal year 1991, we should be able to postpone a recession to 1993 or beyond. This would occur because financial markets would be so euphoric that inflation expectations would fall dramatically.

This would allow nominal interest rates to fall, which would increase corporate profits, put even more people to work, allow for even stronger

investment, and contribute to strong increases in productivity. This would also allow the dollar to rise somewhat, stamp out imported inflation, and allow wage increases that were not inflationary.

Because fiscal policy would then be moving toward encouraging stable growth and reducing inflationary pressures, the Federal Reserve would not have to bear the whole burden itself and could concentrate on stable money growth that could return the United States to the basically noninflationary type of environment we enjoyed from 1946-1965.

It should be obvious why this scenario is not my baseline. However, if you and your colleagues can accomplish this, you will guarantee that the current expansion will go on to be the longest one in American history.

It has been an honor for me to have this opportunity to share my thoughts on the future of the economy with you and I would be delighted to answer any questions you may have on the economic outlook.

Biographical Sketch
Dr. James F. Smith

Dr. Smith is a professor of finance in the graduate school of business administration at the University of North Carolina in Chapel Hill. He teaches the core course in macroeconomics in the MBA program. He is the author of the Business School's new bimonthly "UNC Business Forecast", an analysis of the national and North Carolina economies.

He is currently serving as vice president of the National Association of Business Economists, an organization of some 3,500 members. He is a fellow of NABE and serves on the editorial review of its journal, Business Economics.

He has over 20 years of experience as an economic forecaster. He is a member of the American Statistical Association/National Bureau of Economic Research forecasting panel, the NABE quarterly survey of forecasters, the Forecasters Club of New York outlook panel, and the Wall Street Journal economic outlook survey.

He worked at Sears, Roebuck and Company in Chicago from 1965-1980, where his last position was Director of Credit Research. He was chief economist for Union Carbide Corporation in Danbury, Connecticut from 1980-1985.

During 1985-86, he was Director of Regional Services and U.S. Consulting for Wharton Econometric Forecasting Associates in Philadelphia. In this position he was responsible for the group that prepared quarterly forecasts of all 50 states and each of the over 300 metropolitan statistical areas in the United States.

From September, 1986, until June, 1988, Dr. Smith was at the University of Texas in Austin. During most of that time, he was the director and chief economist of the Bureau of Business Research, the premier source of information on the economies of Texas and the Southwest. He also taught courses in corporate finance and money and capital markets.

During 1975-1977 he was on leave from Sears serving as a senior economist in the Mortgage and Consumer Finance Section of the Division of Research and Statistics of the Board of Governors of the Federal Reserve System in Washington, D.C. During April and May of 1981, he was on leave from Union Carbide serving full time as a consultant to the President's Council of Economic Advisers. In this capacity, his principal responsibility was to formalize the process of developing economic forecasts within the Reagan Administration.

Dr. Smith is a native of Dallas. He earned his B.A., M.A., and Ph.D degrees, all in economics, at Southern Methodist University there. His doctoral dissertation was The Demand for Consumer Installment Credit Since 1948: A Dynamic Stock Adjustment Approach.

He has appeared on national and local television and is frequently quoted in newspapers and magazines. He was a co-author of Economic Growth and Investment in Higher Education (1987) and has written articles in professional journals.

NABE OUTLOOK

NABE MACROECONOMIC FORECAST
November 1988

This report presents the consensus of macroeconomic forecasts made by a panel of professional forecasters drawn from the membership of the National Association of Business Economists. Most of the forecasts submitted were made in late October or early November and are being reported in November 1988. This survey is one of three taken regularly by NABE; the other inquiries are the Industrial Outlook and the Economic Policy Assessment surveys.

James F. Smith
Vice President, NABE
Professor of Finance
Graduate School of Business
University of North Carolina
Phone: (919) 962-3176

John H. Qualls
Director, Macroeconomic Forecast
NABE Public Affairs Committee
Manager, Marketing Research
Monsanto Chemical Company
Phone: (314) 727-0545

CURRENT HIGHLIGHTS - SLOWER GROWTH ON THE HORIZON

NABE's panel of economic forecasters are looking for a marked slowdown in economic activity for 1989, with year-over-year median growth in real GNP projected at 2.5%. While this forecast is up slightly from the September 1988 forecast of 2.3%, it is significantly slower than the 3.8% growth now expected for this year.

According to NABE's panel of experts, the main reason for the slowdown is slower growth in both consumer spending and business fixed investment. The 2.0% increase forecast for 1989 consumer spending would be the slowest growth since the current recovery began in 1983. The business fixed investment forecast of 4.3%, while at or slightly above the long-term trend growth rate, is still down sharply from the 10.1% expected this year.

Exports are expected to be an area of real strength in 1989, as the trade balance continues to show improvement. NABE's forecasting panel is projecting a $120 billion deficit in the trade account next year, down from the $135 billion deficit anticipated in 1988.

Published by the National Association of Business Economists, 28349 Chagrin Blvd., Cleveland, OH 44122 216-464-7986.

The NABE panel continues to expect an increase in the inflation rate. The GNP deflator is forecast to increase by 4.4% next year, up from the moderate 3.3% rate projected in 1988. The Consumer Price Index is expected to rise even more rapidly, showing a 5.0% year-over-year increase in 1989.

The vast majority of panelists (88%) still expect a recession sometime during the next two years, but more respondents now expect it to arrive in 1990, rather than earlier. However, a substantial minority (40%) still expect a downturn in 1989.

Interest rates, both short and long, are still expected to peak in the first half of 1989. However, rises are expected to be modest, with the three month treasury bill rate peaking at 7.6%, and thirty year bonds topping out at 9.5% -- up only 30 to 50 basis points from October rates.

THE DETAILED OUTLOOK -- CONTINUED RECOVERY, BUT AT A SLOWER PACE

November's forecast for 1989 is a bit more bullish than the two previous forecasts, in May and August of this year. Real growth is now expected to be 2.5% on a year-over-year basis, up from the 2.3% projection in August. One reason for the slightly stronger forecast is a more robust business fixed investment outlook. NABE's panel of experts is now expecting nonresidential fixed investment to rise 4.3% next year, versus the old forecast of 3.7%. The real net export deficit is still expected to improve in 1989, at -$76 billion versus 1988's -$96 billion. However, the current forecast shows some deterioration from August's level of -$67 billion. Other forecast components remain relatively unchanged.

While the consensus forecast has not changed much, the spread between the pessimistic and optimistic panel members has tightened somewhat, as can be seen from the table below:

Real GNP Growth (1988Q4-1989Q4)	Estimates of Survey in: August	November
Median Forecast	2.0%	2.2%
Upper Quartile	3.0	3.2
Lower Quartile	0.6	1.1
Spread -- Upper-Lower	2.4	2.1

The tighter spread is due to slightly less pessimistic forecasts by the lower quartile of respondents. This is consistent with the panel's answers on the timing of the next recession, which is now not expected to arrive until late 1989 or early 1990.

With three quarters of actual data in, it is no surprise that the 1988 forecast has converged at 3.8% for real GNP growth. Industrial production is expected to grow at a faster 5.5% clip, a reflection of the significant improvement in the trade deficit. Real net exports for the year are now expected to be -$96 billion, substantially better than the -$129 billion reported in 1987, although slightly worse than the forecast of -$91 billion in the August forecast.

INTEREST RATE PEAK EXPECTED IN 1989 SECOND QUARTER

As an optional question, we requested that respondents provide a quarterly path for the interest rate predictions. The quarterly medians of those responding, along with the upper and lower quartiles, are shown below:

Estimate	88Q3A	88Q4E	89Q1F	89Q2F	89Q3F	89Q4F
91 Day T-Bills - median	7.0	7.4	7.5	7.6	7.4	7.1
- upper 25%		7.7	8.1	8.2	8.0	8.0
- lower 25%		7.1	7.0	6.7	6.5	6.1
30 Year T-Bonds - median	9.2	9.1	9.4	9.5	9.4	9.1
- upper 25%		9.5	9.8	10.0	10.1	9.9
- lower 25%		8.9	8.8	8.8	8.6	8.3

A = Actual; E = Estimate; F = Forecast

The median and top quartile forecasts have rates peaking in the middle of next year, while the bottom quartile expects a continual decline from current levels.

THE NEXT RECESSION -- EXPECTED A BIT LATER

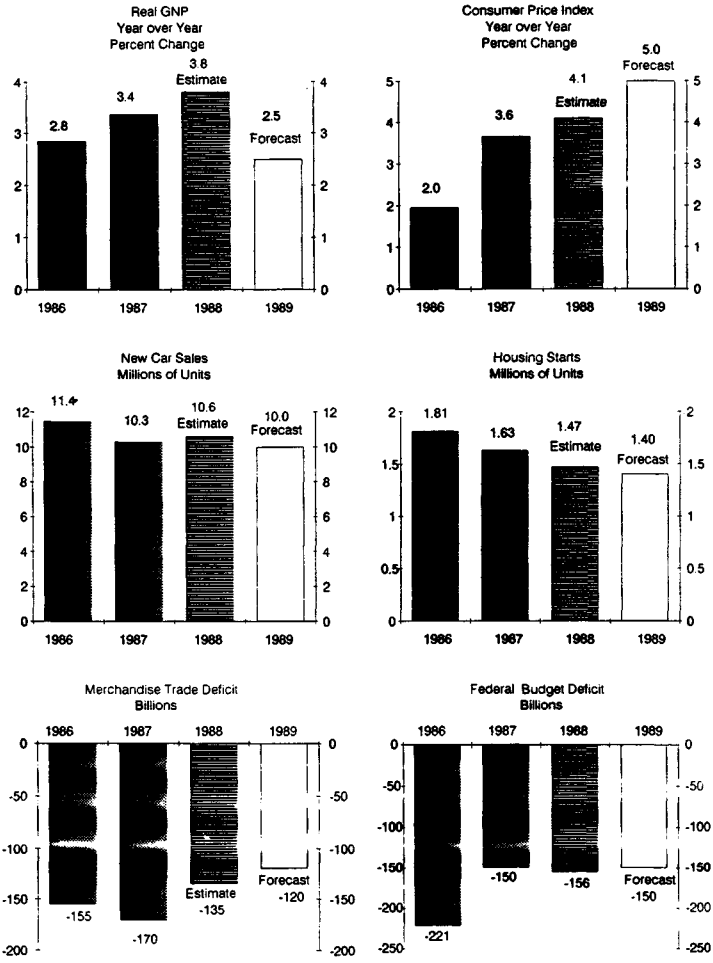
The panel has again pushed out in time its guess as to when the next recession will begin. Fewer than half of the respondents now expect the downturn to arrive in 1989; however, over 88% still expect one before the end of 1990, as can be seen below:

	% of Respondents in:		
Next Recession Begins In:	May 1988	August 1988	November 1988
1988	5.6%	0.0%	0.0%
1989	57.4	47.3	40.0
1990	31.5	41.8	48.3
1991	1.9	9.1	8.3
1992 or later	3.8	1.8	3.3

TABLE 1
SUMMARY OF NABE MEDIAN FORECASTS

	1987 ACTUAL	1988E Feb 88 SURVEY	1988E May 88 SURVEY	1988E Aug 88 SURVEY	1988E Nov 88 SURVEY*	1989 Est. May 88 SURVEY	1989 Est. Aug 88 SURVEY	1989 Est. Nov 88 SURVEY*
4TH QUARTER TO 4TH QUARTER								
Real GNP	5.0%	2.0%	2.3%	3.1%	2.8%	2.0%	2.0%	2.2%
Consumer Price Index	4.5%	4.2%	4.3%	4.4%	4.4%	5.0%	5.1%	5.0%
ANNUAL AVERAGES								
Real GNP	3.4%	2.2%	2.9%	3.9%	3.8%	2.2%	2.3%	2.5%
Personal Consump. Expend.	2.7%	NA	2.0%	2.5%	2.7%	2.0%	2.0%	2.0%
Nonresident. Fixed Invest	2.8%	3.8%	8.3%	10.3%	10.1%	2.5%	3.7%	4.3%
Net Exports	-$128.9	NA	-$117	-$91	-$96	-$93	-$67	-$76
Nominal Magnitudes:								
Merchandise trade bal.	-$170.3	-$150	-$150	-$135	-$135	-$130	-$120	-$120
Fed Budget Deficit (FY)	-$149.5	-$157	-$155	-$150	-$155	-$151	-$150	-$150
Corp Profits (after tax)	10.1%	3.0%	9.1%	9.5%	10.8%	4.7%	5.0%	5.2%
Real Magnitudes:								
Unemployment Rate (Civil)	6.2%	6.0%	5.6%	5.5%	5.5%	5.9%	5.6%	5.6%
Industrial production	3.8%	NA	4.5%	5.2%	5.5%	2.9%	2.9%	3.0%
Housing starts (Mils.)	1.68	1.52	1.5[illegible]	1.48	1.47	1.49	1.41	1.40
Auto Sales (Millions)	10.3	9.8	10.3	10.5	10.6	10.0	10.0	10.0
Inflation & Interest Rates:								
Consumer Price Index	3.7%	4.0%	4.0%	4.1%	4.1%	4.7%	5.0%	5.0%
GNP deflator	3.3%	NA	3.1%	3.1%	3.3%	4.2%	4.4%	4.4%
Treasury Bills (3 mo.)	5.8%	NA	6.1%	6.6%	6.6%	6.8%	7.4%	7.5%
Treasury Bonds (30 yr.)	8.6%	NA	9.1%	9.2%	9.0%	9.5%	9.6%	9.5%

NA = Not available in earlier surveys.
* = Based upon 66 forecasts submitted in November, 1988.



Testimony of

Norman Robertson
Senior Vice President and Chief Economist
Mellon Bank
Pittsburgh, PA

before the

Subcommittee on Domestic Monetary Policy

of the

Committee on Banking, Finance and Urban Affairs

House of Representatives

February 21, 1989

I greatly appreciate the opportunity to appear before this Subcommittee to discuss the 1989 economic outlook and offer some suggestions regarding the appropriate strategy for monetary and fiscal policies.

Looking first at the current economic situation, the record peacetime expansion, now in its seventh year, is still alive and well, showing neither signs of overheating nor exhaustion. According to the latest batch of statistical reports, employment, income, production and trade have all moved off to a fast start in 1989. At the same time, there are very few signs of the speculative excesses and imbalances, such as the excessive accumulation of inventories and the overbuilding of industrial capacity, that in the past have often preceded downturns in economic activity.

In assessing prospects for the rest of 1989, I am mindful of the fact that most economists, myself included, have tended to underestimate the strength and resilience of the U.S. economy. In recent years, for example, the emergence of recession-like conditions in a number of key sectors, including energy, agriculture and manufacturing, led many observers to conclude that the economy was probably headed for a major slowdown -- or even a recession. Instead, activity in other areas took up the slack and the economy as a whole was able to maintain its forward momentum.

Might not 1989 be another year in which weakness in one or two sectors is more than offset by increased strength elsewhere in the economy? I raise this question because the consensus forecast for 1989 again calls for a distinct slowdown in the economy's growth pace during the latter part of the year. Briefly stated, the primary engines of expansion, foreign trade and fixed investment spending, are expected to slacken perceptibly as the year progresses. And since the forecast also anticipates a mixture of declines and weak growth in most of the remaining sectors, the economic growth rate during the second half of 1989 is projected in the 1-2 percent range compared with an average of close to 3 percent estimated for the first two quarters.

I have no quarrel with the argument that progress toward a narrower trade gap is likely to falter during 1989. One problem is that capacity constraints in a number of major export industries will shortly limit the ability of some U.S. producers to accommodate further strong gains in orders from domestic and overseas markets. Of greater significance, however, is the likelihood that we have already reaped most of the trade benefits resulting from the dollar's extensive 1985-87 decline. Once the backlogs of export orders, particularly those with long production lead times, have been worked down, a much less buoyant pattern of U.S. exports is likely to develop, reflecting the dollar's renewed strength since early last year. Other factors, ranging from the unresolved debt problems of Latin America to the worldwide

abundance of agricultural commodities and the intense competition from the low-cost and technically advanced Asian NICs are clouding this year's outlook for U.S. exports. All things considered, I expect that the uptrend of exports will soon slow to the 6-7 percent range projected for world trade in 1989-90.

Meanwhile, the continued buoyancy of U.S. domestic demand scarcely augurs well for a further reduction in imports. Indeed, the composition of real GNP growth in the fourth quarter of last year clearly favored consumption over exports and investment. While adverse developments in a single quarter need not be regarded with any great concern, it is nonetheless worrisome to find that the composition of growth has shifted in a direction which can only have negative consequences for the economy, even on a temporary basis. At issue here, of course, is the compelling need to curtail the growth of domestic consumption in order to free up resources for the investment and export sectors.

Aside from the strength of domestic consumption, it is evident that the failure of import prices to increase at a rate even remotely commensurate with the 1985-87 decline of the dollar has played a considerable role in sustaining the demand for imported goods. This situation is unlikely to change any time soon. Indeed, given the dollar's recent strength on the foreign exchange markets, I seriously question whether we will see much in the way

of any additional shift from foreign to domestic supplies during 1989.

Any further improvement in the trade deficit during this year will probably be on a very modest scale. My own forecast calls for a slight narrowing of the current dollar merchandise trade gap from last year's $135 billion to roughly $120 billion in 1989. This implies, of course, that one of the major sources of economic energy during much of last year will soon begin to dissipate.

The waning of the export boom may also have a dampening effect on business spending for new equipment, which to some degree has been linked to the ebullient demand for U.S. goods in world markets. Consistent with this view, the recent lackluster pace of nondefense capital goods, excluding the surging demand for aircraft, may be the first hint of a slower paced uptrend in capital outlays. But this does not mean that the upswing is about to stall. Far from it. The need to enlarge capacity, modernize and upgrade existing facilities and further improve productivity all argue strongly in favor of a briskly rising trend of outlays for new machinery and equipment. Likewise, the growing number of foreign-based producers who are establishing or expanding manufacturing facilities in this country should further bolster this year's demand for capital goods.

As an aside, I am encouraged by the fact that business firms now seem to be spending more heavily for plant modernization and capacity expansion. Since early 1987, real outlays for industrial machinery have climbed 20 percent, representing the first decisive advance in this key segment of the capital goods market since the early days of recovery from the 1981-82 recession.

In real terms, investment outlays for new equipment should climb about 7 percent over the four quarters of 1989. While less than last year's 12 percent advance, the prognosis for business fixed investment is, in my judgment, extremely positive. Viewing the recent strength of corporate profits in the manufacturing sector as well as the growing backlogs of fixed investment needs, there is a good chance of a larger-than-expected increase in business capital spending during 1989. From my perspective, therefore, investment outlays are likely to remain a source of some considerable energy in the 1989 economy.

In the key consumer sector, most of the signals are pointing to developing strength rather than weakness. Since last July, payroll employment has climbed at a near-3.5 percent annual rate, one of the strongest growth rates for any six-month period since 1983-84, when of course the economy was still in the early stages of recovery from the deep 1981-82 recession. Likewise, real disposable personal income surged at a better than 5 percent annual rate over the final two quarters of last year, again one of

the strongest advances for any six-month period since the expansion began in late 1982. Against this backdrop, forecasts of a perceptible slowdown in consumer demand appears inconsistent with these recent gains in employment and income which by and large have matched those experienced during the middle 1980s when consumer spending provided much of the impetus to overall economic activity.

Since there is scant evidence to suggest that consumers are planning to save a significantly larger proportion of their incomes or scale back their use of credit, it is entirely possible that, even assuming a more subdued pace of employment and income growth, the pace of spending will again pick up speed. Should that happen, the composition of output gains would shift in a direction which under present circumstances would be decidedly unfavorable for the nation's future economic growth.

I agree that activity in other sectors of the economy is unlikely to show very much movement in either direction. But again the upside risks appear greater than those on the downside. While a marked acceleration in the rate of inventory accumulation does not seem very probable, the fact remains that in many industries stocks now appear low relative to sales and orders. Should the tempo of inventory building begin to quicken, it is doubtful whether those industries already operating at or close to their capacity ceilings could readily accommodate a sudden or

substantial increase in demand. Such a development would not only increase the risk of supply bottlenecks and rising prices but would also boost the demand for imported supplies, thereby enlarging the trade deficit.

There is also a well-founded view that construction activity will at best remain on an even keel during 1989. Most observers are looking for a volume of housing starts in 1989 which is little changed from last year's 1.49 million. However, despite widespread reports of empty office buildings and retail stores, it is startling to find that the trend of contract awards for commercial building, including office and retail space, has moved almost steadily upward since June of last year. Before year-end 1989, therefore, it is entirely possible that we could see a renewed firming of spending for commercial construction.

With most of the evidence continuing to show a very strong economic performance, I believe that the thrust of monetary policy should be directed toward the containment of wage-price pressures. This policy recommendation has been challenged on the grounds that fears of accelerating inflation have been greatly exaggerated. Some observers have pointed out that the economy has been operating in the "full employment" zone for the better part of 18 months without any clear sign of a serious inflation problem. Then, too, it is argued that the prospect of a less buoyant pattern of export growth has increased the likelihood of a

more general economic slowdown and hence less pressure on available resources.

One major issue in this debate is the rate at which the U.S. economy can safely expand without causing rapid inflation. Unfortunately, no one can specify with any degree of conviction the exact limits of the economy's productive capacity. Until very recently, the Federal Reserve took the position that the economy's long-term potential growth rate was in the 2-2.5 percent range. More than 18 months ago, Federal Reserve officials began expressing concern that the economy might overheat unless it slowed to a pace which was more in keeping with the perceived expansion of productive capacity. With the economy expanding at an above-trend rate of activity, the Fed acted to tighten policy in the spring of 1987 and raised the discount rate from 5.5 percent to 6 percent in September of that year. Subsequently, policy was eased in response to the stock market's crash in October. But then as the threat of recession receded, the Fed resumed its anti-inflationary course in March of last year.

Since then, the discount rate has been raised another one-half percentage point and market rates have jumped more than two and one-half percentage points. So far as I can see, however, the Fed's restraining moves have not slowed the economy's growth pace, which in recent quarters has continued to climb at a near-3 percent rate. They have, however, been more visible in the

dollar's recent strength -- a mixed blessing -- and more positively, the successful containment of inflationary expectations, as evidenced by the relative stability of long-term Treasury bond yields which in the face of a 200 basis point rise in short-term rates since last spring have traded in a narrow range centered on 9 percent.

The economy's continued vigor raises the interesting question as to whether small and carefully timed increases in interest rates -- the so-called gradualist approach -- can have much of a dampening effect on a large, dynamic and well-diversified economy. Incidentally, those who argue that a further moderate, say 50-100 basis point, rise in interest rates will choke off the expansion are, in my opinion, failing to recognize that as a result of large structural, institutional and regulatory changes, the economy is now much less sensitive to interest rate movements than it was in prior periods of cyclical expansion.

More recently, the Fed has indicated that gains in real GNP of 2.5-3 percent as opposed to 2-2.5 percent might be sustained without reigniting the inflationary fires. This seeming reassessment of the potential growth rate implies that the Fed will not be as quick to tighten policy in order to shunt the economy onto a somewhat slower growth track. Nonetheless, monetary policy should, and I think will, err on the side of caution and remain tilted toward restraint. The reason, in my

judgment, is that although no one knows the precise growth rate that might trigger accelerating inflation, there is ample evidence to suggest that the economy is in the "full-employment" zone both in terms of labor and plant capacity. At a time when the margin of unused resources has been substantially reduced, it would surely be irresponsible for the Federal Reserve to gamble that the inflation rate will not pick up speed.

Looking back over the past couple of years, the Fed's adoption of preventive as opposed to remedial monetary policy actions, which in a sense amounted to a preemptive strike against inflation, represented a clear-cut departure from earlier periods of economic expansion when the Federal Reserve often failed to apply the monetary brakes until the signs of inflation were clearly visible in the various cost-price indices. By that time, of course, the degree of restraint needed to counter well-entrenched inflationary forces was on a scale which invariably produced a sharp run-up in interest rates -- and a decline in economic activity. As a matter of fact, most of the cyclical upswings since World War II have come to an end when the inflation rate was allowed to accelerate, necessitating a drastic tightening of monetary policy which, in turn, precipitated an economic downturn.

Nowadays, the Federal Reserve appears to accept the view that a firming of policy in response to conflicting and sometimes ambiguous warning signals of inflation is far preferable to

running the risk of an accelerating inflation rate which would necessitate more painful tightening of policy. Quite apart from concerns about the future rate of inflation, however, the Federal Reserve has acknowledged that even the current rate of price increases of roughly 4.5 percent is too high for safety and needs to be reduced. This concern also argues in favor of continued monetary restraint.

Current and prospective economic conditions would, therefore, seem to dictate further restrictive moves through at least the first part of this year. However, the dollar's strength, which reflects in part the attraction of high U.S. interest rates to foreign investors, places the Fed in an awkward position. A rising trend of interest rates, designed to prevent the domestic economy from overheating, can be expected to strengthen the dollar, retard progress toward a lower trade deficit and further increase the burden of foreign debt. By the same token, a decline in the dollar's value, while helping to reduce the trade deficit, is also likely to boost prices and interest rates. Quite simply, the dollar's position in foreign exchange markets would seem to mitigate against either a drastic easing or tightening of monetary policy in the foreseeable future.

It would be fanciful to believe that the Federal Reserve can single-handedly sustain the expansion, contain the rise in inflation, reduce our excessive dependence on foreign capital and

ensure that adequate resources flow to the export and investment sectors. Support from fiscal policy is urgently needed and, unhappily, long overdue. Reducing the budget deficit will enlarge the pool of domestic savings available to finance productivity-enhancing investment on which future living standards heavily depend. Plainly put, a steady decline in the deficit would remove many of the obstacles in the path of balanced and sustained economic growth and thus improve the chances of continued expansion into the 1990s. They could also diminish the demand for foreign funds and almost certainly reduce the trade deficit. Aside from these crucial longer-run considerations, however, lower budget deficits could have some important short-run benefits, including an easing of credit market pressures -- and lower interest rates.

What about the economic costs of large budget deficits? Some observers have now decided that large deficits are essentially benign and do not pose a threat to the economy's longer-term growth prospects. True, no one can deny that the economy has performed well in the face of budget deficits, which since 1982 have totaled $1.2 trillion. Arguably, too, there has been some encouraging progress on the fiscal front as evidenced by the drop in the deficit-to-GNP ratio from 6.3 percent in 1983 to a more moderate -- but still historically high -- 3.3 percent last year. And when the state and local government surpluses are included, the consolidated government deficit amounted to roughly 2.0

percent, which closely approximated the average for other major industrial countries.

These and similar arguments fail to recognize the real danger of budget deficits. Essentially, the budget deficits, while not seemingly excessive relative to GNP, are extremely large relative to the country's woefully inadequate supply of private savings. As a share of GNP, net private savings have averaged only 5.6 percent in the 1980s, well below the average of 7.9 percent recorded from 1952 through 1979. This worrisome decline when combined with the dissaving of the public sector has reduced the net national savings rate to a dismal 2.8 percent, half the net investment rate of 5.6 percent.

What has happened, of course, is that the deficits have preempted funds needed to finance investment in the private sector. Had it not been for the massive inflow of foreign capital, there is little doubt that the competition for funds between the public and private sectors would have "crowded out" investment. Since 1983, in fact, net foreign capital inflows have closely approximated net domestic savings, which indicates that funds from abroad have financed roughly 50 percent of net U.S. investment. In short, the inflow of foreign savings has enabled the United States to finance the deficit and private investment without undue pressures in credit markets.

Given the small pool of private savings, large budget deficits are potentially dangerous because they will force us to depend on heavy inflows of foreign capital. But surely foreign capital cannot be viewed as a permanent substitute for domestic savings. Remember that the servicing of foreign debt will, over time, absorb an ever-increasing share of U.S. domestic income. What we are talking about is the mortgaging of future income to pay for our overconsumption.

To service the growing debt, real resources will have to be transferred to other countries. As a result, less of the nation's domestic income will be available for consumption and thus the growth of U.S. living standards will be endangered. At the same time, it is difficult to escape the conclusion that in order to attract a steady flow of funds from abroad, U.S. interest rates would need to be significantly higher than they would otherwise have been. Should the deficits persist, therefore, the United States will be faced with the unpleasant choice of either displacing foreign capital which would severely depress investment spending or continuing to rely on foreign funds which would mean sharply higher interest rates and little if any growth in living standards.

To ignore the deficits or pretend that they don't really matter would, in my judgment, have serious and far-reaching economic consequences. It must be hoped, therefore, that 1989 will be the

year in which the Administration and the Congress can finally agree on a credible deficit-reduction program which will convince the financial markets that the deficits will soon be set on a downward path.

To conclude, the U.S. is still enjoying an unusually favorable combination of economic developments, including strong above-potential growth, low employment and moderate increases in costs and prices. While there is good reason to expect that most of these positive trends will continue through 1989 and quite possibly into 1990, the outcome cannot be taken for granted, especially since a good deal will depend on the conduct of monetary and fiscal policy.

To combat inflation, the Federal Reserve should continue to err on the side of restraint and keep monetary policy tight. This could imply a further rise of about 50 basis points in short-term interest rates over the immediate months ahead. Although an increase of this magnitude should not derail the expansion, it should be recognized that rising interest rates are not necessarily the best way of curbing the growth of domestic demand, since they can choke off investment and retard progress toward a lower trade deficit. Actions to lower the Federal budget deficit would clearly lighten the burden on monetary policy and thus avoid the risk that sharply higher interest rates might bring the expansion to a premature end. Plainly stated, then, the adoption

of a deficit-lowering plan could well be the single most important policy action that can be taken to avoid the boom/recession scenario and enhance prospects for stable economic growth in 1989 -- and beyond.

Federal Reserve Objectives and Procedures and Inherent Risks of Higher Rates of Interest and Inflation

Submitted by Robert A. Jones
to the
Subcommittee on Domestic Monetary Policy
February 7, 1989

Fed Policy is NOT a monetary policy

Reserve management by Fed officials is used as a tool of interest rate control, not as a tool of monetary control. Policy makers at the Fed currently operate with the belief that the funds rate is the key transmission of policy actions to the financial markets and to the economy. In short, this means that Fed targeting of the funds rate, to which many important interest rates are structurally linked, can influence the growth of aggregate demand with a still-unknown lag of many months. Why is there such policy emphasis on aggregate product demand?

Fed Policy IS an anti-inflation policy

Federal Reserve domestic objectives are full employment of economic resources and price stability. Whenever the full employment objective is met or nearly achieved, Fed policy makers have usually given greater priority to the stable price objective, particularly if there is evidence of rising prices.

At present, the underlying rate of inflation appears to be somewhere between the annual rates of 4.5% and 5%. By any account, such rate of inflation significantly exceeds any reasonably modest rate of inflation consistent with the stable price objective. Under these conditions, the Fed has adopted what is widely recognized to be an anti-inflation policy.

Anti-inflation policy can incorporate tactics of a monetary policy seeking to moderate the growth of money and credit. Alternatively, the anti-inflation objective can be sought by restraining the growth of aggregate product demand commensurate with the growth of output capacity. Such desired equilibrium can theoretically be monitored by data on capacity utilization. This second alternative tactical approach toward combating inflationary pressures is basically the one used by Fed policy makers, not the monetary alternative.

The impact of BAD DATA on Fed policy tactics

One reason why there is such little monetary importance to anti-inflation policy is the questionable meaningfulness of monetary aggregates in the wake of financial deregulation. Oddly, Fed officials have not made known any recent research attempts to improve both definitions and measurements of monetary aggregates. Yet private research has offered reasonable hopes that significant improvement can be made to make monetary data more meaningful. The apparent willingness of Fed officials to leave monetary data distorted by definitional and measurement flaws seems to indicate a desire to keep Fed policy detached from any appreciable monetary emphasis. This, of course, partly belies, the spirit of Federal Reserve accountability to Congress through Humphrey-Hawkins reporting requirements.

While seeking to avoid potentially misleading use of monetary data, Fed officials have not improved their policy vision in using capacity utilization data, widely viewed with suspect and uncertain meaning. So, if such data do not fairly represent the relationship of aggregate demand to output capacity, then how can policy makers monitor this crucial relationship?

Fed policy makers have been forced to closely monitor wage and price evidence of inflation as a sign of capacity limits being strained by aggregate demand. But history shows that once such inflationary pressures become rooted, it is too late for policy actions to quickly moderate these pressures. In fact, history shows that either severe monetary restraint or extraordinarily high real interest rates will be required over a sustained period of time to root-out inflationary pressures and related psychology. Often such severe restraint forsakes the full employment objective to the extent of creating an economic recession.

The WORST of two evils

If tardy policy reaction to inflationary influences requires a severe dose of anti-inflation policy, which strategy is least efficient; monetary (reserve) restraint or aggregate demand (interest rate) restraint? Fed officials often claim that there is no interest rate difference arising from either reserve or interest rate restraint. Such a claim is false.

There once was a time, several decades ago, when reserve management was used as a tool of monetary restraint. Commercial banks, at times of tight monetary policy, were simply unable to extend more loans (which create new dollar deposit credit) for want of reserves. Yet borrowers were more than willing to pay prime (plus) to obtain new bank credit (loans). Compared with today's interest rate standards, borrowing rates several decades ago were relatively low despite very tight credit conditions. Today's society has forgotten the term "credit crunch." Credit crunches were distinguished by tight availability of money and credit in spite of affordable borrowing rates in most real sectors except housing.

Such restraint was deemed inequitable by Fed officials early in the seventies because the apportionment of credit seemed rather arbitrary relative to a free market allocation based on higher interest rates. The strategic shift to interest rate targeting, that subsequently occurred, was accompanied by the false claim that higher rates reduced money demands, thus affecting monetary restraint simultaneous with interest rate restraint on aggregate product demand. Though it is quite true that mortgage credit demands have a high degree of interest rate elasticity, private research has documented that, in the aggregate, the demand for bank credit is highly inelastic to interest rate changes.

Accordingly, high interest rate targets of Fed anti-inflation policy exert much more restraint on aggregate demand as opposed to monetary growth within a given period of time. The demand for credit will eventually succumb to high real interest rates, but only after rate-induced weakness in the real sector spreads and multiplies itself through depressed income flows.

The claim that reserve and funds rate targets produce equal interest results is made false also by official Federal Reserve recognition that the funds rate is determined by both reserve availability and the discount rate. Specifically, the funds rate is basically floored by the discount rate, above which the funds rate will predicably rise in accordance with the amount of reserve restraint applied. A very low discount rate, as an example, can keep the funds rate quite low relative to a significant amount of reserve (monetary) restraint imposed.

Post-war history of anti-inflation policies of the Fed seem to validate theoretical claims that reserve restraint on monetary growth is far less damaging to the economy and living standards than interest rate restraint on aggregate demand growth. In other words, reserve management rather than interest rate management more effectively addresses the need for stable price behavior and full employment. Such strategic advantage of reserve restraint on monetary growth is partly due to the fact that long term monetary growth trends precede (as one causative factor) long term inflation trends. Reserve management is therefore more likely to be more proactive and less reactive than interest rate management to inflation risks.

Why doesn't the Fed use the LEAST PAINFUL method of restraint?

Because financial deregulation was accompanied by a mandated drop in stipulated (as well as average) reserve requirements, Fed officals believe that potential monetary control has been structurally weakened beyond salvation. This too is false. Though structural weakness occurred, its impact was limited to forsaking moderation of the money multiplier; it did not impair the Fed's ability to constrict money center bank abilities to extend new credit through tight reserve conditions.

The Fed's inability to make the foregoing distinction needlessly prompted dismissal of reserve management as an effective tool of monetary control. In turn, efforts to better define and measure monetary aggregates were thought to be of little policy value. Even a proper recourse to targeting bank credit, as the major source of dollar deposit growth worldwide, was considered to be without much appropriateness as long as it was mistakenly believed that bank credit growth was beyond the influence of reserve management; indeed, there still remains a predictable linkage.

Time for the Fed to TELL the TRUTH

Fed officials have avoided candid public discussions about strategic options of anti-inflation policy, probably because they would rather veil their interest rate control (particularly the funds rate target) from public view. Free market forces of supply and demand are suppose to govern interest rates, not a select few who lack accountability to the people so dramatically impacted by interest rate policies.

The Fed's veil of secrecy is not sustained by failing to tell the truth, but by not telling the full truth. As an example, current targeting of a specific funds rate level requires Fed officials to also target both borrowed and nonborrowed reserves in the daily conduct of open market operations. If the Fed Chairman is asked whether the funds rate is targeted, Mr. Greenspan can quite honestly assure the public that reserve targets are used in the conduct of open market operations. When pressed further about funds rate objectives, the Chairman can refer to broad funds rate guidelines set by the FOMC, but not as the specific objective that is not publically disclosed (even as to its existence).

The question is which target of open market operations is the primary target? Clearly the funds rate is primary with reserve targets subordinated as a means of hitting a funds rate target. Why is this so clear? Because the object of a primary target is control and thus stability. Mere comparison of time series of the funds rate with any reserve aggregate will vividly display reserve variations relative to funds rate stability.

The funds rate target, moreover, has to be primary because Fed officials believe the funds rate to be the key link between policy actions and the economy, not monetary growth or reserve management. Such reality make the Humphrey-Hawkins requirement of disclosing monetary growth targets a cruel hoax. Yes, there is some monetary monitoring in the formulation of anti-inflation policy; but surely there is not much money in the so-called "monetary policy equation."

The RISK of Monetary blindness

From 1982 to 1987 the rates of monetary and bank credit growth were in excess of any historical, non-inflationary standard. Yet as long as inflation remained in apparent control, the inevitable rise in inflation to be expected was conveniently dismissed, particularly when money velocities seemed so irregular. Unfortunately, monetary growth flooded world financial markets with astounding volumes of liquidity. Such evidence was quite clear.

In theory, the twin deficits (fiscal and trade) should have crowded-out domestic private credit demands from the marketplace. Yield curves should have displayed record-breaking positive slopes. Dislocated financial flows should have created a severe recession. But, none of this happened. Indeed, enormous dollar liquidity volumes blasted through the economic barriers of trade and fiscal deficits. Liquidity inverted yield curves even as the Fed tightened and inflation rates rose (rather than receded).

Financial assets rose from roughly $.95 for each GNP dollar in 1982 to about $1.15 (plus) last year. Such dramatic increase in dollar liquidity occurred at a time of significant dollar devaluation. World market dollar pricing of commodities had to be adjusted upward to a weaker vehicle (dollar) currency, not at all restrained by scarce liquidity; in fact, excessive liquidity may become a more visible force in commodity markets this year than Fed officials would dare admit as a possibility.

Liquidity has also sustained economic growth well beyond previous expectations. Notably the consumer, supposedly out of savings and liquidity, has led the way to recovery more than manufacturing investment and expansion. Wage inflation has clearly surfaced in many regions of the nation, raising the question of if the Fed can really apply sudden brakes to consumer demand fueled by liquidity? Though a definitive answer may not be possible, partly due to the known power of psychology, it nonetheless seems clear that the current inflation risk is on the upside, not the downside of Fed projections. Why? Because of monetary blindness not overcome through Humphrey-Hawkins hearings.

Fed officials in recent years seemed to have two objectives in mind when establishing monetary growth targets for review by Senate and House Banking Committees. The first objective is to present the Banking Committees (and the public) with an internally consistent argument for a constructive outlook. The second objective has, in recent years, seemingly been one of accommodating sufficient latitude for growth rate variations so that actual monetary growth rates will not hold Fed policy hostage to monetarism.

Indeed, very few market participants think it appropriate for the Fed to limit policy prerogatives only to monetary growth rates, as was done in the seventies. Monetarism then created a monetary blindness in the opposite extreme, being blind to all incoming data except monetary growth rates. Today's opposite blindness to the importance of money and monetary policy needs to be shifted towards a more balanced monitoring of the economy, as the basis for formulating monetary policy.

In Conclusion

Federal Reserve considerations of becoming more candid about its policy objectives and procedures should be encouraged, because the current veil of secrecy has prevented an open debate about important policy issues so critical to our future well-being.

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Lacking quality data to confidently monitor the current and prospective behavior of money and prices, anti-inflation policy may risk more inflationary pressures than most people would like to admit; and, the Fed might be more prone toward a high interest rate over-reaction without due consideration of strategic options which, available evidence suggests, could be far less harmful to the economic well-being of each and every American.

APPENDIX

February 22, 1989

Statement by

Alan Greenspan

Chairman, Board of Governors of the Federal Reserve System

before the

Committee on Banking, Finance and Urban Affairs

of the

U.S. House of Representatives

February 22, 1989

Mr. Chairman and members of the Committee, I appreciate this opportunity to discuss with you recent monetary policy and our plans for the future. You have received our formal report to the Congress. This morning, I would like to summarize the important points of that report and to place monetary policy in the context of the overall economic and financial situation.

Economic and Monetary Developments in 1988

Last year was a challenging one for monetary policy. Early in the year, uncertainties remained about the impact of the October 1987 worldwide stock market break on the economic expansion and financial system. Given these risks, the Federal Reserve increased the availability of bank reserves slightly further, adding to the easing put in place immediately following October 19; at the same time we monitored financial and economic indicators closely for any signs that the economic expansion was faltering.

Gradually, however, it became clear that the economic expansion remained well on track and that market confidence was on the mend. Spending was robust, and dwindling margins of unused resources as employment and output registered sizable gains indicated that the balance of risks was shifting in the direction of higher inflation. Consequently, the Federal Open Market Committee applied increased restraint to reserve positions in a series of

steps beginning in the spring of 1988 and extending to the current period. In addition, the discount rate was raised from 6 to 6-1/2 percent in August.

The policy restraint led to an appreciable rise in short-term market interest rates beginning in the spring of 1988. Growth of money moderated over the year as rates on deposits lagged the rise in market interest rates. M2 and M3, which were near the upper ends of their target ranges early in the year, slowed considerably in subsequent months and finished the year around the middle of their 4 to 8 percent annual target ranges. Growth of M1 also was restrained by higher interest rates, slowing to about 4 percent, while the monetary base grew only a bit less rapidly than in 1987, as currency continued to expand at a strong pace. Thus, in both 1987 and 1988, most money measures grew appreciably more slowly than they had in many years. This more moderate pace of monetary expansion has been a necessary aspect of a monetary policy designed to contain inflation and promote price stability and economic growth over time.

Despite tightening money markets, longer-term interest rates have been remarkably stable. Yields on Treasury bonds, for example, remained in a fairly narrow range around 9 percent for most of the year and have continued in that range so far in 1989. Moreover, the stock market recovered relatively steadily over the year and into

1989. The performance of the bond and stock markets in the face of rising short-term rates seemed to stem from expectations of continued relatively balanced economic expansion in the United States with inflation pressures not likely to intensify. U.S. investments looked attractive under these circumstances, and the dollar's average value against major foreign currencies recovered from the late 1987 plunge and was relatively stable over the course of the year.

The optimism of domestic and foreign investors evident in financial markets reflected the solid performance of the economy and prospects for its continuation. Our GNP expanded by around 3-1/4 percent in 1988, adjusted for crop losses caused by the drought. Over the year, payroll employment rose by 3.7 million. Since the economic expansion began in late 1982, employment in the United States has increased by more than 17 million people, pushing the unemployment rate below 5-1/2 percent, its lowest level since the mid-1970s. Employment gains in 1987 and 1988 were strong in nearly every major sector of the American economy, including manufacturing, construction, trade, and services. Although in 1988 farmers suffered one of their worst crop losses in this century, the situation in agriculture remains fundamentally much improved from that earlier in the 1980s. Industrial production in manufacturing rose 5-1/2 percent, bringing average capacity utilization to the highest level

since the late 1970s. Some industries that had been hit especially hard by the recession of 1981-82 and by the erosion of international competitiveness owing to the rise in the value of the dollar now are considerably improved. Quite a few firms in those industries are operating essentially flat out and experiencing notable profit improvement.

However, last year's economic performance had some disappointing features. The federal budget deficit remained high and our national saving low. This contributed to continued large current account and trade deficits. By keeping pressure on interest rates, the low rate of saving also was a factor behind the performance of business fixed investment last year. Investment slowed from 1987, especially in the second half of the year, even in the face of relatively rapid expansion of production and high levels of capacity utilization.

In addition, overall inflation, in the area of 4 to 4-1/2 percent, during 1988 was a little above the general range in which it had fluctuated in the mid 1980s. The drought boosted food prices, adding somewhat to inflation last year, but this was largely offset by a leveling off of energy prices. Prices of other consumer goods and services accelerated a bit. This acceleration is troubling, especially with inflation already at a level that would be unsatisfactory if it persisted.

Although the step-up in consumer inflation to date has been rather small, some signs have emerged of greater acceleration in broad measures of costs of production. Wage gains accelerated toward the end of last year. Moreover, benefits took an unusually large jump in 1988, boosted in part by a sharp rise in health insurance costs and a hike in social security taxes--both of which add to business costs as directly as do wages. Overall, the employment cost index, a comprehensive measure of hourly wage and benefit rates, rose 5 percent in 1988, up significantly from 1987. Materials inputs also were adding to costs; the producer price index for intermediate materials and supplies excluding food and energy rose about 7 percent over the past year.

Economic Prospects and Monetary Policy for 1989

On the whole, the economic expansion remains vigorous and unusually well balanced after more than six years. There are few of the tell-tale distortions, such as widespread inventory overhangs or constricted profit margins, that typically have signaled the last phases of expansions. But with the economy running close to its potential, the risks seem to be on the side of a further strengthening of price pressures. In these circumstances, the Federal Reserve remains more inclined to act in the direction of restraint than toward stimulus.

The determination to resist any pickup in inflation in 1989 and especially to move over time toward price stability shaped the Committee's decisions with respect to monetary and credit ranges for 1989. The Committee agreed that, particularly in this environment, progress toward these objectives likely will require continuing restraint on growth in money and credit.

To this end, the Committee lowered the range for M2 by a full percentage point to 3 to 7 percent and reduced the range for M3 by 1/2 percentage point to 3-1/2 to 7-1/2 percent. The Committee also lowered the monitoring range for domestic nonfinancial sector debt by 1/2 percentage point to 6-1/2 to 10-1/2 percent. These were the ranges adopted on a tentative basis last June.

We decided to retain the wider, 4-percentage-point ranges that were adopted in 1988. The relationship of the monetary aggregates to economic performance has been quite variable in the 1980s. The relatively high interest elasticity of the aggregates, even after deregulation, makes them very sensitive to changes in money market conditions, which in turn can respond to developments in the real economy or prices. The resulting potential for sizable movements in velocity requires broader ranges in order to have reasonable assurance that the targets are consistent with satisfactory economic performance. Considerable uncertainties regarding the effects on the monetary

aggregates of the resolution of the thrift institution difficulties also argue for relatively wide ranges this year. Depending on the pace of asset growth of thrifts and changes in their deposit pricing policies, the composition and growth of their liabilities could vary substantially from past patterns.

For the same reasons, the Committee agreed to continue its current approach to the implementation of policy, which involves monitoring a variety of economic and financial indicators, including growth of money and debt. In this regard, appropriate growth of M2 and M3 relative to their ranges will be determined in part by developments during the year. At present, it appears that the velocities of M2 and M3 are likely to rise this year, in response to the market interest rate increases to date and unusually sluggish adjustment of deposit rates.

The Federal Reserve expects its policy in 1989 to support continued economic expansion while putting in place conditions for a gradual easing in the rate of inflation over time. However, the wage and price process may have developed some momentum. The central tendency of forecasts made by members of the Federal Reserve Board and presidents of Federal Reserve Banks is for inflation to rise slightly in 1989. But let me stress that the current rate of inflation, let alone an increase, is not acceptable, and our policies are designed to reduce inflation in coming years.

This restraint will involve containing pressures on our productive resources and, thus, some slowing in the underlying rate of growth of real GNP is likely in 1989. The central tendency of GNP forecasts for this year of Board members and Reserve Bank presidents is 2-1/2 to 3 percent; abstracting from the expected rebound from last year's drought losses, real GNP is projected to grow at closer to a 2 percent rate. Net exports are expected to continue to improve in 1989 as we make further progress on reducing our external imbalances, but this implies the need for restraint on domestic demand to contain pressures on our productive resources. With demands for labor growing more in line with expansion of the labor force, the unemployment rate is expected to remain near its recent level over 1989.

Monetary Policy and Long-run Economic Growth

Maximum sustainable economic growth over time is the Federal Reserve's ultimate objective. The primary role of monetary policy in the pursuit of this goal is to foster price stability. For all practical purposes, price stability means that expected changes in the average price level are small enough and gradual enough that they do not materially enter business and household financial decisions. Price stability contributes to economic efficiency in part by reducing the uncertainties that tend to inhibit investment. Also, it directs resources to productive

economic activity that otherwise would tend to be diverted to mitigating the financial effects of inflation.

Price stability--indeed, even preventing inflation from accelerating--requires that aggregate demand be in line with potential aggregate supply. In the long run, that balance depends crucially on monetary policy. Inflation cannot persist without a supporting expansion in money and credit; conversely, price stability requires moderate growth in money--at rates below those prevailing in recent years.

In the short run, demands can fall short of, or run ahead of, available resources, with implications for wage and price pressures and the appropriate stance of monetary policy. By altering reserve conditions and the money supply, and thus interest and exchange rates and wealth positions, monetary policy can assist in bringing about a better match between demand and potential supply and thereby contribute to aggregate price stability.

When the economy is operating below capacity, bringing demand in line with supply can involve real GNP growth that is faster for a time than its long-run potential. For example, in the mid-1980s, the U.S. economy was recovering from a deep recession; with utilization of labor and capital not nearly complete, we were able to bring these resources back into the production process at a pace that substantially exceeded their underlying growth rates. In those circumstances, it is not surprising that growth of

real GNP was relatively rapid while inflation performance was reasonably good.

But when the economy is operating essentially at capacity, monetary policy cannot force demand to expand more rapidly than potential supply without adverse consequences. Such an attempt will result in accelerating prices and wages, as producers bid for scarcer, and at the margin less productive, labor and capital. Over time it would result in little if any additional output.

As a result of robust expansion in the last few years, the U.S. economy has absorbed much of its unused labor and capital resources. No one can say precisely which level of resource utilization marks the dividing line between accelerating and decelerating prices. However, the evidence--in the form of direct measures of prices and wages--is clear that we are now in the vicinity of that line.

Thus, policies that foster more economic growth, if such growth is to be sustainable over the long run, should focus on aggregate supply. Aggregate supply depends on the size of the labor force and its productivity. Growth of the labor force basically is a function of increases in population and of individuals' decisions with regard to participation in the labor force. Labor productivity depends partly on the quantity and quality of capital and the overall efficiency in combining labor and capital in the

production process. Given projections of likely labor force expansion and capital accumulation, most estimates of growth in long-run potential real GNP fall in a range below the average growth rates of real nonfarm GNP experienced over the last couple of years.

Faster growth in real GNP would be possible for a time if we could use more of our labor and plant capacity without putting pressure on wages and prices. Monetary policy is not a useful tool to accomplish this. But microeconomic policies may well be, such as policies designed to improve the match between labor demands and supplies. Conversely, we must be careful to avoid approaches to our national needs that would add unduly to business costs or increase rigidities in labor and product markets. Perhaps most important over the long run, as the composition of production in the U.S. economy continues to evolve, we must intensify our efforts to educate our labor force to be productive in the increasingly high-technology world marketplace.

In addition, the United States could improve its longer-run growth prospects by stepping up the pace of capital accumulation. Government policies can contribute to a higher rate of investment. Tax policies can help by ensuring that returns from capital are not taxed excessively or unpredictably. And fiscal policy can help boost the national saving rate.

Ideally, increased national saving would involve some improvement in the private saving rate. Household saving is abysmally low in the United States, and business saving hasn't risen enough to offset that. However, it is not clear that past government policies have been very effective in boosting private saving. Probably the most direct and sure way of increasing saving is by a reduction in government dissaving. Congress should follow the Gramm-Rudman-Hollings timetable and then seek a budgetary surplus by the mid-1990s.

An improving federal budget position should have a variety of favorable effects. It can pave the way for a reduction in our external imbalance by freeing resources currently absorbed by domestic demand. By putting downward pressure on real interest rates, it can encourage domestic business capital formation and make housing more affordable. It can encourage households and businesses to focus more on the long run in economic planning.

Monetary policy also has a role to play in encouraging capital formation and economic growth over time, by providing a stable price environment. Although the relationship between growth of money and the economy can vary from year to year, over the long haul there is a close relationship between money and prices. Recently, the Board's staff has done some interesting research on this subject. This work indicates that future changes in the

rate of inflation have been fairly reliably linked to the difference between the prevailing price level and its equilibrium level. That equilibrium level is calculated at the current level of M2, assuming that real GNP is at its potential and velocity is at its long-run average. As you can see from the chart, inflation apparently tends to accelerate with a lag when actual prices are below the equilibrium value associated with current M2, and to decelerate when above it. This research suggests that despite relatively moderate expansion of M2 in recent years, the equilibrium value still is a little above the current price level, reinforcing the notion that the present risks are on the side of a pickup of inflation. This work also confirms that price stability ultimately will require somewhat slower M2 growth than we have experienced in recent years.

Financial Developments and Monetary Policy

The Federal Reserve recognizes that monetary policy over the coming year will be carried out against the backdrop of a financial system facing certain difficulties. The thrift and FSLIC situation is perhaps most pressing. The administration has proposed an extensive, workable plan for closing insolvent institutions, improving the regulation and supervision of S&Ls, and strengthening the deposit insurance funds. Let me encourage you and your colleagues to take the necessary legislative steps to resolve this

situation promptly. There appears to have been little, if any, effect of the S&L problem on mortgage availability and housing--thanks in part to financial innovation in the form of the mortgage-backed securities market. However, without quick and effective action the situation could deteriorate.

Developments in the corporate sector warrant close scrutiny as well. The stock market has been recovering over the past 15 months, with few signs as yet of speculative excesses. However, as you know, corporate equity continues to be retired at a startling rate in conjunction with LBOs and other mergers and restructurings and has involved issuance of a correspondingly large amount of debt. As I have noted in recent congressional testimony, this phenomenon is complex, having both positive and negative dimensions. These restructurings often have added economic value through improved efficiency--an important consideration given the increasingly competitive nature of world markets. But the higher leverage leaves these firms, and potentially their creditors, more vulnerable to financial difficulties in event of a downturn. The Federal Reserve and other federal regulators are instructing bank examiners to review especially carefully loans to highly leveraged firms in order to maintain a safe and sound banking system.

The international economy also will command the continuing attention of policymakers around the world.

Among the industrial countries, greater concern about rising inflation followed the substantial economic growth recorded last year. Meanwhile, the process of adjustment of international imbalances appeared to have slowed somewhat in the second half of last year, and many developing countries continued to face serious problems of achieving sustained economic growth, fostering development, and servicing large external debts.

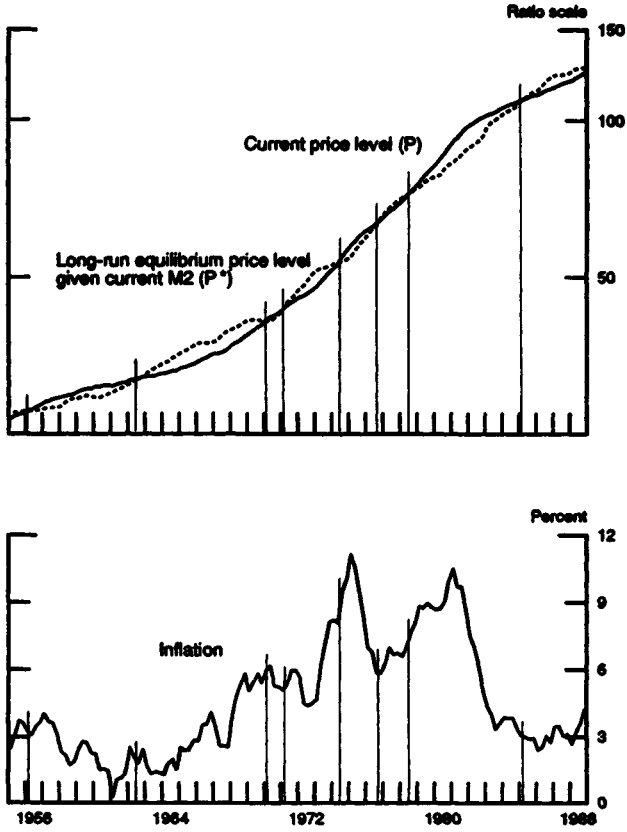
Some have argued that these financial stresses, taken together, could hamstring the Federal Reserve's anti-inflationary policy. Certainly we have to take account of the effects of our actions on all sectors of the domestic and international economy and on financial markets; at the same time we recognize that monetary policy is not the instrument to deal with structural financial stresses and imbalances here and abroad--and that attempts to do so may even worsen these problems. Backing away from policy adjustments needed to contain inflation will not solve the thrift problem, make the debt burden of heavily leveraged firms lighter, speed the process of international adjustment, or contribute to a fundamental solution of the economic problems of the developing countries. In fact, the thrift industry's problems, as well as the external debt problems of the developing countries, were exacerbated by the inflation of the 1970s. Attempting to lower interest rates in the short run through more rapid money growth

against countervailing market pressures would quickly raise inflationary expectations, leading soon to higher, not lower, interest rates. Instead, the structural financial problems require the prompt application of microeconomically oriented solutions within the supervisory, regulatory, and legal framework. Imbalances in the world economy require the continued, patient application of responsible macroeconomic policies in the United States and in other industrial countries, as well as further progress in economic reforms by the developing countries.

Conclusion

For its part, the Federal Reserve will continue to seek monetary conditions that will reduce inflation. Our major trading partners are following consistent policies in their own economies. Together, these policies should bring about a more stable financial environment and promote long-run worldwide economic growth. Relatively stable long-term nominal interest rates and flattening yield curves around the industrial world are strong evidence that savers and investors are in accord with this view. Monetary policy, at least for the moment, appears on track in the United States. The task is to keep it on track while making necessary adjustments to fiscal policy and reforms to the regulation of financial institutions. In this way we can ensure vigorous and balanced economic conditions over the long run.

Inflation Indicator Based on M2



The current price level (P, the solid line in the top panel) is the implicit GNP deflator, which is set to 100 in 1982.

The long-run equilibrium price level given current M2 (P*, the dashed line in the top panel), is calculated as $P^* = (M2 \times V^*)/Q^*$, where V^* is an estimate of the long-run value of the GNP velocity of M2—the mean of V2 from 1955:Q1 to 1988:Q4—and Q^* is a Federal Reserve Board staff measure of potential real GNP.

The vertical lines mark the quarters when the difference between the current price level (P) and the long-run equilibrium price level (P*) switches sign, and thus when inflation, with a lag, tends to begin accelerating or decelerating.

Inflation (bottom panel) is the percentage change in the implicit GNP deflator from four quarters earlier.

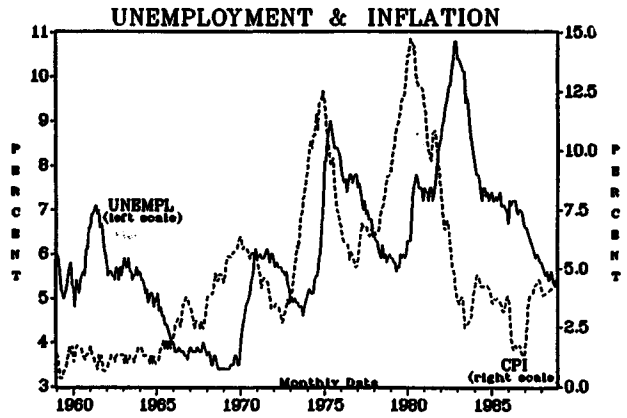
For more details, see Jeffrey Hallman, Richard D. Porter, and David H. Small, *M2 Per Unit of Potential GNP as a Price-Level Anchor*, Staff Studies (Board of Governors of the Federal Reserve System, forthcoming).

SUBMITTED BY CHAIRMAN STEPHEN NEAL

Review of the Course of Monetary Policy in 1988
[Committee Print 101-1]

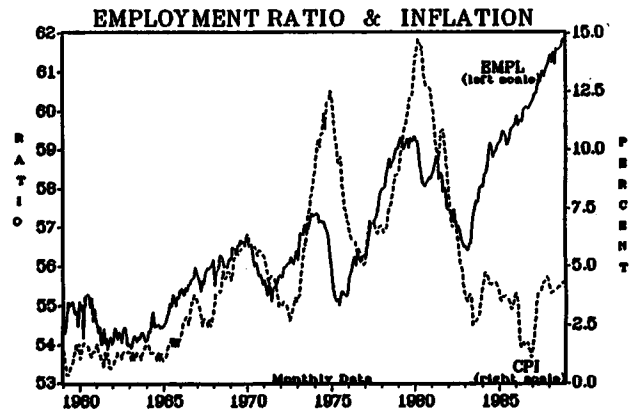
9

CHART IV



UNEMPL is the Unemployment Rate. CPI is the percent change in the Consumer Price Index, compared to 12 months prior.

CHART V



EMPL is the Ratio of Civilian Employment to Total Population. CPI is percent change in Consumer Price Index, compared to 12 months prior.

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D. C. 20551

ALAN GREENSPAN
CHAIRMAN

March 27, 1989

The Honorable Stephen L. Neal
Chairman
Subcommittee on Domestic Monetary Policy
Committee on Banking, Finance and Urban Affairs
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Following the hearing on February 22, Congressman Bunning forwarded to me written questions. I am pleased to enclose my responses for inclusion in the record of the hearing.

In addition, I have sent a letter to Congressman Bunning enclosing my responses.

Sincerely,

Enclosure

Chairman Greenspan subsequently submitted the following responses to written questions from Congressman Bunning in connection with the hearing held before the Subcommittee on Domestic Monetary Policy of House Banking on February 22, 1989:

Question 1: Why does the Federal Reserve think it can control inflation by manipulating the targets on the M-2 money supply from 4-8 percent to 3-7 percent?

Answer: As indicated in my testimony, long-run price trends bear a clear correspondence with long-run trends in monetary aggregates, especially M2. Although the shorter-run relationship between inflation and money growth is complicated and affected by a number of temporary influences, the evidence suggests that attaining price stability over time ultimately will require slower average M2 growth than in recent years. However, price stability cannot, as a practical matter, be achieved in only one year's time, given the inertia embedded in current inflation and inflationary expectations. The FOMC selected its 1989 range of 3 to 7 percent--1 percentage point below the 1988 range--in line with a strategy of establishing monetary conditions that would contain inflationary pressures this year, while setting the stage for a declining inflation trend in future years. As this process unfolds, the monetary ranges in some future years would need to be lowered further in support of an anti-inflationary monetary policy stance. The appropriate timing of these further adjustments will depend on the surrounding economic circumstances, including developments affecting economic activity, credit markets, and interest rates.

Question 2: Since last March, short-term interest rates have gone up to 2.5 percent. How much "lag time" is there before we see an effect on inflation due to those increases?

Answer: The lag between monetary policy action and prices has been characterized many times as "long and variable." While in certain instances the prevailing economic conditions--and the expectational environment--may be such as to accelerate the response, it probably would be more generally the case that a monetary impulse would not leave a clear imprint on inflation trends until a year or two has passed.

Question 3: Is there a real disagreement inside the Federal Reserve on whether increasing short-term interest rates is an effective tool at fighting inflation? If yes, please outline the parameters of that disagreement.

Answer: I don't think that there is any basic disagreement that monetary restraint is an effective--indeed, necessary--tool for fighting inflation. And, in the short run, when the effort is made to slow growth of the money supply relative to emerging money demand, the usual concomitant is a rise in short-term interest rates. However, as I have emphasized, if there is complementary restraint from the fiscal side, the financial market pressures associated with restraint on inflation can be offset.

Question 4: Do you think that an economic growth of 2.5 percent to 3.5 percent of GNP is inflationary? Why?

Answer: Such growth in real GNP is not inflationary if it does not imply excessive pressures on resources. When unemployment is exceedingly high and utilization of industrial plant exceedingly low, there is room for output to grow at a rate well beyond 2.5 percent to 3.5 percent without inflationary consequences. When the slack in the economy, however, is largely taken up, rapid growth is more likely to lead to price pressures, and to higher inflation if wage and price increases are accommodated by accelerated growth in money and credit. Estimates of the long-term potential growth of the U.S. economy from most analysts range between 2.5 percent and 3 percent per annum. While we cannot say with any assurance that a 3 percent plus growth rate in the period immediately ahead will lead to progressive upward pressure on resources, continued growth in excess of potential over the long run must assuredly produce pressures on capacity which can engender inflationary processes.

Question 5: Why is full employment inflationary?

Answer: Full employment, by itself, is not inflationary. "Inflation in the long run is essentially a monetary phenomenon." However, full employment is often a precursor of demands on labor markets in excess of a sustainable "full employment" level. Such excess will tend to put pressure on financial authorities to provide sufficient liquidity (money supply) to accommodate increasing wage and price inflation, although even with such accommodation employment cannot remain for long beyond "full employment". If money and credit growth is limited to that needed to support growth of the economy at its potential, we can have full employment without inflation.

APPENDIX

March 1, 1989

TESTIMONY

before the

SUBCOMMITTE ON DOMESTIC MONETARY POLICY

of the

HOUSE COMMITTEE ON
BANKING, FINANCE, AND URBAN AFFAIRS

William C. Melton

Vice President and Chief Economist
IDS Financial Services, Inc.

March 1, 1989

Mr. Chairman and members of the Subcommittee on Domestic Monetary Policy, my name is William C. Melton. I am Vice President and Chief Economist of IDS Financial Services, Inc., an American Express company. I am responsible for the IDS economic forecast, and I also manage the cash assets of the IDS mutual fund group, which currently total about $3 billion.

I appreciate the Subcommittee's invitation to participate in this review of the Federal Reserve's conduct of monetary policy.

I will discuss several salient aspects of Chairman Greenspan's recent testimony and the associated Monetary Policy Report, and I will offer some observations on various ideas for improving the monetary targets, including Chairman Neal's recent suggestion for a multi-year inflation cap.

The Federal Reserve's objectives

Chairman Greenspan's testimony and the Monetary Policy Report provided a thorough and candid assessment of our economy's recent performance, the risks attached to the future, and the role that the Federal Reserve can play in enhancing future performance.

I agree emphatically with his view that a 4 percent inflation rate--let alone a higher rate--is too high. I often remind people that a 4 percent inflation rate compounded for ten years reduces the purchasing power of the dollar by almost one-half. That's not my idea of stable prices, and it is comforting to know that Chairman Greenspan shares this view.

Most reassuring of all, however, the testimony reflects a conviction that the Federal Reserve should focus its efforts on solving problems that it potentially can solve. Chairman Greenspan was absolutely correct that monetary policy cannot resolve a structural problem such as, for example, the savings and loan crisis. I believe that one of the ways we got ourselves into trouble in the past was by asking the Federal Reserve to deliver more than it reasonably could.

What we can--and should--ask the Federal Reserve to deliver is stable prices. Admittedly, short-run control of the price level is a technical impossibility, while even longer-run control may be difficult in the presence of economic and financial shocks. Nevertheless, it is within the Federal Reserve's power to achieve a reasonable approximation of price stability, provided that this objective is kept at the forefront.

If this is done, and if the public--including Congress and the Administration--understand and support the objective, the reward may be increased credibility of monetary policy and a reduced economic cost of achieving stable prices.

To borrow a phrase from Chairman Greenspan's testimony,

I believe that monetary policy is "on track" in focusing its attention on price stability.

Assessment of the economy

The analysis of the economy contained in the testimony and the Monetary Policy Report reflects the Federal Reserve's usual high technical standard. The key point in the analysis is that accelerating inflation is the main risk facing the economy now. For the next several months, at least, the risk of recession is quite low. I agree with the general thrust of the analysis, though my own economic forecast differs in several respects from the Federal Reserve's.

The table below contrasts the Federal Reserve's "central tendency" expectations for selected indicators with the IDS forecast. The Federal Reserve's expectations for GNP growth and employment are very similar to the IDS forecast; the main discrepancy concerns the outlook for inflation.

As well as I can determine, two favorable assumptions

Table 1

Federal Reserve and IDS Forecasts for 1989

	FOMC Central Tendency	IDS 2/1/89
Real GNP growth	2.5-3.0	2.5
Civilian unemployment rate (Q4)	5.25-5.5	5.3
Consumer Price Index	4.5-5.0	5.8

by the Federal Reserve chiefly account for this discrepancy. The first is the assumption that both food and oil prices will moderate during the course of this year; I am less optimistic. The second is the assumption that fiscal policy will achieve the Gramm-Rudman-Hollings target for fiscal year 1990. In that connection, I would note that the Administration's projection for the fiscal year 1989 budget deficit is already over $170 billion, compared to the Gramm-Rudman-Hollings target of $136 billion. Perhaps Congress and the Administration soon will discard their excessively generous economic assumptions and get down to the hard work of deficit reduction, but I personally would not bet the ranch on that outcome.

Thus we should recognize the possibility that the Federal Reserve, despite its repeated expressions of concern and numerous policy tightenings, may turn out to have been too optimistic regarding the inflation situation. This possibility has been highlighted by recent inflation reports. As you know, in January the Producer Price Index rose 1.0 percent, and the Consumer Price Index (CPI) rose 0.6 percent. Note that a 5 percent CPI inflation rate--the high end of the Federal Reserve's central tendency range--implies an average monthly rise of about 0.4 percent. Only two or three more monthly readings like January would make a 5 percent inflation rate virtually impossible to achieve this year.

The bottom line is that Chairman Greenspan was exactly right when he said that inflation was the main risk; he may even have understated his case!

This is not to say that the risk of a recession is nonexistent. On the contrary, I expect that a very mild recession will commence late this year. There is nothing inevitable about this outcome, and I hope that we can avoid it.

Policy implementation

In my opinion, the Federal Reserve's implementation of monetary policy during 1988 merits high commendation. Though it is easy, in retrospect, to argue that the policy easing in January of that year was unnecessary, I believe it was a prudent response to concerns at the time--which included an apparently weak employment report as well as the unknown impacts of the October 1987 stock-market crash. Indeed, it seems to me that if we expect policy makers to get out ahead of problems, we have to recognize that they may have to reverse course sometimes.

By March of last year, it was clear that the time for policy tightening had arrived, and the Federal Reserve did just that, in a series of moves spread over several months. In late summer, when a variety of indicators began to appear quite weak, the tightening process halted. Later in the year, as the earlier signs of weakness gave way to very strong readings, the tightenings resumed, and they have continued into this year. Since the time lags from policy changes to economic results are long, and a variety of important factors are uncertain, there is no way for a professional economist to say with confidence that these initiatives were too little, too much, or just right.

However, I think we can say beyond a reasonable doubt

that the Federal Reserve's initiative, occurring as it did right in the middle of the nation's presidential campaign, went a long way to enhance the credibility of monetary policy.

Although the concept of policy credibility is employed frequently by economists, it is extremely hard to gauge.[1] I have two main reasons for thinking that the Federal Reserve's credibility rose perceptibly last year.

One is that numerous conversations with other investors showed they were very impressed that the Federal Reserve had the courage to go ahead with repeated tightening moves--including a discount-rate hike only days prior to the Republican convention--in complete defiance of the cynical political wisdom. Equally impressive was the fact that both presidential candidates apparently concluded that there were no votes to be gained by campaigning against the Federal Reserve. As a result, despite the tightenings, monetary policy was a non-issue in the campaign.[2] This certainly made at least some investors realize

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[1]In collaboration with Vance Roley of the University of Washington, I attempted to measure the degree to which changing patterns of financial market responses to new information corresponded to Federal Reserve statements about policy. The results suggested that policy was credible during this decade, at least in the context of policy procedures. See William C. Melton and V. Vance Roley, "Federal Reserve Behavior Since 1980: A Financial Markets Perspective," National Bureau of Economic Research Working Paper No. 2608, June 1988.

[2]This was perhaps all the more remarkable in view of the publication of William Greider's Secrets of the Temple: How the Federal Reserve Runs the Country a few months earlier. This book argued for an enlarged political role in monetary policy formulation and also advocated a higher inflation rate. Despite major publicity, the book had no impact on the election campaign.

that future inflation probably would be lower than they had thought earlier.

Second, survey evidence indicates that inflation expectations dropped significantly late in the summer. This is shown in Chart 1, which displays the average ten-year inflation rate expected by institutional money managers surveyed by Richard B. Hoey.[3] Of course, it may be that other factors also contributed to the drop. For one thing, the OPEC cartel was in disarray at the time, and oil prices were softening. For another, expectations of a slowdown in the pace of business activity became fairly widespread around that time. However, oil prices rose sharply late last year, and economic forecasts have generally been revised upward. Nevertheless, inflation expectations continued to decline; they are now the lowest they have ever been in the ten-year history of the Hoey survey. This suggests that the Federal Reserve should get most of the credit for the decline in long-term inflation expectations, which I have estimated kept long-term interest rates about three-quarters of a percentage point lower than they otherwise would have been.

On a more technical level, one can question some of the details of the Federal Reserve's implementation of monetary policy.

The first is the Federal Reserve's use of borrowed reserves as an operating target. The statistical relationship

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[3]Richard B. Hoey, David Rolley, and Helen Hotchkiss, "Decision-Makers Poll," Drexel Burnham Lambert, January 13, 1989.

between borrowed reserves and the spread between the Federal funds rate and the discount rate has always been imprecise, but late last year, it shifted radically. This is shown in Chart 2. I doubt that anyone understands very well why this occurred. My own best guess is that the large, money-center banks, who have been very active in LBO finance, were determined to hold their reliance on the discount window to an absolute minimum in order to deflect criticism from the Federal Reserve and others. Other factors also could have played a role.

In any event, the abrupt shift in this relationship does not appear to have created major problems for the Federal Reserve's implementation of policy. In essence, the borrowed reserves target was downplayed in favor of a more direct focus on the Federal funds rate--a matter of nuance and nothing more. Under the circumstances, some have argued that the Federal Reserve should adopt an explicit funds-rate target. My judgment is that it does not make much difference.

A more substantive issue, in my opinion, is the Federal Reserve's policy of gradualism. During the last year or so, with the sole exceptions of the August discount-rate increase and the discount-rate increase announced last Friday, all policy changes appear to have been calibrated in one-quarter percent adjustments of the Federal funds rate. In addition, we know from the recently released minutes of the December 15-16 FOMC meeting that at that time a staggered policy tightening was decided upon, involving an immediate tightening move, to be followed by another around year-end. The rationale for this apparently is a concern

to avoid rattling the financial markets. My personal opinion is that such an elevated degree of concern is excessive. Nobody ever promised financial market participants a quiet life, and the Federal Reserve is under no obligation to deliver it. More fundamentally, monetary policy during the 1970s gave gradualism a bad name, and the Federal Reserve today runs some risk of investors possibly beginning to contemplate a repetition of the inflation acceleration that followed the earlier gradualist policy.

Current policy stance

Is the Federal Reserve "behind the curve" in adjusting its policy stance to resist inflation? My best guess is yes--but not a great deal behind.

On one level, the mere fact that inflation is accelerating suggests that monetary policy has been too slow to react. However, as I noted earlier, monetary policy acts with a lag. We will not see the full results of earlier tightenings for some months to come. For the same reason, it would be unwise to overreact to short-run inflation developments; much more important to a successful long-run outcome is a persistently disinflationary stance.

To make the same point another way, in the presence of significant policy lags and major uncertainties, gradualism is not necessarily bad. But gradualism must be buttressed with vigilance and persistence.

I expect that further tightening moves will be needed before the Federal Reserve succeeds in reversing the recent acceleration of inflation.

Possible improvements in Federal Reserve targets

Many economists have assumed that credibility of monetary policy requires rigid adherence to a policy rule. This is plainly a false assumption, especially when the linkages between policy instruments and desired outcomes for policy objectives are highly uncertain.[4]

A recent case in point is the fate of the M1 policy target. For years, monetarists argued that tight control of M1 growth would produce major economic benefits, including enhanced policy credibility. However, virtually everyone now agrees that rigid adherence to an M1 target would have been a disaster in the 1980s.

Fundamentally, we want a target to do two things. First, we want it to provide useful guidance to the members of the FOMC, so that they can improve the quality of their policy decisions. Second, we want the target to be readily understood by the public at large, so that the Federal Reserve's objectives

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[4]By far the best theoretical overview of the problem of policy credibility that I have seen is Anne Sibert and Stuart E. Weiner, "Maintaining Central Bank Credibility," Federal Reserve Bank of Kansas City Economic Review, September/October 1988, pp. 3-15. The authors conclude that, "there are no costless ways to maintain the credibility of a central bank's commitment to price stability" and stress that there is no substitute for "vigilance against inflation for maintaining central bank credibility."

will help the public to form their own expectations of inflation. The M1 target failed because it was neither a good policy guide nor readily understandable by the public. In contrast, the complex mass of policy guides embodied in a sophisticated economic forecasting model can assist policy formation, but they are almost useless for communicating with the public.

Can we find targets that both impart sound guidance to the FOMC and communicate effectively with the public?

One promising idea is to establish a target for the growth of prospective nominal GNP, perhaps on a four-quarter basis, as McNees has suggested recently.[5] Such a target would have a number of advantages.[6]

First and foremost, it would make the Federal Reserve's objectives far clearer to the public than monetary aggregates targets alone are currently capable of doing. As things stand now, the use of monetary aggregates targets is embedded in a morass of dauntingly complex money demand relationships. Few individuals are capable of understanding these relationships, and

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[5]Stephen K. McNees, "Prospective GNP Targeting: An Alternative Framework for Monetary Policy," Federal Reserve Bank of Boston New England Economic Review, September-October 1987, pp. 3-9.

Another interesting analysis of this idea is George A. Kahn, "Nominal GNP: An Anchor for Monetary Policy?," Federal Reserve Bank of Kansas Economic Review, November 1988, pp. 18-35.

[6]The following discussion draws on my paper, "Some Issues in Implementing U.S. Monetary Policy," presented to the conference on Monetary Aggregates and Financial Sector Behavior in Interdependent Economies, sponsored by the Board of Governors of the Federal Reserve System, May 26-27, 1988.

thus few can translate the adopted target into a desired outcome for the growth of spending.

Similarly, a prospective nominal GNP target would formalize the tradeoff between inflation and real growth and would tend to focus policy discussions on GNP potential and price stability, while avoiding an attempt to determine the division of nominal GNP into real output and inflation.

Of course, a nominal GNP target is hardly a panacea. In the first place, the objectives of economic policy obviously encompass variables other than nominal GNP. Similarly, nominal GNP is hardly the only information source that should be utilized by policy makers. In addition, nominal GNP is not under the control of the Federal Reserve, which presents difficulties for accountability as well as for policy implementation. Finally, the risk exists that Congress or the Administration might try to dictate the nominal GNP target, perhaps in the form of requiring that it be consistent with the economic assumptions of budget forecasts.

However, all of these problems currently exist, in one form or another, with the monetary aggregates targets. The main advantages of a prospective nominal GNP target are two. First, it would be far more comprehensible for the public and probably for policy makers as well.[7] Second, because the nominal GNP

[7]Adoption of another intermediate target could not be expected to improve the efficiency of the policy process, since such targets in general are informationally inefficient.

target need not be affected by the vagaries of money demand, there is a good chance that the Fed could retain the numerical target parameters for years at a time. Thus a prospective nominal GNP target would have considerably more potential for molding expectations than the monetary aggregates targets have.

A concrete example of just how difficult it can be to use the monetary aggregates to anchor the policy process was provided in Chairman Greenspan's testimony. He reported the result of a staff study that endeavored to sift out the implied long-run price level, measured by the GNP deflator--from a comparison of actual versus potential real GNP (as estimated by the Board staff) and the actual versus long-run equilibrium level of M2 (as estimated by the Board's staff's M2 model). In essence, the idea is to see where the price level should settle down after GNP reaches its potential and temporary influences on M2 demand have had time to dissipate. As the Chairman noted, in the past, a positive gap between the estimated equilibrium price level and the actual price level generally has preceded an acceleration of inflation, and such a gap began to emerge in 1985. (The chart attached to the testimony is included as Chart 3.) This indicator thus buttresses the Chairman's concern

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Moreover, in this case, something like a nominal GNP target already is the starting point for policy makers when they determine appropriate parameters for the annual monetary aggregates targets. Nevertheless, McNees argues persuasively that a nominal GNP target could focus policy makers' attention more effectively than the current aggregates targets do. See McNees, op.cit.

regarding future inflation.

Unfortunately, I think that this kind of analysis, though interesting and technically impressive, will never provide a very effective guide for policy makers, given the uncertainty pertaining to any estimate of M2 demand. Still less will it constitute an effective device for communicating with the public.

I now turn to the idea of specifying annual caps on the permissible increase of the CPI, a suggestion advanced in Chairman Neal's recent Review of the Course of Monetary Policy in 1988.[8] The main attraction of this proposal, as I see it, is precisely its ease of communication. Congress and the public clearly could understand the inflation implication of such a target vastly easier than they can understand the existing monetary aggregates targets.

However, such a gain in clarity probably would come at a high cost. The fact is that we all care greatly about other things in addition to inflation--real growth and employment, to mention only two. It is not sound policy to exclude all of these from the Federal Reserve's target. Indeed, any attempt to do so would probably founder on well-placed public skepticism regarding the Federal Reserve's ability to adhere to such a target.

On balance, I think a prospective nominal GNP target incorporates about the best combination we are likely to obtain

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[8] Review of the Course of Monetary Policy in 1988, House Committee on Banking, Finance and Urban Affairs, Subcommittee on Domestic Monetary Policy, February 1989.

between the twin functions of sound policy guidance and effective communication.

A concluding thought

I mentioned at the outset that it is important that the Federal Reserve focus its attention on problems that potentially it can do something about and not be enticed into trying to provide short-term palliatives for problems that are, at root, structural in nature.

Nevertheless, I do want to applaud the emphasis that Chairman Greenspan accorded what I regard as the outstanding structural problem facing our economy today--the saving problem. A major source of the shortfall of saving is our grotesquely large federal deficits. But as the Chairman noted in his testimony, "household saving is abysmally low in the United States." He did not go into the details, but in 1987 our personal saving rate reached its lowest ebb in four decades, though it turned up marginally last year. Some have argued that our saving rate will rise significantly in the future, but the best academic research on this subject suggests exactly the opposite conclusion. Because of my concern regarding this situation, I have taken the liberty of attaching to my written testimony a recent presentation of mine, entitled "Saving Behavior and the Outlook for U.S. Financial Markets."

Unfortunately, the Federal Reserve does not have the means to solve the saving problem for us. Instead, we must do so. The Federal Reserve will earn gratitude enough if it

continues this decade's progress toward price stability.

CHART 1

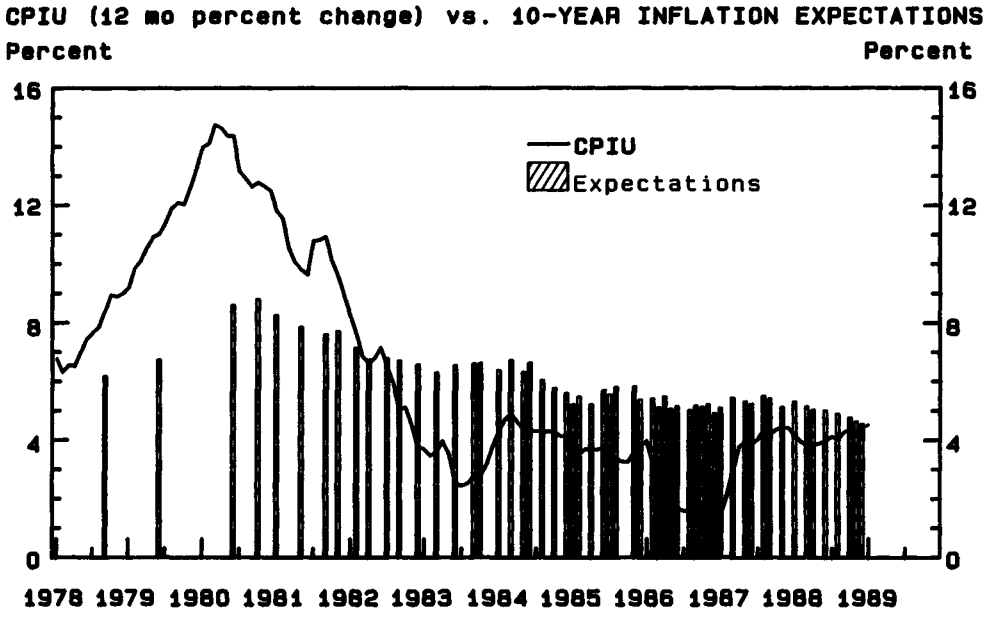


CHART 2

BORROWED RESERVES AND SPREAD OF FED FUNDS OVER DISCOUNT RATE

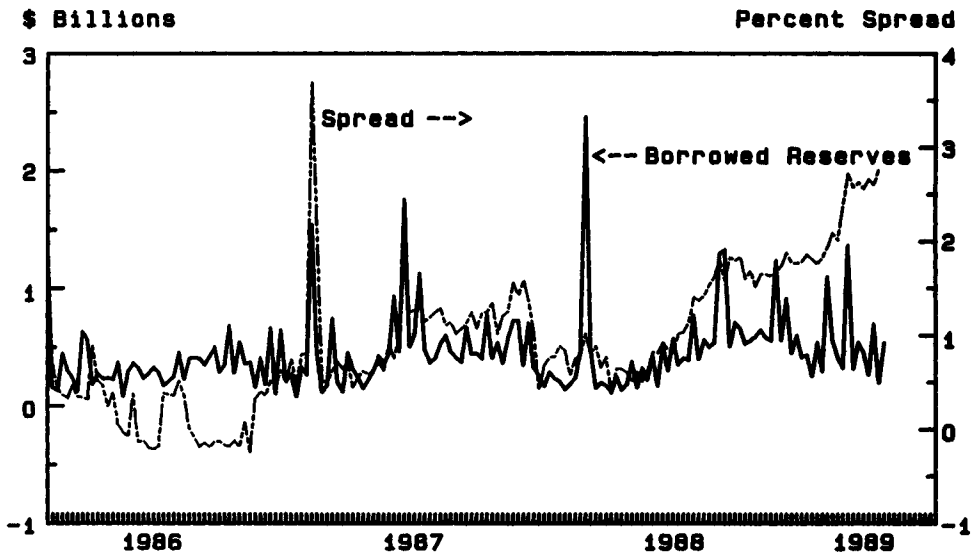
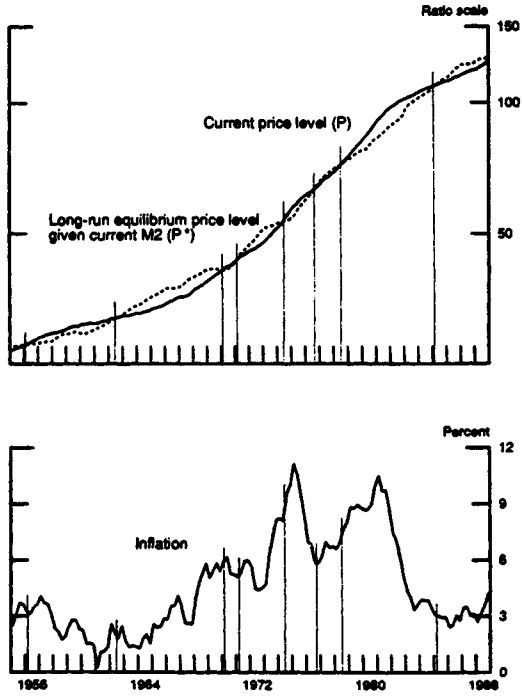


CHART 3

Inflation Indicator Based on M2



The current price level (P, the solid line in the top panel) is the implicit GNP deflator, which is set to 100 in 1982.

The long-run equilibrium price level given current M2 (P^*, the dashed line in the top panel), is calculated as $P^* = (M2 \times V^*)/Q^*$, where V^* is an estimate of the long-run value of the GNP velocity of M2—the mean of V2 from 1955:Q1 to 1988:Q4—and Q^* is a Federal Reserve Board staff measure of potential real GNP.

The vertical lines mark the quarters when the difference between the current price level (P) and the long-run equilibrium price level (P^*) switches sign, and thus when inflation, with a lag, tends to begin accelerating or decelerating.

Inflation (bottom panel) is the percentage change in the implicit GNP deflator from four quarters earlier.

For more details, see Jeffrey Hallman, Richard D. Porter, and David H. Small, *M2 Per Unit of Potential GNP as a Price-Level Anchor*, Staff Studies (Board of Governors of the Federal Reserve System, forthcoming).

Saving Behavior and the Outlook for Financial Markets

Executive Summary

Much of the discussion about the Federal deficit is misplaced; the supply of saving generated by the economy is a much more critical variable. It determines the extent to which investment in productive facilities can be financed internally, without recourse to foreign borrowing. The deficit--a form of "dissaving"--reduces the supply of saving, but other influences also are important.

Despite some improvement in the deficit recently, the economy's saving performance has been the worst in decades. This is mainly because a plunging personal saving rate has overwhelmed the modest reduction in federal dissaving.

- In 1987, the personal saving rate averaged 3.2 percent of disposable personal income--the lowest percentage since 1947. (The rate for 1988 is estimated to have been about 4.2 percent--still extremely low.)

- In 1987, total gross saving by the entire U.S. economy was 12.4 percent of GNP--far below the 16 percent average for the last four decades and the lowest in any year since 1945. (For 1988, gross saving is estimated at 13.3 percent of GNP--still extremely low.)

Unfortunately, the decline in the personal saving rate is probably mostly permanent. This means that even if substantial progress in deficit reduction is achieved, saving is likely to continue in scarce supply.

- Most of the best academic research indicates that the decline in personal saving has been produced largely by an enormous expansion of the wealth of the older age groups. This phenomenon explains not only the declining aggregate saving rate, but also the striking reduction of the average retirement age.

- The contrary view, which has become popular in some circles on Wall Street, holds that the decline of the personal saving rate is solely the result of the changing demographic composition of the population, and that as the middle-age segment grows in relative importance in coming years, the personal saving rate will rise substantially. This conclusion has been rejected by everyone who has examined it seriously. Demographics can account for only a fraction of one percentage point of the decline in the personal saving rate.

Accordingly, enlarging the aggregate supply of saving should be an urgent national priority.

Saving behavior and the outlook for U.S. financial markets

by William C. Melton

The paucity of saving in the U.S. has become the focus of heated discussion, not only among academic economists, but on Wall Street as well. There are ample reasons for this. As you are aware, recent statistics on saving in the United States have presented a very discouraging picture. The statistic most commonly cited—probably because it is published monthly—is the personal saving rate. In 1987, the personal saving rate averaged 3.2 percent of disposable personal income—the lowest percentage since 1947, when it was 3.1 percent. For most of 1988, the personal saving rate was only slightly higher, at about 4 percent.

Gross saving by the entire U.S. economy tells essentially the same story. In 1987, total gross saving was 12.4 percent of GNP—far below the 16 percent average for the last four decades and, in fact, the lowest annual reading since 1945. The saving rate rebounded somewhat in 1988, but it remains extremely depressed relative to what would have been considered normal in earlier decades.

The outlook for U.S. domestic financial markets and for the foreign exchange value of the dollar is clearly critically sensitive to the supply of saving. If, as some have argued, our low saving rate is merely a temporary phenomenon, then there is little cause for concern and probably no need for a change in government policy in order to encourage saving. On the other hand, if the saving rate has been depressed more or less permanently, then the case for a policy shift is far stronger.

Most of the best academic research suggests that the decline in private saving is likely to be permanent, since it has been produced largely by an enormous expansion of the wealth of the older age groups. This phenomenon explains not only the declining aggregate saving rate, but also the striking reduction of the average retirement age. In contrast, there is an emerging view on Wall Street– I hesitate to call it dominant just yet– that the scarcity of personal saving is merely a temporary phenomenon rooted in the demographics of the baby-boom generation.

To anticipate the conclusion of my discussion today, I think that the academics are—unfortunately—mostly correct. The newer Wall Street view appears to be largely the result of a potent combination of showmanship and sloppy economic analysis.

Accordingly, in the absence of corrective policy measures, the national saving rate probably will remain low for a long time to come. Thus, enlarging the aggregate supply of private saving and reducing the portion pre-empted by federal financing requirements should be urgent national priorities. Without such measures, it will be extremely difficult for the United States to expand its industrial capacity sufficiently to accommodate the massive expansion of exports and replacement of imports required to achieve a surplus on merchandise trade in the decade ahead.

National saving rate

Before delving into alternative explanations for the poor saving performance of the United States in recent years, let's review what has been happening and where the problems are.

The course of national saving in the United States during recent years is depicted in Chart 1. As is apparent, since 1981, gross saving as a portion of GNP has dipped well below its long-run average of about 16 percent, with the most recent years posting record lows. The largest portion of the erosion has

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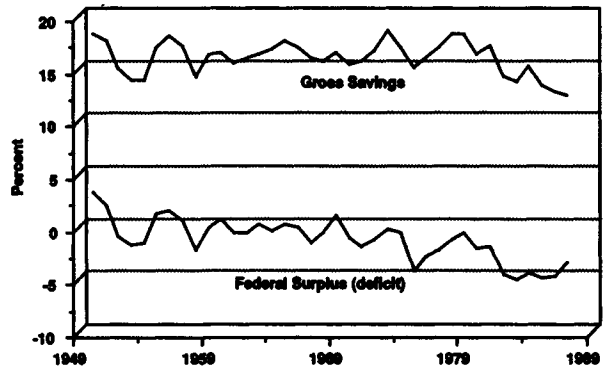
This is a slightly revised version of a speech to the Outlook Conference of the San Francisco Bay Area chapter of the National Association of Business Economists on Nov. 16, 1988.

Chart 1

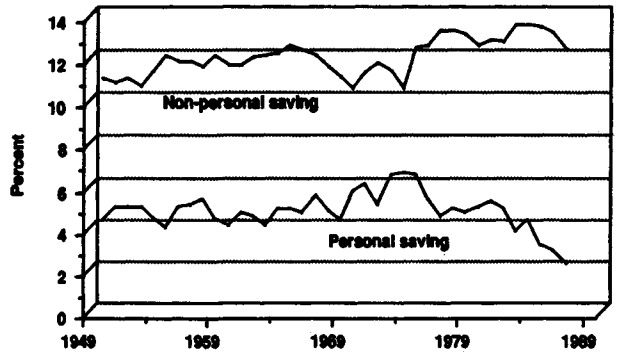
National Saving
(percent of GNP)



been due to the bulge of government dissaving that occurred during those years. For most of the last four decades, the federal deficit averaged about 1 percent to 2 percent of GNP. During the last six years, it averaged almost 5 percent of GNP.

Chart 2

Components of Private Saving
(percent of GNP)



In contrast, until the last three years, total private saving was actually above its long-run average. As Chart 2 indicates, this was the result of a business-saving rate that has trended upward, especially since the early 1970s, together with a personal-saving rate that has been on a declining trend since the mid-1970s. The sharp decline in the private saving rate recently was mainly an individual phenomenon; business saving ebbed only slightly.

Thus, the national saving problem has two principal aspects: huge federal deficits and flagging individual saving. I think the sources of the federal deficit are the subject of general agreement, even if the

remedies are not. The controversy centers on individual saving behavior.

Theoretical perspectives on individual saving behavior

At present, economic theory explains saving by individuals mainly through three basic motives: the desire to provide for one's retirement, the desire to leave a bequest for one's heirs and precaution. There is a profusion of theoretical and empirical studies relating to all of these. Unfortunately, given the limited space available, there is no way to do more than touch on what seem to be the most salient aspects of this research.[1]

To start with, it is well known that the course of saving behavior in the United States during recent decades cannot be described accurately as the result of an undisturbed life-cycle process. There are several reasons why this is so, but arguably the most striking is that the life-cycle hypothesis implies that a trend toward earlier retirement ages would be accompanied by more saving. What we have observed is the exact opposite.

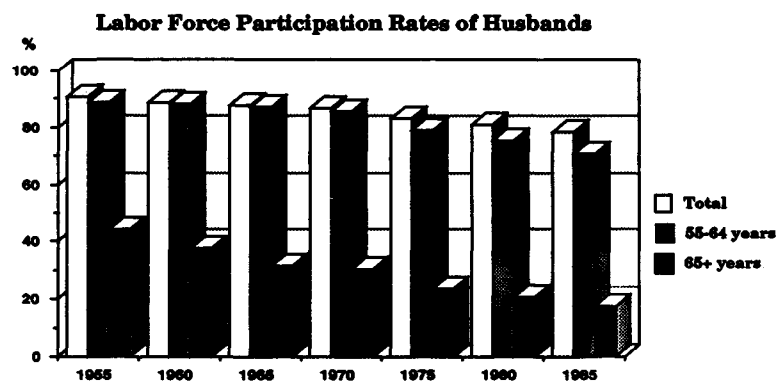
This phenomenon is generally considered to be caused by the large growth of the share of wealth held by the elderly, together with such institutional characteristics of employment contracts as mandated retirement ages, option features of pension plans, etc.

Of course saving is only one of several jointly determined choice-variables, among which labor supply (in particular, the retirement age) is especially significant. Let's review the course of some of these associated variables.

Superficially, nothing new seems to have happened to labor supply. The overall labor-force participation rate has risen on a steady trend from 59.2 percent in 1950 to 65.9 percent in 1987. However, the steady rise in the overall rate has masked two utterly divergent trends—a decline in male participation of about 10 percentage points and a rise in female participation of about 22 percentage points.

Moreover, within the male category, the decline of labor-force participation has been most striking in the senior age groups. Chart 3 summarizes data regarding the labor-force participation rates of married males of various ages. As you can see, while participation rates have declined for all age groups, the drop has been most pronounced among those aged 55 and older. For those 65 and older, the participation rate fell by a huge 27 percentage points during the 1955-85 period; for 55-64-year olds, the decline was smaller, but still a very large 18 percentage points.

Chart 3



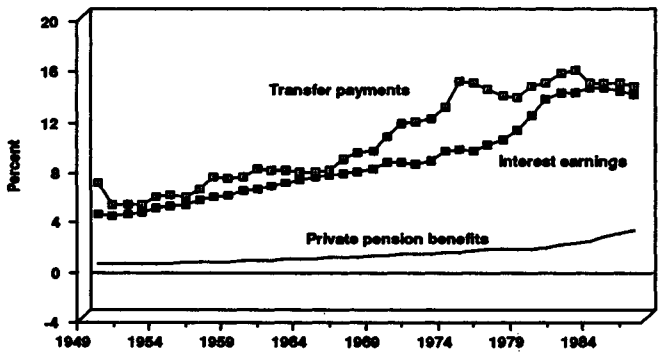
Thus, the early retirement phenomenon is concentrated almost exclusively among senior males. Two main factors are generally thought to account for this. The first is the substantial increases of Social Security benefits (both retirement and disability) that have been implemented over time, especially during the 1970s. The second is the broadening of coverage and improvement of benefits provided by private pension plans.[2]

It requires no stretch of the imagination to conclude that, if these programs have had such massive impacts on labor-supply decisions, then they must have affected saving decisions as well. The empirical problem is how to measure the impact on individuals of such sources of non-employment income.

One obvious way to look at the matter is to consider the changing composition of personal income.[3] Chart 4 illustrates the growth of transfer payments (over half of which are Social Security benefits) as a portion of total personal income. From about 5 percent in the early 1950s, such payments rose sharply, especially in the early 1970s, and have tracked at about 15 percent in the last decade. The growth of benefit payments from private pension funds has been less dramatic, but nevertheless substantial. Such payments currently are about 3 percent of income, compared to a small fraction of 1 percent in the 1950s. Chart 4 also shows the growing share of interest and dividend receipts (the great majority of which is interest) in personal income. The interest and dividend share rose on a gradual, almost uninterrupted trend until the late 1970s, when it lurched sharply higher. So far this decade, it has tracked at about 14 percent of income. The significance of interest and dividend income to labor supply is that such income is received primarily by older individuals, who have accumulated savings.[4] For this group, the extremely high real interest rates of recent years have significantly raised income.

Chart 4

Transfer Payments, Interest Earnings and Benefit Payments
(percent of total personal income*)



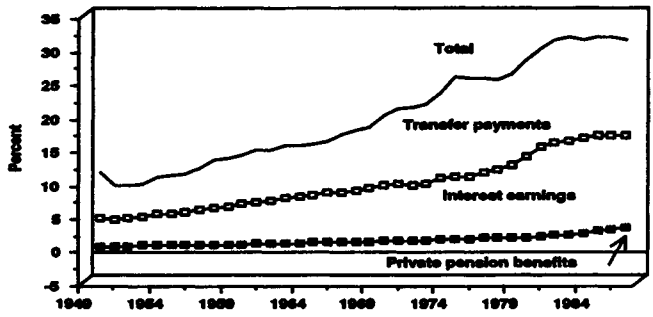
*Defined to include private pension defined benefit payments

Altogether, as illustrated in Chart 5, nonemployment income accruing primarily to older persons has ballooned from about 11 percent of the total in the 1950s to about 31 percent currently. In other words, almost one dollar out of every three dollars of personal income currently derives from a source independent of labor activity.

These numbers are striking, but they are not necessarily the theoretically relevant magnitudes. Most economists would agree that wealth, not the income produced by wealth, should be one of the main factors affecting the saving decision.

Chart 5

Transfer Payments, Interest Payments and Benefit Payments
(percent of total personal income)*



* Defined to include private pension defined benefit payments

There have been numerous studies of the impact of wealth on saving behavior. In my opinion by far the most elegant of them is a recent effort by Boskin and Lau.[5]

Boskin and Lau use the theory of exact aggregation as a basis for integrating a variety of longitudinal and cross-section microeconomic data sets with aggregate time-series data for income, consumption, and saving. One key feature of the analysis is explicit incorporation of labor supply, which they refer to as consumption of leisure.

Among many interesting results, their most striking finding is what they describe as a vintage effect. Specifically, the saving propensities of households headed by individuals born before 1939 are significantly higher than those of households headed by individuals born after that date, even after controlling for age. Since the share of wealth held by the post-1939 age groups has been rising over time, Boskin and Lau conclude that the vintage effect has lowered the aggregate personal saving rate significantly during the last couple of decades. Indeed, they estimate that the operation of the vintage effect lowered the ratio of private saving to GNP by about 10 percentage points on average during the 1963-80 period, with an even larger impact at the period's end. If one accepts this estimate, it follows that the private saving rate would have been about twice as high as it actually was during the last couple of decades, if only the saving propensities of those of us born after the Depression had been as high as our parents' saving propensities were!

One always has to be careful about counterfactual conclusions such as this. For one thing, if the private saving rate actually had been doubled for a period so long as two decades, real interest rates surely would have been reduced substantially, with important impacts on wealth and nonemployment income that are omitted from Boskin and Lau's calculation.

In addition, it appears that Boskin and Lau lean rather heavily on 1972 micro-data sets in order to define a number of key demographic variables. In the absence of independent confirmation, one must be at least a little skeptical that data for that time period can support a decades-long analysis.

Nevertheless, the analysis as a whole is unchallenged for its elegance and sophistication, and certain key

elements definitely ring true. For one, in line with my earlier comments, Boskin and Lau's calculation of the increase of nonhuman wealth–defined to include the capitalized value of pension assets as well as other forms of wealth–held by different age groups shows a wide disparity. If they are correct, during the 1947-80 period, the nonhuman wealth of the 45-54 age group rose by 183 percent, while that of the 55-64 age group rose by 294 percent, and that of the 65-plus age cohort rose by a whopping 473 percent!

Unfortunately, the Boskin-Lau analysis has a grim implication: absent new policy initiatives or some sort of spontaneous revival of saving instincts, the personal saving rate is going to stay low.

Measuring the personal saving rate

No discussion of the behavior of the personal saving rate would be complete without some mention of alternative measurements of personal saving. Though almost all economists would agree that an inclusive concept of saving, comprising all additions to tangible and human wealth, has theoretical merit, I will focus on the NIPA definition of the personal saving rate. The reason is simple. If the challenge facing our nation is to generate saving to fund a larger volume of investment spending, inclusion of consumer durables and other nonfinancial forms of capital accumulation within saving is irrelevant.

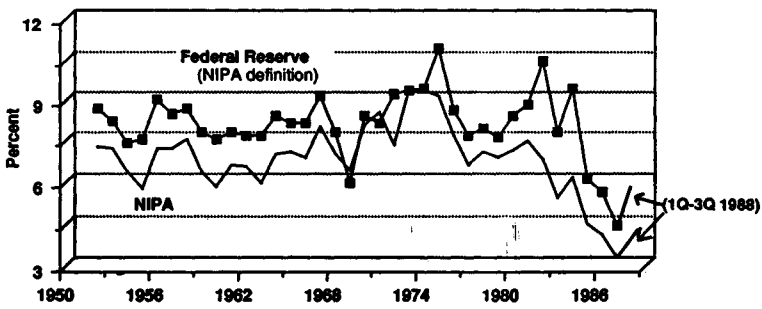
Given that something like the NIPA saving definition is appropriate, there appear to be two main issues regarding its measurement, one of which is empirical and the other conceptual.

The empirical issue is whether there are systematic errors in the NIPA data. The most widely cited reason to think that such errors occur is the fact that saving is calculated as a residual in the NIPA data, so that errors in estimated income and spending categories accumulate in the saving estimate. In particular, it has often been noted that the saving rate computed in the Federal Reserve's flow-of-funds accounts considerably exceeds the NIPA saving rate.

This is true, but not of much practical importance. In the first place, the flow-of-funds definition includes a variety of items that are excluded from the NIPA concept.[6] Once these are removed, the flow-of-funds data are in striking agreement with the NIPA data, though the estimated rate is generally a percentage point or so higher than the official NIPA rate. This is illustrated in Chart 6. It is immediately apparent that the recent level of the personal saving rate is extremely low, no matter which measure is preferred. Thus, the conflict between the flow-of-funds and NIPA measures is not a live issue.

Chart 6

Personal Saving Rate – Alternative Measures



The second issue regarding the NIPA measure is the treatment of private pension contributions and benefits. In the NIPA data, contributions to private pension funds, plus the funds' portfolio income, are treated as personal income. Benefit payments are regarded essentially as withdrawals from a checking account and are excluded.

This approach has a clear and consistent theoretical rationale, since pension costs, like wages, are part of a total labor compensation package. However, it is doubtful whether any but a very few individuals have even the foggiest notion of the scale of the defined-benefit pension contributions that are (statistically) accruing to them as income. Indeed, unlike deposit accounts, defined-benefit pension accounts are beyond the legal control of their putative owners. Moreover, in the event of large capital gains that produce an overfunded pension plan, the sponsors have title to the excess contributions and the beneficiaries have none.

This is not the case with regard to defined contribution plans such as 401Ks, IRAs, etc. For these, contributions clearly should be included in personal income and saving.

For decades contributions to pension plans exceeded benefit payments, and their movements were strongly correlated. Accordingly, the issue of the proper estimation of consumer income and saving was effectively moot. However, as a result of the financial markets rally of the 1980s, corporate pension contributions have been little changed since 1980. During the same period, benefit payments *more than tripled*. They exceeded contributions for the first time ever in 1984, and in 1987 (the most recent data) they were a whopping $111.5 billion—well over twice the scale of contributions.

If defined-benefit pension payments are included in personal income and contributions excluded, the saving rate is lowered for most of the recent decades and it is increased from 1984 onward. Specifically, this adjustment raises the saving rate by about one percentage point in 1986 and 1.3 percentage points in 1987.[7]

This would suggest that the personal saving rate is not so low as it appears. But it is nevertheless very low. Moreover, juggling the statistics does nothing to create saving for the economy as a whole. Whatever is added to the personal-saving estimate in this way must be subtracted from the business-saving estimate. In other words, the estimate of *national* saving is unaffected by this maneuver.

Will demographics raise the saving rate to 10 percent?

At the outset of this discussion, I referred to an emerging view on Wall Street that holds that the low personal saving rate is merely a temporary phenomenon related to the demographics of the baby-boom generation. This view has been pushed most aggressively by Edward Yardeni of Pru-Bache, though several other economists also have expressed sympathy for it in varying degrees.[8] The most striking part of Yardeni's argument is his conclusion that the personal saving rate soon could rise to 10 percent—fully three times its depressed 1987 level.

In contrast to the Boskin and Lau analysis that I sketched earlier, for which presenting the model, estimation techniques, data sources, and empirical results requires the better part of one hundred pages, Yardeni's argument is mercifully contained in merely a few pages of prose with accompanying charts.[9] Unfortunately, that may be one of its key strengths; by being short and pictorial, it is highly accessible to portfolio managers and journalists who have neither the time nor the talent to plow through a hundred pages of economics.

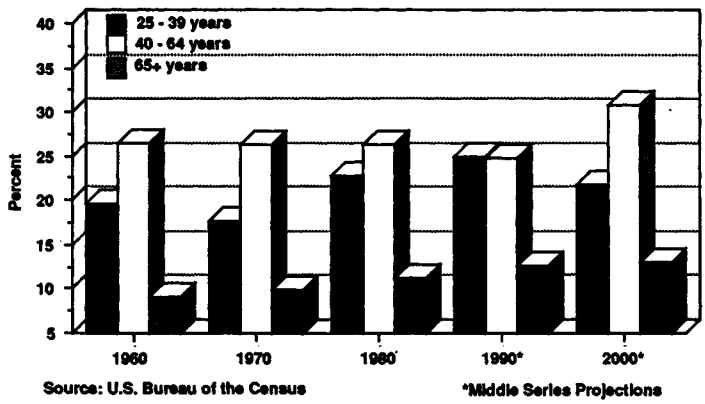
At the outset, we can forget about the issue of private pension contributions that I discussed earlier. Yardeni shows no awareness of the impact of overfunded defined-benefit plans in depressing the personal saving rate.

The core of his argument is simplicity itself: the baby-boom generation is becoming middle-aged. Since middle-aged persons tend to have relatively high saving rates, it therefore follows that as a larger percentage of the population becomes concentrated in the high-saving age group, the aggregate saving

rate will increase. One thing is for sure: the share of the population in the middle-aged range is going to increase in the years ahead, as illustrated in Chart 7.

Chart 7

Age Distribution of U.S. Population



Source: U.S. Bureau of the Census *Middle Series Projections

Unfortunately, the conclusion that the aggregate personal saving rate will rise does not automatically follow, for two distinct reasons.

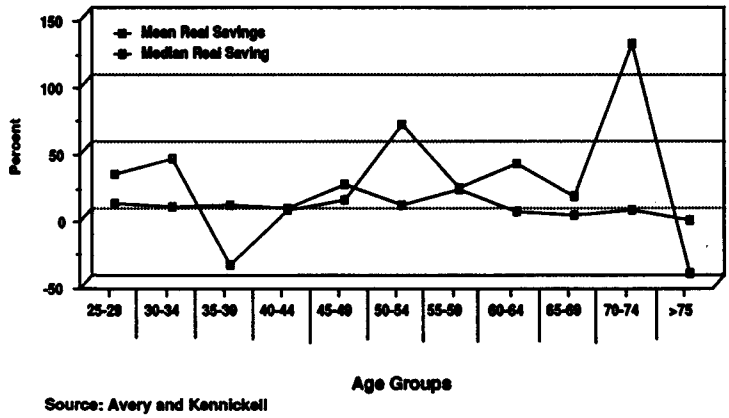
First, it is not enough to point to the relatively high saving rate of the middle-aged; the *entire* age-distribution of saving rates is relevant. In particular, the elderly also are becoming a larger portion of the population, and their saving rate is apparently zero or perhaps even negative. When the analysis is done using the entire *static* age-distribution of saving rates, it turns out that the impact of changing demographics on the saving rate is quite minor. Richard Berner of Salomon Brothers estimates that changing demographics lowered the personal saving rate by 0.8 percent and will raise it by about one half of one percent by the year 2000.[10] DRI's estimates are similar.[11]

Moreover, it is humbling to note how little we actually know about the age-distribution of saving rates. Surveys conducted in the 1960s, for example, turned up a variety of highly implausible results.[12] Arguably the best survey done so far is the Survey of Consumer Finances conducted in 1983 and 1986 (and planned also for 1989) under the auspices of the Federal Reserve. An interesting review of the survey data has been provided in a number of papers by Avery and his associates. Chart 8 illustrates the mean and median saving rates distributed by age group.[13] It is immediately apparent that the means are highly sensitive to extreme observations. If we take the means at face value, we must believe that the saving rate of the 35-39 age group is an irresponsible and imprudent negative 37 percent, while that of the 70-74 age group is an impressively thrifty 128 percent! In contrast, the medians show much less variation. The saving rate is about constant at 8 percent for the younger age groups, then rises sharply in the late forties and late fifties age group, before declining to essentially zero thereafter. This pattern, which was the basis of the calculations by Berner described earlier, is at least plausible.

However, we should ask ourselves how reliable these data are for our purpose. The answer appears to be: not very. The Survey of Consumer Finances is designed to measure *wealth*, not saving as defined in the NIPA data. As a result, the imputed saving numbers capture capital gains and presumably a variety of income transfers as well as NIPA-type saving. This, incidentally, is the most plausible interpretation of the wide discrepancies between the means and the medians. Since financial asset holdings are concentrated among higher income groups and,within any income group, among the elderly, capital gains

accrue disproportionately to the elderly, thus lifting their means relatively to their medians. The bottom line is that an impressive leap of faith is required to move from the age-distribution of saving rates calculated by Avery and Kennickell to judgments about the age-distribution of NIPA-type saving rates.

Chart 8 **Real Saving as a Percent of 1982 Income**
(by age groups)



Source: Avery and Kennickell

The second fundamental reason why Yardeni's argument is unpersuasive is that changes in saving behavior are inherently a dynamic process driven by factors other than demographics. Of course, any survey, no matter how carefully constructed, captures activity only at a moment in time; it can say little about dynamic changes over a period of years. And it is precisely such dynamic changes–in particular, the changing age-distribution of broadly defined wealth—that appear to be at the root of the personal saving problem. None of the calculations made by Yardeni and his critics incorporated such dynamic changes, but rather traced out the course of aggregate saving as the product of a static age-distribution with changing demographic weights. Such a calculation can no more illuminate the changing course of aggregate saving than it can explain the change over time of male labor-force participation.

It is too early to say that Boskin and Lau are correct in all of their analysis, but their grim conclusion is almost certainly much closer to the mark than Yardeni's.

Outlook for financial markets in a saving-poor environment

Thus, the saving shortage is likely to be with us for some time to come and this has major implications for policy and for financial markets. If one takes Boskin and Lau literally, the way to restore the vintage effect is obvious—have another depression! However, there must be a better way—and finding it is what economists are for.

Changing the tax code to enhance incentives to save might be helpful, though our experience with IRAs is not terribly encouraging.[14] After all, if the objective is to increase national saving, it is not enough that an incentive have a positive effect on personal saving. The effect must be large enough to offset the revenue loss to the Treasury.

One obvious solution would be a combination of spending cuts and revenue raisers that would create a surplus in the federal deficit. In principle, such a program of forced saving would do the trick. The

problem is that, in view of the positions taken during the presidential campaigns, and the impending collapse of the National Economic Commission, even attaining the Gramm-Rudman deficit objectives seems highly doubtful.

Moreover, even if we somehow do succeed in eliminating the federal deficit, we might find that the saving rate declines still further, thus offsetting some of the desired effect. How can this happen? In the Washington University Macroeconomic Model, the linkage is as follows. A lower deficit reduces real interest rates, which in turn raises wealth. Greater wealth depresses the saving rate. How important is this effect? In simulations we have done using the Washington University model, eliminating the deficit generally lowered the personal saving rate by about a percentage point, though the actual magnitude of the effect depended on the specific combination of measures used to eliminate the deficit[16].

Two key implications for US financial markets of a saving-poor.environment are easy to identify:

• Real interest rates will continue at historically high levels.

• The foreign exchange value of the dollar will continue under downward pressure as we are forced to borrow abroad to meet our capital investment needs.

It is still possible for interest rates to decline, as long as inflation expectations continue to diminish. We have seen a good example of this process this year. Improving inflation expectations appear to be responsible for much of the current flatness of the yield curve.

Needless to say, the Federal Reserve has a key role to play in this process. And it certainly is encouraging that, contrary to the wisdom of cynics, the Fed had the courage to tighten its policy stance in the middle of a presidential campaign. Equally impressive is the fact that, despite significantly higher short-term interest rates—and despite the best efforts of William Greider—monetary policy never became a serious issue in the campaign. On the contrary, most of the public seems to blame fiscal policy for the economy's ills.

That is a modest beginning in what promises to be a long and arduous process of confronting the saving issue.

William C. Melton is vice president and chief economist for IDS Financial Services.

Footnotes

[1]Two excellent reviews of the literature are Franco Modigliani, "The Role of Intergenerational Transfers and Life Cycle Saving in the Accumulation of Wealth," Journal of Economic Perspective, Spring 1988, pp. 15-40, and Laurence J. Kotlikoff, "Intergenerational Transfers and Saving," Journal of Economic Perspectives, Spring 1988, pp. 41-58.

[2]Howard V. Hayghe and Steven E. Haugen, "A Profile of Husbands in Today,s Labor Market," Monthly Labor Review, October 1987, pp. 12-17.

[3]For this purpose, personal income is defined to exclude contributions to defined-benefit pension plans and to include benefits from such plans. The technique for doing so follows Lawrence Summers and Chris Carroll, "Why Is U.S. National Saving So Low?," Brookings Papers in Economic Activity, 1987, pp.

[4]See Robert B. Avery and Gregory E. Elliehausen, "FinancialCharacteristics of High-Income Families," Federal Reserve Bulletin, March 1986, pp. 163-77.

[5]Michael J. Boskin and Lawrence J. Lau, "An Analysis of Postwar U.S. Consumption and Saving," NBER Working Papers 2605-2606, June 1988.

[6]In addition to the treatment of consumer durables, the main conceptual differences between the two personal saving measures are that the flow-of-funds measure includes capital gains dividends as well as contributions for government insurance. The latter makes the treatment of private and public pensions consistent, but its appropriateness is debatable.

[7]This estimate agrees with independent estimates derived in Alicia Mundell and Nicole Ernsberger, "Pension Contributions and the Stock Market," Federal Reserve Bank of Boston New England Economic Review, November/December 1987, pp. 3-14, and Summers and Carroll, op. cit.

[8]Far and away the most disingenuous of the sympathizers is Paul Craig Roberts, who was the main supply-sider in the Treasury early in the Reagan administration. He attempts to excuse the failure of the supply-side prediction that lower marginal tax rates would *raise* the personal saving rate by appealing to demographics, and specifically to Yardeni's analysis. He writes: "Despite the factors working to lower personal savings, the gross private savings rate (which includes personal and business savings) has averaged 16.7 percent during the Reagan recovery, compared with 16.6 percent during the 1947-81 period. The supply-side policy has succeeded in raising the private savings rate slightly above its post-war average despite the demographic and other pressures operating to push it down." There is no mention here of the following facts: (1) the largest marginal tax-rate reductions were for individuals, who also posted the greatest *declines* in saving rates; (2) as illustrated in Chart 2 , the total private saving rate has *declined* during the Reagan years as the flat business-saving rate was overwhelmed by the plunging personal-saving rate; and (3) thanks in large part to the grossly irresponsible fiscal policy of recent years, the 1987 national saving rate was at *a 42- year low*. In this context, to compare the average private saving rate for carefully selected years, as Roberts does, is intellectually dishonest. See Paul Craig Roberts, "Why America's Piggy Banks Aren't Bulging," Business Week, June 20, 1988, p. 28.

[9]Edward Yardeni, "How the Baby Boomers Are Changing the Economy," Prudential-Bache Securities, April 6, 1988; "The Coming Shortage of Bonds," June 20, 1988; and "Money and Business Alert," October, 1988.

[10]Richard B. Berner, "Don"t Count on a Yuppie Saving Boom," Salomon Brothers Inc.,

August 10, 1988.

[11]"Data Resources Review", October 1988, p. 3.

[12]For a discussion of the limitations of these surveys, see Summers and Carroll, op. cit.

[13]Robert B. Avery and Arthur B. Kennickell, "Savings and Wealth: Evidence from the 1986 Survey of Consumer Finances," April 1988.

[14]For a more optimistic view, see Chris Carroll and Lawrence H. Summers, "Why Have Private Saving Rates in the United States and Canada Diverged?," NBER Working Paper 2319, July 1987.

[15]William C. Melton and Daniel E. Laufenberg, "The Urgency of Deficit Reduction," August 17, 1988.

TESTIMONY

BEFORE THE

SUBCOMMITTEE ON DOMESTIC MONETARY POLICY

OF THE

COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS

OF THE

U.S. HOUSE OF REPRESENTATIVES

DELIVERED BY:

BURTON ZWICK
VICE PRESIDENT AND
SENIOR ECONOMIST

KIDDER, PEABODY & COMPANY

MARCH 1, 1989

TESTIMONY BEFORE

HOUSE BANKING COMMITTEE SUBCOMMITTEE ON MONETARY POLICY

Mr. Chairman, members of the committee, thank you for inviting me to appear before you. I am pleased to discuss the Federal Reserve Board's Monetary Policy Report to Congress.

Signs of accelerating inflation are accumulating, and the intention to curb inflation that I infer from the Federal Reserve Board's Monetary Policy Report to Congress is extremely welcome. I infer the Fed's intent to curb inflation partly from Chairman Greenspan's statement that "the Federal Reserve remains more inclined to act in the direction of restraint than toward stimulus." The lowering of the 1989 growth target for M2 to 3-7% (from 4-8% last year) also suggests a determination to curb inflation. Even if M2 velocity rises at almost the 2.5% rate of the past two years, the 5% midpoint of the 3-7% range implies nominal GNP of only about 7.5% for 1989. The Board's "central tendency" forecast for nominal GNP -- 6.5-7.5% -- is even lower.

Their 2% target for non-farm output growth also suggests a determination to fight inflation. Growth in the non-farm sector is likely to approach 3% in the first quarter, so reaching the 2% target means pushing growth down to 1.5% to 2.0% during the remaining three quarters of the year. This slowdown would be enough to keep utilization from rising and appears consistent with their 5¼-5½% year-end target for the unemployment rate.

Keeping utilization from rising is extremely important, because utilization is already at levels that are likely to cause inflation to accelerate. Capacity utilization in the manufacturing sector is almost 85%, and married male unemployment has fallen to only a 3.1% rate. These utilization rates are very close to the levels reached during 1978-9 when an overheating economy contributed to a sharp acceleration in inflation.

Moreover, last year's 5% growth in the Employment Cost Index and the most recent CPI and PPI readings suggest that inflation has already reached the Board's 1989 target of 4.5-5.0%. We believe that their inflation forecast is too low. Even if the economy is forced into a recession later this year (as we are forecasting), we expect inflation to move slightly above 5% this year. Should the non-farm economy continue to grow anywhere near its recent 3% rate, inflation is likely to move closer to 6% by the end of 1989.

Since inflation is likely to be higher than the 4.5-5.0% rate the Board is forecasting, the Board's intentions -- as implied by their M2 and nominal GNP targets -- are likely to result in a more severe slowdown than they acknowledge. We believe that their efforts to curb inflation will probably result in a mild recession, which we expect to begin before the end of this year.

Even though a sharp slowdown if not an outright recession seems the most likely consequence of the actions required to curb inflation and meet the M2 target, I was especially encouraged to hear Chairman Greenspan indicate that "Backing away from policy adjustments needed to contain inflation will not solve the thrift problem, make the debt burden of heavily leveraged firms lighter, speed the process of international adjustment, or contribute to a fundamental solution of the economic problems of the developing countries. In fact, the thrift industry's problems, as well as the external debt problems of the developing countries, were exacerbated by the inflation of the 1970s."

A recession is never pleasant, and one can hope that the tightening necessary to slow the economy and curb inflation can be achieved without inducing a recession. Nevertheless, sufficient tightening to curb inflation now is almost certainly preferable to allowing inflation to accelerate, forcing a more severe tightening later.

From the perspective of a business and financial market economist forced to make judgments on the basis of Fed policy, let me now discuss Federal Reserve Board efforts to convey what they intend to do. During the 1970s, the Board conveyed their intentions primarily through very precise monetary targets, which they sometimes missed by wide margins. The resulting loss of credibility created difficulties for both the Fed and market participants.

In recent years, they have widened their monetary targets and placed greater emphasis on other monetary indicators (the yield curve, commodity prices, the dollar). They also acknowledge their focus on various goal variables (inflation, employment, and GNP). Given the current state of our knowledge, this seems much more appropriate, and I cannot imagine how else they could proceed.

Their policy statements are necessarily less precise than before, but much less susceptible to contradiction. Like most market participants, I would like to know as much as I can about where the economy and interest rates are going, and how the Fed is trying to influence these events. I believe that the Fed's statement for 1989 is about as straightforward as it can be. The current statement provides me with a conviction that they will tighten until clear signs emerge that the current trend in inflation has been reversed.

I conclude with additional comments about the dollar and the Federal budget. With regard to the dollar, I suspect that there is little need to dwell on the problems of conducting monetary policy on the basis of stabilizing the dollar. Until nations coordinate their policies more closely, efforts to stabilize currencies will come into conflict with domestic policy objectives. Whenever these conflicts arise, either in the U.S. or the other G-7 nations, domestic objectives invariably prevail.

While the Board should reject a fixed exchange rate objective, I do not believe they should ignore foreign exchange movements completely. Our current account deficit has not yet dropped to a sustainable level, and some combination of dollar depreciation and demand restraint will be required to reduce the current account deficit further. Ignoring the dollar declines completely would signal a willingness to rely more heavily on dollar depreciation than demand restraint. This would be particularly unfortunate in our fully employed economy, since further dollar declines are more likely to increase inflation pressures than increase U.S. exports. Additionally, I believe that the Fed has an implicit understanding with other central banks to allow subsequent dollar depreciation to be orderly. Should the Fed show a willingness to permit uncontrolled declines in the dollar, these central banks would feel betrayed and could conceivably liquidate a portion of their dollar holdings. By causing an even sharper drop in the dollar, this would force the Fed to tighten (as in 1979) much more sharply than I am advocating for the next few months.

Turning to the Federal budget deficit, I believe that the shrinkage in our budget deficit from over 5% of GNP in 1986 to about 3% currently is an extremely positive development, and reducing the deficit to 1-2% of GNP within the next four years would eliminate the deficit as a concern for either the economy or the markets. I believe this can be achieved without a major tax increase. Should the spending cuts necessary to cut the deficit without a major tax increase fail to materialize, I would prefer living with the deficit a while longer rather than raising taxes substantially.

However, this argument for accepting deficits rather than raising taxes substantially should not be interpreted as the view that deficits do not matter. It is true that there is little evidence, either over time or across countries, that deficits cause higher interest rates, higher inflation, or anything else. However, this does not obscure the accounting reality that for the U.S. or any other country with a given private saving rate, an increase in the Federal budget deficit requires an increase in foreign borrowing or lower investment. Larger foreign borrowing results in long-term debt service and possibly more foreign intervention in our affairs than we would like. Reduced investment cuts into the long-run growth of our economy and living standards. Either way, it seems to me, we should strive to lower our deficit closer to the 1-2% of GNP level we experienced in the 1970s. It goes without saying that these should be genuine cuts in our public borrowing requirement, not budgetary legerdemain, for example, to avert sequestration under Gramm-Rudman.

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Testimony
of
DR. JOEL POPKIN
President, Joel Popkin and Company
Washington, D.C.

before the

Subcommittee on Domestic Monetary Policy
of the
Committee on Banking, Finance and Urban Affairs
U.S. House of Representatives

March 1, 1989

Mr. Chairman and members of the Subcommittee, thank you for inviting me here today to give my view of the outlook and problems our economy faces in 1989 and the appropriateness of the policy the FRB proposes to pursue this year. My perspective is conditioned by the fact that I have been an "inflation watcher" for almost 25 years, first as Assistant BLS Commissioner in charge of the Consumer and Producer Price Indexes, then as the inflation analyst at the President's Council of Economic Advisers and, since 1978, as President of an economic consulting firm specializing in the measurement, analysis and forecasting of wages and prices.

The forecast on which the FRB is predicating its monetary policy is that nonfarm economic growth will slow to 2 percent this year from 3.4 percent last year, and inflation will accelerate by about one half of one percentage point. That forecast underlies and is presumably interactive with this year's FRB policy objective of reducing the money supply (M2) target by one percentage point to a 3-7 percent range from a 4-8 percent range in 1988. M2 rose 5.3 percent from the fourth quarter of 1987 to the same quarter of 1988.

The FRB forecast and its policy response underscore the basic dilemma that the monetary authority faces in 1989 -- even if it achieves slower growth for the year, such a soft landing will not keep inflation from accelerating further. That's not a new development. Throughout the 1960's and 1970's, except for the two OPEC-induced periods of skyrocketing oil prices, the reduction in economic growth, or even a garden variety recession lasting six to nine months, did little to reduce inflation. The best such recessions accomplished was a temporary halt in the acceleration of the <u>rate</u> of inflation.

To reduce the inflation rate typically requires a very restrictive monetary policy, one that the nation will only tolerate under unusual circumstances -- such as the double-digit inflation of 1979-81 attendant to the second OPEC price increase. Except under such circumstances, which only food and energy commodities are important enough to trigger, inflation, once begun, continues to drift upward, not dramatically, but inexorably. It is the result of price-wage interactions that are difficult to reverse unless unemployment rates rise close to double digits or capacity utilization rates fall below 80 percent. Some illumination of this difficulty is provided by considering that when the FRB slows the economy or puts it into recession, one immediate consequence is that

productivity growth slows or turns negative. Thus, even if hourly compensation does not accelerate, weakening productivity will cause unit labor costs to shoot up. Unless the economy is in a steep recession, some of that rise in unit labor costs will be passed through into prices. This explains why the FRB anticipates in its 1989 scenario that inflation will accelerate this year despite its policy aim of gradually making monetary policy more restrictive.

But the FRB's scenario for 1989 is not likely to eventuate anyway. In fact, it appears that near-term wage and price developments are likely to force the FRB to a policy stance more restrictive than it contemplated in its latest Monetary Policy Report. Money growth will be slower than targeted and interest rates will go higher.

This prediction may come as a surprise, especially to those who think the FRB has tightened considerably already. They point to the 2½ percentage point rise in the Federal Funds Rate and comparable increases in all but the longer term rates since March 1988. But what is lost sight of is that despite that rise in interest rates, it was not until last July that most rates regained the peaks they had achieved in October prior to the stock market sell-off. Thus, for nine months FRB policy was not as restrictive as it had been in the fall of 1987. During that nine-month window, the unemployment rate fell from 6.0 percent to 5.4 percent and capacity utilization in manufacturing rose from 82 percent to 84 percent. Prices of industrial semimanufactured goods ranging from woodpulp to roller bearings rose at a 7.4 percent annual rate. That nine month span was the gestation period that resulted in the rebirth of inflation. Only since July, when interest rates regained earlier peaks did FRB policy break new restrictive ground. (M2 growth did not flatten until last December.) Little wonder monetary policy still has a way to go before it can halt inflation's acceleration. And in the course of travelling those extra miles, FRB policy is more likely to induce a recession, which will occur sooner rather than later.

FRB policy and the shifts in it, from tightening through October 1987, to loosening just after the October stock market decline, to further loosening in the winter of 1988, to modest tightening through mid 1988 and to greater restrictiveness since then, clearly does not describe a cohesive monetary policy. Perhaps the policy variation reflects the substantial divergence of views among the FRB Governors and between them and the District Bank Presidents; I recall few other periods fraught with as much disagreement among monetary policy makers.

Whatever the reasons, there is too much variation in monetary policy. Some years ago, a Nobel Laureate in Economics, Milton Friedman, proposed that the monetary authorities be instructed to pursue a constant rate of growth of the money supply. While I am not a monetarist, I do think that FRB policy should move in that direction. One step would be to abandon the policy of targeting a range of acceptable monetary growth rates and making frequent changes to the ranges targeted. Instead the target would be a growth path with a constant band about it, perhaps expressed as a standard deviation about the level of the money supply. Moreover, the path would be changed only infrequently. It is difficult to see why a narrowing of the FRB's latitude to affect money supply growth would not work better than the present FRB approach. The certainty offered by moving toward a more narrow rule, and the discipline it would impose on the monetary authorities, seem preferable to the current intervention policy that usually results in inflation followed by recession. Moreover, such a rule sidesteps the need to forecast and it avoids the need for the Chairman to pursue a policy that is acceptable to the majority of Governors and the Bank Presidents who comprise the FOMC, when their views differ widely.

Testimony Before The Subcommittee on Domestic Monetary Policy
U.S. House of Representatives
March 1, 1989

Alan Reynolds
Vice President & Chief Economist
Polyconomics Inc.
Morristown, N.J.

Monetary policy is often asked to do too much. Indeed, the most damaging errors of central bank policy have often arisen from a loss of focus, or from excessive impatience. Since the Federal Reserve is operating under a system that relies almost entirely on human judgement, it is admirable that its actions under Chairman Greenspan's tenure have appeared to be both temperate and reversible.

All sustained inflations since 1914 have been the result of deliberate policy decisions made by the Board of Governors, most often the result of a futile attempt to gain trade advantages through repeated devaluation of the dollar. Fiscal decisions have sometimes contributed to recessions, such as the Smoot-Hawley tariff of 1930 or the surtaxes of 1932 and 1968-70. But most recessions can also be clearly traced to deliberate Federal Reserve actions. This rather blunt observation is not intended to criticize the current Fed Governors, who have done a decent job of adjusting interest rates to various bits of incoming information (which is not really a "policy"). The point is simply to emphasize the overwhelming importance of reasonably stable, predictable monetary policy. Without continued high employment and low inflation, none of the government's other policy objectives will prove feasible, or even particularly important. And maintaining high employment and low inflation will depend more than anything else on better monetary policy than the U.S. has had in the past.

Policy errors that cause either a lasting acceleration of

inflation or a recessionary liquidity squeeze typically arise from the following three sources:

> First, the Fed ought not to overreact to late information, such as that contained in producer and consumer price indexes.
>
> Second, the Fed ought not to attempt to fine-tune the real economy -- whether that means limiting or boosting the growth rate of real output, exports or employment.
>
> Third, the Fed should maintain a clear separation between the different roles and effects of tax policy, spending policy and monetary policy, and confine itself to the latter.

BROAD PRICE INDEXES REFLECT THE PAST

The difficulty of changing monetary policy in response to monthly producer and consumer price information arises from the inherently sluggish nature of those indexes. The 1% rise in the January producer price index, for example, was largely driven by the delayed impact of last year's drought on production of meat and eggs, the rebound of oil prices in December and January, and some pricing decisions made when the dollar declined last October and November. These are temporary disturbances, with prices of oil and many other raw materials having since declined with the recovery of a reasonable strong dollar. Pork prices are not going to keep rising by more than 20% per month, energy prices are not going to keep rising by 5% per month, and even if they did it would be a temporary relative price change that was not caused by easy money and could not be cured by tight money.

The 0.6% rise in consumer prices illustrates additional temporary problems. An unusually mild winter clearly affected the seasonal adjustments. Air travel was easier in the absence of

snow storms, so the failure of airlines to temporarily reduce fares, as they usually do in January, appeared as seasonally adjusted increase. Mild weather also avoided the usual stoppage of construction in January, thus preventing the usual temporary declines in prices of building materials. Failure of prices to decline seasonally does not really suggest that prices will increase in the future. Similarly, the 4.7% increase in prices of cigarettes and pipe tobacco reflected higher excise taxes, effective in January, which is neither a product of monetary ease, nor a lasting trend.

Many list prices are increased each January, though they may be discounted later. Some increases in list prices that usually occur in different months occurred this January, thus confusing the seasonal adjustment. This was true of the 0.7% increase in auto prices, which will likely be reduced soon by rebates. Prices of several raw materials increased last year, and the January increases in prices of finished goods reflects last year's costs, which are now falling. Tire prices thus rose, though the price of rubber has since declined by about 20%. A combination of foreign strikes, explosions and political disturbances raised spot prices of copper well above the expected futures prices, and copper has a large weight in most indexes of commodity prices.
As a result, prices of many goods that use copper as an input were increased in January, even though prices of copper and many other base metals have since declined. The Economist index of industrial commodity prices fell 5.4% in the month ending

February 21. The Commodity Research Bureau index of commodity futures prices peaked at 270 last June and has since dropped to 240. Although higher prices of raw materials last summer affected January list prices, the lower or stable prices since then tell us much more about the future. This is why prices of sensitive commodities, particularly speculative commodities such as gold and silver, are superior measures of current and future price trends than the broad price indexes which are dominated by occasional changes in list prices, and by annual pay increases in the service sector.

Given the obvious problems with the January price statistics, it was probably disturbing to financial markets that the Federal Reserve Chairman found these numbers "disturbing." At a minimum, the monthly wiggles in the CPI and PPI should at least be averaged over periods of several months. Despite the temporary anomalies in the January CPI, the 3-month trend in that index nonetheless shows an annual rate of 4.3% through January, down from 5.3% last May.

The delayed information in the CPI is matched by an even longer delay in measures of wages, compensation and unit labor costs -- all of which are officially categorized as "lagging" indicators. Unit labor costs increased by 3.7% in 1988, which could not by itself have "pushed" prices up at an even faster pace. A slowdown in prices will later be reflected in a slowdown in wages, not the other way around.

FOCUS ON NOMINAL INDICATORS, NOT REAL GNP

The second point -- that the Fed ought not to attempt to either limit or stimulate real economic activity -- is particularly important in view of the recent controversy about how rapidly the economy can or should expand. The Congressional Budget Office has repeatedly reduced its estimate of future economic growth, most recently to 2.2% a year from 1990 to 1994. That is the same rate of economic growth that we experienced from 1930 to 1940, which is scarcely a "rosy scenario." To attain such a low rate of real growth would require that at least 2 out of 5 years be recessions. But real economic activity ultimately depends on the quantity and quality of labor and capital, and monetary policy has only an indirect effect through the adverse effects of alternating waves of inflation and deflation, which make longer-term business planning very difficult.

Chairman Greenspan projects real economic growth of 2.5 - 3% this year, with no change in unemployment. That is only possible with a significant increase of 1.5-2% in labor productivity, which will hold unit labor costs down. Productivity growth has averaged 1.8% from 1983 to 1988, though it slowed a bit in 1987-88 as employers hired many extra workers to gear up for production this year. The hiring pace will slow, and the sizable investments in equipment during 1987-88 should be coming on stream, expanding capacity and permitting capital to substitute for labor. Although the labor force is expected to grow by only 1.5% a year in the future (assuming immigration or labor force participation are no greater than expected), hours of work could

grow more rapidly than 1.5% as a result of low marginal tax rates enticing more workers to switch from part-time to full-time work. Even if hours worked grow by only 1.5% and productivity continues to increase by 1.8%, then real output can easily continue to expand by over 3.2% a year, on average, as it has for the past 40 years -- including recessions. Manufacturing capacity is expanding by about 4% a year, on average, and more rapidly where it is most needed. But manufacturing accounts for only about 21% of GNP, and there is ample capacity to expand other sectors, such as housing and services, as well as to expand capacity itself. Increased output and the resulting productivity gains are not inherently inflationary, as Japan has shown with its 15-year expansion. And inflation is not helpful to increasing output.

The Fed could not possibly use the erratic quarterly figures on real GNP as a guide to policy, even if that were desirable, because that would be basing future policy on past information. After all, real GNP is always increasing in the quarter before the economy enters a recession. Some leading indicators of future real GNP are at present rather weak -- including initial claims for unemployment, the pace of vendor deliveries, housing permits and auto sales. There have also been outright declines of industrial production in several foreign economies -- including the U.K. and China -- and weakness abroad does not bode well for U.S. exports.

However, the whole idea of using monetary policy to restrain real activity is as ineffective as is it is impractical.

Inflation is mainly a monetary phenomenon, not a matter of real growth or employment. The weakest economies in the world, including Peru and Nicaragua, all have extremely high inflation. The strongest economies in the world, including Japan and the United States, have comparatively mild inflation.

Attempting to slow wages by reducing real economic growth and raising unemployment would be likely to backfire by reducing the growth of productivity and thus increasing unit labor costs. Such a Fed-engineered recession would also damage the investments that are now adding to capacity. It is not possible to expand capacity without either producing or importing machinery, yet increases in industrial production of business equipment, or imports of such equipment, are widely misunderstood to be signs of "overheating." If rapid investment and production are not accompanied by symptoms of inflation, such as a falling dollar or speculation in commodities and tangible assets, there need be no tightening of the flow of bank reserves.

The Fed's February 21 Monetary Policy Report to Congress notes that in the first quarter of 1988, "indicators of aggregate demand suggested that there was a risk of weakness in the economy that warranted some easing." In the following month, however, "incoming information...indicated that the economy was expanding at a rate that threatened progress toward long-run price stability." That opinions can shift so rapidly from overcooling to overheating is reason enough to avoid such fine-tuning of real output. The repeated experience of "stagflation" in the 1970s

shows that it is quite possible to have both slow growth and rapid inflation, if monetary policy is lax, while the experience of 1983-88 likewise shows that moderate inflation is quite compatible with brisk economic expansion.

It may be unwise that Congress asks the Fed to produce forecasts for the coming year, particularly the latest forecast of inflation in the 4.5-5% range. The whole procedure seems to suggest that policy can and should be adjusted to a forecast, rather than to timely, objective information about whether inflation is actually trending up or down. Nobody can forecast the relevant variables without first being able to forecast what the Fed will actually do in the future. And that is impossible because the Fed is not bound by even broad guidelines or a clear mandate that could hold it accountable for anything. The Fed must instead focus on stabilizing reasonably sensitive indicators of future price trends, such as commodity prices and exchange rates, rather than ever-changing guesses about the appropriate amount of production and employment in the future.

FISCAL AND MONETARY TOOLS HAVE DIFFERENT EFFECTS

Central bankers often attribute all forms of poor economic performance to government borrowing, even in years like 1932 and 1982 when budget deficits were largely the consequence of monetary policy excesses, not the cause. As Robert Mundell demonstrated many years ago, the two separate policy objectives of high employment and low inflation cannot both be attained with a single policy instrument. Fiscal policy in the narrow sense

(the budget deficit) has no clear connection with inflation unless central banks finance the deficits by creating new money, which is by no means necessary or inevitable. On the other hand, the critical details of fiscal policy, such as marginal tax rates and government capital outlays, have a much clearer impact on the real economy. Federal Reserve policy should thus be assigned the task of maintaining the integrity of the currency, while the OMB and Treasury specialize in the respective tasks of spending and tax policy.

Restraint on federal consumption, and federally-financed consumption, is desirable when the economy is near full employment regardless of the budget deficit. That is because workers and machines purchased by the government are not available to expand output of marketable goods and services.

When Congress asks the Director of OMB or Secretary of HUD to testify on their responsibilities, it would probably be considered inappropriate for them to comment at length on monetary policy, even though monetary policy has an enormous impact on both the budget and housing. Federal Reserve officials, however, routinely turn discussions of monetary policy into lectures on the budget. The danger is that progress on the budget deficit may be considered a substitute for an appropriate degree of monetary restraint. One need look no further than the United Kingdom and Australia, which combined budget surpluses with rapid monetary expansion, to realize that this widely advocated "policy mix" does not hold down inflation, interest rates or the current

account deficit. Indeed, short-term interest rates are about 13% in the U.K. and 16% in Australia. It is equally inappropriate for monetary policy to be unduly tight, as U.S. policy was from February to July of 1982, with the excuse that Fed policy could have been more moderate if the resulting budget deficits were somehow reduced.

Although there are excellent reasons for deemphasizing domestic monetary aggregates as reliable short-term indicators of monetary policy, it is not an improvement to replace them with interest rates. Countries with strong currencies and low inflation never have high interest rates, which should lead us to suspect that monetary policy operates through different channels. It is not simply that the nominal interest rate may simply reflect expected inflation, or expected efforts to devalue the currency. It is also that the quantity of liquid assets, and not simply the price of credit, have effects on the ability of households and firms to keep paying higher prices without simply running out of cash.

In short, the real economy is the wrong target and interest rates are the wrong instrument. Among timely nominal targets that have lately been proposed by several Federal Reserve Governors are commodity prices, exchange rates and the yield curve. Monetary aggregates thus become instruments rather than ultimate objectives. The Fed would buy Treasury bills with new bank reserves when there is a sustained, excessive rise in the dollar and fall in commodity prices, and sell bills in the opposite,

inflationary situation. Such a policy would at least avoid repeating the wild roller coaster of the dollar and commodities of 1973-75, 1978-82 and 1984-86. Until a credible international monetary reform can institutionalize a better system, leaning against rising and falling trends in commodity prices, with due allowance for genuine supply shocks (like the draught) is about all that can reasonably be expected of the Fed.

Among sensitive indicators, commodity prices are superior to exchange rates, but exchange rates are important precisely because they affect the prices of commodities priced in dollars. A rising dollar makes commodities more expensive to foreign countries, thus curbing excessive stockpiling. In the current situation, where countries like Germany and Canada vow to match any increase in the U.S. fed funds rate, there is not likely to be any strengthening of the dollar in response to Fed manipulation of short-term rates. Instead, world interest rates could simply ratchet up in unison, which is potentially dangerous and difficult to unwind. Cash then becomes the favored asset, and commodities and stocks are apt to be sold at falling prices to acquire cash and avoid borrowing. The resulting disinflation or deflation makes real short-term interest rates rise even if nominal rates simply remain high, thus accelerating the global liquidity squeeze. This is not yet the current situation, but it happened in early 1982 and late 1984. In both cases, the Fed ultimately eased aggressively, but there was lasting damage resulting from the gyrations in exchange rates and producer

prices. And the fact that excessive tightening is invariably followed by excessive ease is another reason to avoid impatient attempts to abruptly reverse lagged increases in consumer prices that are a legacy of some previous period of excessive ease (in the current case, 1985-86).

The yield curve also contains some information about whether the supply of dollar liquidity exceeds demand, or vice-versa, but it can be quite misleading. The last three times the yield curve inverted, with Treasury bill rates rising above the yield on long bonds, the bill rate started no higher than the consumer price index over the previous 12 months. That is, the Fed had been holding the real short-term interest rate at about zero, or less. If the current situation were remotely similar, that would suggest the Treasury bills would now be about 4.5%, not 8.5%. The only reason to hold 30-year bonds when the yield on 3-month bills is just as lucrative is the expectation of capital gains when the Fed relents, by letting the short rate decline with declining inflation. That expectation apparently prevailed during several episodes of tightening in 1988, because each move was consistent with leaning against dollar declines and/or commodity speculation. In such cases, short rates can be expected to decline once the cause is removed -- as when the dollar stops falling and commodities stop rising. The recent tightening in response to the CPI, however, makes future Fed policy much less predictable, since it happened in the face of a reasonably firm dollar and some declines in commodity prices. If the Fed and

Bundesbank kept raising short-term rates until they squeezed all visible inflation out of the CPI, including college tuitions and physicians' fees, it could involve a long and dangerous escalation of interest rates. In any case, since the Fed takes some comfort in the fact that bond markets were not too troubled by previous upticks in the fed funds rate, the same standard must judge the latest moves as a mistake.

There is no evidence for the common claim that "financial markets" would respond favorably to a smaller budget deficit, regardless how it was achieved (e.g., by a big tax on financial markets). The U.S. deficit had been sharply and unexpectedly reduced just before the Crash of October 1987, and the budget surplus in the U.K. and Australia were accompanied by much higher interest rates. There is ample evidence, however, that financial markets did not respond favorably to the apparent increase in the fed funds rate that accompanied the otherwise unobjectionable February 24 hike in the discount rate.

TOWARD FEDERAL RESERVE ACCOUNTABILITY

The Humphrey-Hawkins Act was designed to introduce a small element of public accountability into Federal Reserve decisions, without severely curbing the Fed's flexibility and independence. The required targets for monetary aggregates are somewhat archaic, the use of forecasts is more likely to mislead than inform, and monitoring of the real economy is already duplicated in better detail and frequency by many government agencies. A simple but possibly effective reform would be to request the Fed

to provide additional information about a broad variety of sensitive indicators of emerging trends toward inflation or deflation, together with evidence on how Fed policy instruments (such as the quantity and cost of bank reserves, or growth of bank credit) are expected to affect these price targets.

IDS
An American Express company

IDS Financial Services Inc.
IDS Tower 10
Minneapolis, Minnesota 55440

William C. Melton
Vice President
Chief Economist

March 2, 1989

The Honorable Stephen L. Neal
Chairman, Subcommittee on Domestic Monetary Policy
U. S. House of Representatives
Washington, DC 20515

Dear Congressman Neal:

I very much enjoyed meeting with you and your colleagues on the Subcommittee yesterday.

As you requested, I am enclosing a copy of the study of deficit-reduction options that the IDS economics group prepared for Congressman Frenzel last August. The results indicate beyond a reasonable doubt that a serious deficit-reduction strategy--however implemented--would have major benefits for almost any indicator of economic vitality. As I stated in my testimony, this is why the widespread, relaxed attitude toward deficit reduction is a matter of concern to me.

Let me say once again that I appreciated your invitation to participate in the Subcommittee's hearing. I look forward to doing so again sometime.

Best wishes.

Yours sincerely,

William C. Melton

The Urgency of Deficit Reduction

William C. Melton
Vice President and Chief Economist

and

Daniel E. Laufenberg
Senior Economist

IDS Financial Services Inc.
August 17, 1988

The Urgency of Deficit Reduction

The main reason why measures to reduce the federal budget deficit are an urgent priority is that the United States has a very low national saving rate. The relative scarcity of internally generated saving necessarily forces the country to either forego critical, productivity-enhancing investment or else finance that investment by continuing borrowing from abroad. Either alternative implies a sacrifice of future economic potential for present consumption.

Projections made by the IDS economics group in collaboration with L. H. Meyer & Associates, Ltd. suggest clearly that elimination of the deficit--and, if possible, achievement of a reasonable budget surplus--would produce significant tangible benefits in the form of additional saving, additional investment, and lower interest rates. The projections encompassed a wide variety of possible approaches to reducing the deficit, including Vice President Bush's "flexible freeze" proposal, a temporary income-tax surcharge, an income-tax surcharge supplemented by a value-added tax and spending reductions, and these latter measures buttressed by an investment tax credit. In all cases, significant benefits appear achievable, though the specific details naturally differ considerably from one policy alternative to another. However, one conclusion stands out: what matters most to improved macroeconomic performance is the achievement of deficit reduction itself; the exact measures employed to bring this about are considerably less significant.

Sources of the low saving rate

In 1987, total national saving, including saving (or dissaving) by the federal, state and local governments, business enterprises, and individuals, amounted to 12.4 percent of GNP. This was the lowest saving rate recorded since the end of World War II and was far below the 16 percent average for the last four decades. What is even more remarkable is the fact that this strikingly low saving rate was achieved during a peacetime business expansion; in the past, the pattern has been for the saving rate to dip during recessions and world wars.

Two main factors have accounted for virtually all of the decline in the national saving rate during recent years: the plunge of the personal saving rate to the lowest level in four decades, and the explosion of the federal deficit during the last several years.

Economists are divided concerning the determinants of the personal saving rate and the source of its decline. Nevertheless, the massive growth during recent years of nonemployment income--comprising interest receipts, pension benefit payments, and Social Security payments--appears to be a large part of the explanation.[1] In 1955, such income constituted about 11 percent of total personal income; as a result of rapid growth during recent years, the portion had swollen to about 31 percent by 1986. At the same time, labor force participation by males--especially those in the upper age brackets--declined sharply.[2] It is of course impossible to prove conclusively that the growth of nonemployment income caused the plunge in the male labor force participation rate and the personal saving rate, but logic and the reasonably close timing of the events are highly suggestive.

In contrast, the source of the federal budget's plunge into deficit is beyond reasonable dispute. Revenue reductions unmatched by expenditure restraint have fostered deficits unparalleled in a peacetime expansion. Admittedly, efforts to rein in the deficits in recent years have made a significant dent, paring the awesome $221 billion deficit in fiscal year 1986 to an estimated $157 billion in the current fiscal year--which is nevertheless up significantly from the 1987 fiscal year's $148 billion. Unfortunately, as these numbers testify, the largest part of the task of deficit reduction still remains.

In recognition of this challenge, Congress established the National Economic Commission to formulate a bipartisan approach to deficit reduction. The Commission's work is crucial to our country's future, since the inadequacy of internally generated saving--including the dissaving produced by federal deficits--has major adverse impacts on the US economy. Especially prominent are the effects on interest rates, investment, and foreign indebtedness.

The scarcity of saving causes real interest rates (that is, the gap between interest rates and inflation) to be extremely

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[1]In what follows, nonemployment income is defined as the sum of personal dividend income, personal interest income, OASDHI benefits, government employee retirement benefits, other government transfer payments, and private pension benefits. The definition used in the National Income Accounts includes private pension contributions and excludes private pension benefits. For a discussion of the pros and cons of these alternative definitions, see William C. Melton, "Our Low Saving Rate," Economic Perspective, IDS Financial Services, Inc., March 2, 1988.

[2]For details, see Howard V. Hayghe and Steven E. Haugen, "A Profile of Husbands in Today's Labor Market," Monthly Labor Review, October 1987, pp. 12-17.

high, as strong demand for investment is pared back by the limited supply of saving. To the extent that worthwhile investment projects cannot be financed, the country's long-run productivity performance is impaired. Given the scarcity of internal saving, the only way to maintain investment is to borrow from abroad. However, this is at best a temporary measure; moreover, it implies that foreign influence on the US economy--and in not a few instances, outright ownership of our productive assets--must rise. Americans are right to regard this as a deeply troubling prospect.

For these reasons, increasing the US economy's supply of saving is an urgent task.

In recognition of this challenge, the IDS economics group undertook to examine the economic benefits and costs of a variety of deficit reducing options. While the results of these projections hardly constitute the final word on the subject, we do think they contain an important message, and we hope that they will prove helpful to the Commission and others interested in resolving the deficit problem.

Will the Social Security surplus solve the problem?

Before examining the projections in detail, a few comments are in order concerning the latest rationale for ignoring the need for action on the deficit, namely, the notion that projected surpluses in the Social Security trust fund will solve the problem painlessly.

First, it is not widely appreciated that the economic assumptions on which 77-year projections of the financial position of the trust funds are based are extremely tenuous, and the results are highly sensitive to these assumptions.[3]

Second, the optimistic projections of accumulating surpluses apply only to the OASDI trust fund. Even on the trustees' most favorable assumptions, the Medicare program will be in precarious condition by the turn of the century--and such optimism is probably unwarranted. In any event, it has been during recent years.

Third, the whole rationale to accumulating a surplus in the Social Security trust fund is to fund the retirement benefits of the baby boomers. It is this additional saving, channeled into productive investment, which is expected to raise worker productivity sufficiently so that the retired boomers can be

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[3]For a brief but incisive review of the nature of the projections of the Social Security trust fund, see Irving M. Auerbach, "No Social Security Bonanza for the Federal Debt," Wall Street Journal, August 9, 1988, p. 24.

supported by the working population. If instead the surplus merely is used to offset an operating deficit elsewhere in the budget, no such increase in investment will occur.

Fourth, there is nothing painless about the payroll tax used to finance the trust fund. As is well known, it is an extremely regressive tax. A worker supporting a family on $45,000 a year pays the same tax as a millionaire--and possibly less, since upper-income individuals have income sources that are exempt from the tax. At a minimum, this feature should raise some questions concerning the continued willingness of the working population to pay persistently rising payroll taxes.

Finally, it takes a long time for the projected increases in the Social Security surplus to occur, even under the most optimistic assumptions. In the meantime, barring additional policy initiatives, the unified budget will continue to run huge deficits, at a major cost to future economic potential.

Possible scenarios for deficit reduction

In our examination of possible alternative deficit reduction strategies, we developed five scenarios to illustrate the likely costs and benefits associated with each approach. These scenarios are not forecasts; rather, they are scenarios that share certain common assumptions regarding economic performance.

The most important of these assumptions is that monetary policy adjusts in whatever way is necessary to keep the growth rate of real GNP at 2.6-2.7 percent for each year of the ten-year projection horizon. This rate of growth is also assumed by the CBO to be the potential growth rate of GNP at the present time. It is also the growth rate that maintains the unemployment rate unchanged at 5.3 percent, which is taken to be consistent with full employment. A constant growth rate of GNP in line with potential is a useful assumption, because it allows the analysis to focus exclusively on what the various alternatives imply for saving, investment, and other important variables without becoming entangled in projections of business-cycle phenomena for ten years ahead.

Unfortunately, enforcing an essentially constant growth rate of real GNP masks other issues. For example, one of the most compelling reasons for deficit reduction is to raise the potential growth of GNP in the years ahead. A higher potential GNP growth rate means a higher potential growth of living standards. Obviously, in evaluating the various possible ways to reduce the deficit, a key issue is their impact on the growth of potential GNP. The methodology used in these projections illuminates this issue only indirectly.

Similarly, no attempt is made in the projections to determine the optimal growth path of per capita consumption--that

is to say, of living standards. Such an analysis ought to be done by someone, but our limited time and resources precluded making the attempt.

Finally, consistent with the Congressional Budget Office's methodology for its own medium-range budget projections, we have made no assumption about additional programs that might add to budget outlays in coming years. To cite only one example, federal support for day care is one such proposal that has been actively discussed in recent months. Much more significantly, in terms of budget impact, the implicit assumption is made that the financial difficulties of FSLIC and the savings and loan industry will be resolved at no cost to the Treasury; most observers have a much more pessimistic assessment. Consequently, it should be kept in mind that the addition of new program commitments could alter substantially the projected deficit totals.

Finally, the projections were conducted using the Washington University Macro Model (WUMM), which has been developed by L. H. Meyer & Associates, Ltd. WUMM, a medium-size econometric model of the United States economy, combines Keynesian and monetarist theoretical properties with a particularly detailed set of tax-rate effects. It thus appears to be a particularly attractive model with which to analyze alternative deficit-reduction proposals, especially those relying on tax changes. Nevertheless, it should be borne in mind that estimated economic relationships differ from one model to another; projections done with another model would produce different results. We believe that most of the differences would be quite minor, but there is no way to know for sure short of actually doing a side-by-side comparison.

Baseline

The baseline projection is essentially a "do nothing" scenario. No changes are made to the existing tax code, and growth of federal outlays for the most part follows the CBO's assumptions. Discretionary outlays are held constant in real terms; that is, they grow only in line with inflation. Entitlement spending expands in accordance with inflation and CBO projections of the utilization of such benefits (for example, retirements by Social Security beneficiaries). In contrast to the CBO, which makes explicit assumptions regarding the course of interest rates, rates are determined endogenously by the model in all of our projections.

The results of the baseline projection are fairly encouraging. A large part of the reason for this result is the assumption of no real growth of discretionary spending for the next ten years. Most observers would consider this optimistic, to say the least.

Certain key variables in the baseline projection are summarized in Table 1. The budget deficit is $129.8 billion

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(NIPA basis) in calendar year 1993, which is 1.9 percent of nominal GNP that year. The associated unified budget deficit for fiscal year 1993 is $149.1 billion--a wide variance from the zero deficit target for that year incorporated in the Gramm-Rudman-Hollings legislation. After four more years, the situation improves. The deficit declines about $90 billion and constitutes only a small fraction of nominal GNP.

While it takes ten years to come close to budget balance, the results are notable. Saving as a fraction of GNP increases from 12.4 percent in 1987 to 15.8 percent in 1997. This is due exclusively to reduced federal dissaving; the personal saving rate declines slightly over the projection horizon, though it is higher than in 1987.

As one would expect, the increase of saving results in somewhat lower interest rates, together with a higher ratio of real investment spending relative to real GNP. By 1997, investment is up to 18.3 percent of GNP, compared to 16.6 percent in 1987.

Flexible freeze

The second projection incorporates Vice President Bush's "flexible freeze" proposal. This is the same as the baseline projection, with one important difference: All entitlement expenditures except Social Security are held to zero real growth beginning in the fourth quarter of 1989 (the first quarter of fiscal year 1990) and are allowed to resume growth at the baseline rate only after the budget is in balance (the start of fiscal year 1996 in this projection).[4]

It should also be noted that, unlike Michael Boskin's discussion of the flexible freeze, in which a two percentage point decline of interest rates from the CBO baseline is assumed, this projection allows interest rates to be determined endogenously by the model.

The results--summarized in Table 1--are disappointing, in that the flexible freeze fails to achieve budget balance by 1993. Instead, the unified budget deficit is still $94.2 billion. On a more positive note, during the ensuing four years, the situation continues to improve, reaching a budget surplus of $61.9 billion in 1997.

In any event, the budget position is distinctly better than in the baseline. Consequently, real interest rates decline further than they do in the baseline, while saving and investment are enhanced commensurately. By 1997, the real Treasury bond

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[4]At present, federal pension benefits are among the fastest growing components of such outlays.

rate is 3.1 percent, which is slightly less than the average real bond rate during the late 1950s and early 1960s, when the budget was close to balance.

Temporary income tax surcharge

The next projection assumes that outlays are determined as in the baseline, but a 17 percent surcharge to both personal and corporate income taxes is introduced at the start of 1990. This keeps the basic structure of tax reform intact while raising revenue.[5] Starting in 1994, the surcharge is phased out and is finally eliminated by the start of 1997. Since it lasts only nine years, the surcharge can be described accurately as a "temporary" measure, though some might understandably come to feel it was permanent after a few years.

The results--summarized in Table 1--suggest that the surcharge could achieve budget balance by 1993, posting a small surplus on a NIPA basis and a small deficit on a unified budget basis. This pattern of small surpluses and small deficits continues in subsequent years as the surcharge is phased out.

As one would expect, the consequences are superior to those of the baseline in several ways: real interest rates are lower, while saving and investment are stronger. This is mainly due to the impact of achieving budget balance, in contrast to the baseline, which continues to run deficits through 1997. However, in other respects, performance is worse. For example, inflation is higher early in the projection period.

Compared to the flexible freeze, performance is mostly worse, mainly because phasing out the surcharge means that no budget surplus materializes late in the projection period. As a consequence, the real bond yield, which was lower in 1993, is higher by 1997, and investment is lower that year. Moreover, inflation is higher in both 1993 and 1997.

Temporary income tax surcharge, VAT, and flexible freeze

A value-added tax (VAT) has been the focus of much discussion in recent years, primarily because it can raise large amounts of revenue at low rates, thus minimizing economic distortions. One drawback to a VAT is the fact that setting up the administrative machinery to collect it would require eighteen

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[5]The surcharge is defined as a multiple of the tax liability computed under current law; i.e., with a 17 percent surcharge, the new tax liability would equal 1.17 times the liability under current law. For a taxpayer in the 28 percent bracket, this would amount to an increase of marginal rates to 32.76 percent.

months or more. Accordingly, in this projection the assumption is made that an 8.5 percent income tax surcharge is introduced for two years, 1990-91, after which a 2 percent VAT begins to be collected. In addition, the cost of living adjustment (COLA) applied to transfer payments is reduced in 1992 by the amount of the impact that the VAT has on the COLA.[6]

On the expenditure side, the flexible freeze is imposed as in the second projection. This mix of policy measures divides the burden of deficit reduction roughly half-and-half between the expenditure side and the revenue side.

The results--summarized in Table 1--are dramatic, to say the least. Unlike the flexible freeze, budget balance is achieved in 1993 (actually a small surplus on NIPA basis and a small deficit on unified basis). Thereafter, the budget moves sharply into surplus, so that by 1997 the surplus amounts to a large 1.9 percent of GNP.

As a consequence, the real bond yield declines to 3.3 percent, and inflation in 1997 is 4.3 percent--a full percentage point lower than the baseline.

Saving and investment are both significantly stronger than the baseline. Compared to the flexible freeze, investment is slightly stronger, and saving moderately stronger. As one would expect, the results are also superior to the income tax surcharge, especially where inflation is concerned.

Surcharge, VAT, flexible freeze, and investment tax credit

The final projection is the same as the preceding one, except that a 10 percent investment tax credit (ITC) is introduced at the start of 1990, while the VAT rate is raised to 3 percent in order to cover approximately the revenue loss from the ITC.

In some respects, the results are similar to those in the previous projection. In both cases, the inflation rate is significantly lower than the baseline. Also, both achieve about the same amount of budget surplus in 1997. The main differences are that saving and investment are significantly higher with the ITC--although both VAT approaches outperform the baseline--and the bond yield is one-half percent higher with the ITC than without it. This latter effect is due to the significantly stronger credit demand resulting from increased investment incentives.

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[6]This insures that the impact of the VAT is in principle shared by all of the population.

Concluding comments

Projections such as these are inherently unrealistic, in that they abstract from a variety of details in order to get at the "big picture." The use of a constant growth trajectory in all of the projections contributes further to the sense of unreality. Nevertheless, the projections are not intended to foretell the future; their purpose is to provide a rough quantification of the scale of the benefits and costs associated with alternative strategies of deficit reduction. It is clear that the potential benefits are very large indeed, even if the calculations are necessarily imprecise.

Some would conclude, however, that the greatest element of unreality in this exercise is the implicit assumption that the country really is prepared to support anything like the sustained deficit reduction measures examined here. There is no easy answer to this question, but our own experiences suggest that there is a widespread public concern with the low saving rate and the growing foreign penetration of the US economy. Provided that these seemingly disparate phenomena can be linked together in the public mind, we venture that deficit reduction--or more properly, the saving issue--would have immense popular appeal.

In particular, the clear message of the projections examined here is that reducing the deficit matters far more than how we do it. Obviously, the various approaches all have their own peculiar advantages and disadvantages. Some, for example, deliver more "bang per buck" in saving and investment than others. Some are more effective in keeping inflation low. And so forth. But these peculiar features pale by comparison with the results produced through virtually any significant program of deficit reduction.

Table 1

Alternative Projections of Deficit Reduction Strategies

	(1) Baseline		(2) Flexible Freeze		(3) Income Tax Surcharge		(4) Surcharge + VAT + Cuts		(5) Surcharge + VAT + Cuts + ITC	
	1993	1997	1993	1997	1993	1997	1993	1997	1993	1997
Federal Budget Surplus										
NIPA (Billions $)	-129.8	-38.9	-69.4	85.5	20.5	15.1	6.7	170.0	3.3	159.1
(Percent Nominal GNP)	-1.9	-0.4	-1.0	1.0	0.3	0.2	0.1	1.9	0.0	1.7
Unified (Billions $/FY)	-149.1	-61.0	-94.2	61.9	-5.0	-4.2	-21.7	148.8	-23.6	136.6
Gross Saving (Billions $)	964.5	1442.5	987.7	1462.9	1022.9	1492.8	1037.0	1507.0	1066.6	1586.2
(Percent Nominal GNP)	14.2	15.8	14.6	16.3	14.9	16.1	15.0	16.7	15.3	17.3
Personal Saving Rate (Percent)	4.3	4.0	3.7	2.8	2.6	3.6	3.0	2.4	3.3	3.4
Fixed Investment										
Real (Billions 1982$)	806.1	924.2	813.5	942.9	816.0	931.7	817.8	900.8	840.9	1000.2
Percent Real GNP	17.7	18.3	17.9	18.7	17.9	18.4	18.0	18.8	18.5	19.8
Consumer Price Index (Percent)	4.9	5.3	4.8	4.7	5.4	5.3	5.1	4.3	5.1	4.3
30-Year Treasury Bond Yield (Percent)	9.5	9.1	8.8	7.8	8.6	8.9	8.4	7.6	8.9	8.1
Real 30-Year Treasury Bond Yield (Percent)	4.6	3.8	4.0	3.1	3.2	3.6	3.3	3.3	3.8	3.8

APPENDIX

Detailed Projections of Alternative Deficit Reduction Strategies

Projections prepared by:

L. H. Meyer & Associates, Ltd.

Baseline

A. Fiscal Policy

1) The current tax code is assumed.

2) Exog real federal outlays grow at roughly same rate as in CBO baseline

3) Nominal net interest payments are determined endogenously by the model.

B. Monetary Policy

Monetary policy is used to keep the economy expanding at full employment (= roughly 5.3% unemployment rate). Our estimate is that potential GNP will grow roughly 2.6% annually over the period.

Baseline: CBO-Type Real Federal Outlays

MAJOR ECONOMIC INDICATORS

	YEAR OVER YEAR % CH										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Gross National Product (GNP)											
%ch annual rate	5.0	3.2	2.2	2.9	2.6	2.5	2.6	2.5	2.9	2.7	2.4
Composition of Real GNP Growth											
Final Sales	3.0	4.4	2.2	2.6	2.6	2.5	2.6	2.5	2.8	2.7	2.5
Change in Inventories	2.1	-1.2	.0	.3	.0	-.1	.1	.0	.0	.0	-.1
--- INDICATORS OF REAL ACTIVITY ---											
Housing Starts (pvt)	1633.9	1472.6	1347.6	1407.6	1347.4	1274.5	1240.1	1222.5	1272.1	1292.2	1227.1
Auto Sales	10.3	10.5	10.2	10.6	10.9	11.3	11.8	12.3	12.7	13.1	13.4
Domestics	7.1	7.5	7.3	7.6	7.8	8.1	8.5	8.8	9.1	9.4	9.6
Imports	3.2	3.0	2.9	3.0	3.1	3.2	3.4	3.5	3.6	3.8	3.8
Industrial Production	129.8	136.7	139.9	143.7	148.1	151.8	155.9	159.9	164.3	169.1	172.9
Industrial Production (mfg)	134.6	142.2	145.9	150.2	155.2	159.5	164.3	168.9	174.0	179.5	183.9
Capacity Util. (mfg)	81.0	83.2	83.9	84.6	85.0	84.3	85.0	84.7	85.0	85.3	85.2
Unemployment Rate (Civ)	6.2	5.4	5.1	5.2	5.1	5.2	5.1	5.1	5.1	5.1	5.2
--- PRICES, PRODUCTIVITY & COSTS --											
GNP Deflator %c	3.1	3.4	3.8	4.0	4.3	4.6	4.8	4.8	4.8	4.9	5.0
CPI, (all urban) %c	4.5	4.3	4.8	4.4	4.7	5.0	4.9	5.0	5.1	5.2	5.3
PPI, (finished) %c	2.5	3.6	3.8	4.1	4.2	4.2	4.3	4.3	4.3	4.4	4.5
Exchange Rate (index)	96.9	92.3	86.6	82.8	82.9	82.7	82.5	80.9	79.0	77.3	75.1
Price of Imported oil $/b	18.1	15.7	17.0	17.6	18.2	18.9	19.5	20.2	20.9	21.6	22.4
Comp. per Manhour %c	2.8	4.3	5.6	5.6	6.0	6.1	6.2	6.3	6.4	6.5	6.6
Output per Hour %c	1.2	1.3	.7	1.8	2.0	2.1	2.1	1.9	2.0	1.7	1.6
Unit Labor Cost %c	1.5	3.0	4.9	3.7	3.9	3.9	4.1	4.3	4.3	4.7	5.0
--- MONEY AND INTEREST RATES ---											
Nonborrowed Reserves %c	8.3	4.9	5.5	7.6	7.7	8.2	7.6	7.9	7.9	7.6	8.1
Money Supply (M1) %c	6.3	6.0	4.9	7.0	7.0	7.5	7.2	7.2	7.5	7.2	7.5
Prime Rate	8.2	9.3	10.0	9.7	9.5	9.1	9.0	8.9	8.8	8.8	8.6
Treasury Bill Rate (3m)	5.8	6.6	7.2	6.9	6.8	6.5	6.4	6.3	6.3	6.3	6.1
Yield on 30 Year Gov'ts	8.6	9.2	9.6	9.5	9.7	9.6	9.5	9.3	9.2	9.2	9.1
AAA Corporate Bond Yield	9.4	10.0	10.4	10.3	10.4	10.3	10.1	10.0	9.8	9.8	9.7
--- INCOMES AND RELATED MEASURES --											
Corp Profits w/Inv & ccadj	3.9	6.7	2.0	2.2	8.1	7.1	10.1	8.4	8.7	8.2	4.2
Corp. Profits After-tax %c*	5.7	19.6	8.9	7.7	8.7	5.9	10.3	9.1	10.4	7.3	4.8
Real Pers. Disp. Income %c.	1.7	3.5	2.6	2.4	2.6	2.2	2.3	2.3	2.4	2.5	2.3
Personal Saving Rate	3.2	4.1	4.4	4.7	4.8	4.6	4.3	4.1	3.9	3.9	4.0
Federal Deficit (FY, UNI)	-147.5	-157.0	-158.4	-161.2	-157.6	-156.2	-149.1	-133.8	-113.3	-84.7	-61.0

* % chg from year-earlier period

Baseline: CBO-Type Real Federal Outlays

GROSS NATIONAL PRODUCT
(Billions of 1982 Dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
GROSS NATIONAL PRODUCT.....	3867.0	4002.1	4104.7	4209.3	4328.2	4434.7	4549.6	4665.9	4792.3	4928.2	5048.9
PERS. CONSUMPTION EXP'S....	2520.9	2585.8	2647.3	2702.3	2768.7	2837.5	2912.4	2988.8	3065.4	3142.3	3212.8
DURABLE GOODS.....	390.9	409.9	426.8	445.5	467.1	489.5	514.9	540.7	566.3	592.0	614.4
NEW AUTOS.....	80.1	83.8	83.5	86.0	88.7	91.4	95.4	99.0	102.1	105.0	106.7
OTHER.....	310.9	326.1	343.3	359.5	378.4	398.1	419.4	441.7	464.1	487.0	507.7
NONDURABLE GOODS.....	890.5	891.0	898.5	911.8	930.6	949.6	970.2	991.2	1012.3	1033.6	1053.3
SERVICES.....	1239.5	1284.9	1322.0	1345.0	1371.0	1398.5	1427.3	1456.9	1486.8	1516.7	1545.2
GROSS PVT DOM INVESTMENT...	674.8	722.1	726.0	755.0	787.1	808.3	837.1	866.7	900.3	938.2	957.8
FIXED INVESTMENT.....	640.3	681.8	702.0	726.9	754.0	777.5	806.1	834.3	867.4	902.1	926.2
NONRESIDENTIAL.....	445.1	491.4	515.4	530.6	551.5	576.8	604.8	630.2	654.9	680.6	702.0
STRUCTURES.....	125.5	127.4	131.5	135.0	138.9	145.5	153.8	162.6	171.5	181.1	190.0
EQUIPMENT.....	319.6	364.1	383.9	395.6	412.6	431.3	451.0	467.6	483.4	499.5	512.0
RESIDENTIAL.....	195.2	190.3	186.6	196.3	202.5	200.7	201.3	204.2	212.5	221.5	222.3
CHANGE IN INVENTORIES*.....	34.4	40.3	24.0	28.2	33.1	30.8	31.0	32.4	32.9	36.1	33.5
FARM.....	-2.5	3.8	-1.5	5.1	5.1	5.6	5.6	5.6	5.6	5.6	5.6
NONFARM.....	36.9	36.5	25.4	23.1	28.0	25.2	25.4	26.8	27.4	30.5	28.0
NEW AUTOS.....	5.5	-1.1	2.2	2.1	2.3	2.2	2.3	2.4	2.3	2.4	2.2
OTHER.....	31.4	37.6	23.3	21.0	25.6	23.0	23.1	24.4	25.1	28.2	25.8
NET EXPORTS*.....	-128.9	-90.0	-72.4	-57.0	-45.4	-36.9	-33.7	-31.6	-24.1	-12.0	8.9
EXPORTS.....	427.9	503.8	549.0	581.6	610.5	626.6	641.6	660.2	684.4	714.0	744.8
NONAG MERCHANDISE.....	265.2	305.2	338.3	363.2	380.7	390.2	397.8	407.0	419.5	434.5	450.0
AG MERCHANDISE.....	34.9	41.4	46.0	49.9	53.2	55.5	57.4	59.4	62.0	65.0	68.2
SERVICES.....	147.7	157.3	164.7	168.6	176.6	180.9	186.4	193.8	202.9	214.5	226.6
IMPORTS.....	556.7	593.8	621.3	638.6	655.9	663.6	675.3	691.8	708.5	726.0	735.9
NONPETRO MERCHANDISE...	361.0	374.3	388.5	398.1	407.3	408.9	415.3	426.3	437.5	449.3	454.5
PETRO & PRODUCTS.....	77.9	85.8	89.1	92.0	95.6	98.8	102.2	105.6	109.2	113.0	116.5
SERVICE.....	117.8	133.8	143.7	148.5	153.0	155.8	157.7	159.9	161.8	163.7	164.9
GOVERNMENT PURCHASES OF GOODS & SERVICES.....	780.2	784.2	803.8	808.9	817.8	825.8	833.7	842.0	850.6	859.8	869.4
FEDERAL.....	339.0	331.3	343.0	340.5	340.7	340.8	340.8	341.0	341.1	341.3	341.6
DEFENSE.....	264.9	261.1	259.0	259.1	259.2	259.2	259.3	259.3	259.4	259.6	259.7
NONDEFENSE.....	74.1	70.2	84.0	81.5	81.5	81.6	81.6	81.6	81.7	81.8	81.8
STATE & LOCAL.....	441.2	452.9	460.8	468.4	477.2	485.0	492.9	501.0	509.5	518.4	527.8
ADDENDUM:											
FINAL SALES (NIPA).....	3812.6	3961.8	4080.7	4181.1	4295.1	4403.9	4518.5	4633.5	4759.3	4892.1	5015.3
CONSUMPTION (MODEL DEF.).	2544.1	2614.0	2682.9	2743.1	2812.6	2884.5	2960.5	3039.3	3119.7	3201.2	3280.1
HH NET WORTH, EQUITIES**	3655.7	3313.1	3432.8	3774.1	4110.8	4591.1	5192.6	5856.5	6545.3	7176.7	7837.4

* Billions of 1982 Dollars
** Billions of Current Dollars

Baseline: CBO-Type Real Federal Outlays

FEDERAL RECEIPTS & EXPENDITURES
(Billions of dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
RECEIPTS.....	916.5	983.2	1053.9	1132.2	1215.7	1296.3	1388.9	1489.8	1601.3	1724.5	1848.6
PERSONAL TAX.....	405.6	417.9	447.6	483.6	523.0	563.7	609.0	658.6	713.0	774.0	839.1
CORPORATE PROFITS TAX.....	105.8	116.2	129.7	136.8	149.5	158.1	170.6	184.2	199.9	216.1	226.7
INDIRECT BUSINESS TAX.....	54.0	56.7	59.5	62.1	65.4	68.9	72.7	76.6	80.9	85.4	90.2
CONT FOR SOC INS.....	351.0	392.6	417.2	449.7	477.7	505.6	536.6	570.3	607.5	649.0	692.7
EXPENDITURES.....	1074.2	1120.3	1201.3	1277.6	1355.2	1435.3	1518.7	1603.1	1691.7	1786.6	1887.6
PURCHASES OF G&S.....	382.0	382.9	409.6	425.3	446.3	468.2	491.3	515.9	542.3	571.2	602.2
NATIONAL DEFENSE.....	295.3	296.9	306.8	320.8	336.8	353.4	371.0	389.7	409.7	431.6	455.1
EX COMPENSATION.....	186.4	183.8	189.2	198.4	208.5	218.7	229.7	241.1	253.2	266.1	279.9
COMPENSATION, MIL.....	35.7	37.4	38.6	40.1	42.1	44.2	46.3	48.7	51.4	54.3	57.5
COMPENSATION, CIV.....	73.2	75.8	79.1	82.2	86.2	90.5	95.0	99.8	105.2	111.2	117.7
NONDEFENSE.....	86.7	85.9	102.8	104.5	109.6	114.8	120.3	126.2	132.6	139.6	147.1
EX COMPENSATION & CCC.	47.9	53.0	54.6	57.0	59.7	62.5	65.5	68.5	71.8	75.3	79.0
COMPENSATION.....	42.1	44.3	45.7	47.5	49.8	52.3	54.9	57.7	60.8	64.3	68.1
CCC PURCHASES*.....	-1.4	-11.7	1.3	1.3	.0	.0	.0	.0	.0	.0	.0
TRANSFER PAYMENTS.....	414.2	440.1	471.9	507.9	544.6	583.4	625.5	667.4	712.8	762.7	817.7
TO PERSONS.....	402.0	429.0	460.2	495.3	531.0	569.0	610.0	650.9	695.1	743.7	797.3
UNEM BENEFITS.....	14.7	13.3	13.3	14.3	14.8	15.7	16.4	17.2	18.1	19.1	20.7
OTHER.....	387.3	415.7	446.9	481.0	516.2	553.2	593.6	633.7	676.9	724.7	776.6
TO FOREIGNERS.....	12.2	11.1	11.7	12.6	13.5	14.5	15.5	16.5	17.7	19.0	20.4
GRANTS-IN-AID.....	102.7	108.8	113.8	120.6	127.7	135.6	144.0	152.5	161.5	171.2	181.6
NET INTEREST PAID.....	143.0	155.0	170.5	184.8	198.2	210.1	220.8	230.3	238.0	244.2	248.6
TO FOREIGNERS.....	24.0	26.6	29.0	31.4	33.7	35.7	37.5	39.1	40.4	41.5	42.2
SUBSIDIES LESS CURRENT SURPLUS*.....	29.7	34.9	34.9	38.3	38.8	38.0	37.3	37.0	37.1	37.2	37.4
Less: WAGE ACCRUALS*.....	.1	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
DEFICIT, NIPA (-)*.....	-163.5	-142.7	-144.4	-148.2	-140.6	-139.2	-133.1	-117.8	-97.3	-68.7	-45.0
DEFICIT, UNI (-)*.....	-147.5	-157.0	-158.4	-161.2	-157.6	-156.2	-149.1	-133.8	-113.3	-86.7	-61.0
ADDENDA:											
YRLY COMP, CIVILIAN.....	26.4	27.6	28.5	29.6	31.0	32.6	34.2	36.0	37.9	40.1	42.4
EMPLOYMENT, CIVILIAN....	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
YRLY COMP, MILITARY.....	32.4	33.5	35.0	36.4	38.1	40.1	42.0	44.2	46.5	49.2	52.1
EMPLOYMENT, MILITARY....	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3

* BILLIONS OF DOLLARS (FY)

Baseline: CBO-Type Real Federal Outlays

MONEY, RESERVES, & INTEREST RATES

	YEAR OVER YEAR % CH										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
-- MONETARY MEASURES (% ch) --											
MONEY SUPPLY (M1).....	11.6	4.8	5.3	6.4	7.0	7.3	7.3	7.1	7.4	7.4	7.3
CURRENCY.....	8.3	8.7	6.2	5.2	5.5	5.7	5.9	5.9	5.9	6.1	6.1
CHECKABLE DEPOSITS.....	12.8	3.4	5.0	6.9	7.6	7.9	7.9	7.6	7.9	7.9	7.8
NONBORROWED RES + EX. CR...	14.9	4.9	5.2	7.1	7.6	8.1	7.8	7.7	7.9	7.8	7.9
FREE RES. + EX. CREDIT. *..	.5	.3	.4	.5	.6	.8	.9	1.0	1.1	1.2	1.4
-- INTEREST RATES (%) --											
FEDERAL FUNDS RATE.....	6.7	7.5	8.0	7.8	7.6	7.2	7.1	7.0	6.9	6.9	6.8
TREASURY BILL RATE.....	5.8	6.6	7.2	6.9	6.8	6.5	6.4	6.3	6.3	6.3	6.1
PRIME RATE.....	8.2	9.3	10.0	9.7	9.5	9.1	9.0	8.9	8.8	8.8	8.6
DISCOUNT RATE.....	5.7	6.0	6.3	6.1	6.0	5.7	5.6	5.5	5.4	5.4	5.4
YIELD ON 10-YR GOV'TS.....	8.4	9.0	9.5	9.3	9.5	9.3	9.2	9.1	8.9	8.9	8.8
YIELD ON 30-YR GOV'TS.....	8.6	9.2	9.6	9.5	9.7	9.6	9.5	9.3	9.2	9.2	9.1
YIELD ON SEASONED AAA CORPS	9.4	10.0	10.4	10.3	10.4	10.3	10.1	10.0	9.8	9.8	9.7
MORTGAGE RATE (SECONDARY)..	10.2	10.6	11.0	10.9	11.0	10.8	10.7	10.5	10.4	10.3	10.2
-- RENTAL RATES (%) --											
NEW AUTOS.....	20.5	21.4	21.8	21.6	21.7	21.4	21.0	20.6	20.2	20.1	19.9
OTHER CONSUMER DURABLES....	26.3	26.8	26.7	26.2	25.9	25.4	25.0	24.7	24.5	24.4	24.3
SINGLE FAMILY HOUSING.....	11.3	11.9	11.8	11.2	10.9	10.8	10.8	10.7	10.5	10.5	10.4
MULTI-FAMILY HOUSING.....	14.3	14.6	14.7	14.3	14.3	14.2	14.1	14.0	13.8	13.8	13.7
PRODUCERS' DUR. EQUIPMENT..	23.2	23.0	22.9	22.3	22.2	22.3	22.1	22.0	22.0	22.2	22.5
NONRESIDENTIAL STRUCTURES..	22.1	22.9	23.6	23.2	23.2	22.9	22.4	21.9	21.6	21.4	21.3
NONFARM INVENTORIES.....	4.2	3.0	2.4	2.0	1.7	1.2	1.3	1.3	1.1	.9	.5
-- REAL INTEREST RATES (%) --											
DIVIDEND PRICE RATIO.....	3.1	3.7	3.7	3.6	3.5	3.4	3.2	3.1	3.0	3.0	2.9
REAL CORPORATE BOND YIELD..	5.1	6.4	7.0	6.6	6.5	6.2	5.8	5.4	5.2	5.1	5.0
SPREAD:GOV'T BOND - T'BILL.	2.6	2.5	2.5	2.6	2.9	3.1	3.0	3.0	2.9	2.9	2.9
EFFECTIVE T-BILL RATE	6.1	6.9	7.6	7.4	7.2	6.8	6.8	6.7	6.6	6.6	6.5
EFFECTIVE FED FUNDS RATE	7.0	7.9	8.5	8.2	8.0	7.6	7.5	7.4	7.3	7.3	7.1

* Level, billions of $

Baseline: CBO-Type Real Federal Outlays

GROSS SAVING & INVESTMENT
(Billions of dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Gross Saving	560.4	643.1	670.3	731.2	807.1	874.5	964.5	1060.2	1174.7	1312.1	1442.5
Gross Private Saving	665.3	728.4	762.0	816.9	882.2	945.0	1019.2	1092.2	1177.4	1279.7	1384.7
Personal Saving	104.2	142.7	161.6	185.9	203.1	205.5	207.2	208.7	215.2	232.2	254.7
Undistributed Profits	47.4	58.4	72.6	77.9	91.9	97.4	108.3	119.7	133.7	146.9	149.1
IVA*	-18.0	-24.0	-29.9	-28.9	-32.7	-33.8	-33.8	-36.7	-39.7	-43.5	-47.6
CCadj	51.7	44.6	19.4	4.5	-2.7	-1.0	1.8	.7	-2.2	-5.0	-7.5
CCA with CCadj	480.0	506.7	538.4	577.5	622.6	677.0	735.7	799.8	870.4	949.1	1036.0
Federal Wage Accruals*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
S&L Wage Accruals*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Government Surplus or Deficit (-), NIPA's	-104.8	-85.3	-91.7	-85.8	-75.1	-70.6	-54.7	-32.1	-2.6	32.4	57.9
Federal	-157.8	-137.0	-147.4	-145.4	-139.5	-138.9	-129.8	-113.3	-90.5	-62.1	-38.9
State & Local	52.9	51.7	55.7	59.6	64.4	68.4	75.1	81.2	87.8	94.5	96.8
Capital Grants Received By the United States (net)*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Gross Investment	552.3	628.1	655.3	716.2	792.1	859.5	949.5	1045.2	1159.7	1297.1	1427.5
Gross Pvt. Domestic Invest.	712.9	756.2	777.6	841.1	915.4	987.6	1074.6	1170.1	1281.3	1409.9	1519.8
Net Foreign Investment	-160.6	-128.0	-122.3	-124.9	-123.3	-128.1	-125.1	-125.0	-121.5	-112.8	-92.2
Net Exports	-123.0	-89.2	-80.5	-79.7	-74.5	-76.3	-70.4	-67.6	-61.6	-50.5	-27.8
Less Payments to Foreigners											
Federal Net Interest	24.0	26.6	29.0	31.4	33.7	35.7	37.5	39.1	40.4	41.5	42.2
Federal Transfers	12.2	11.1	11.7	12.6	13.5	14.5	15.5	16.5	17.7	19.0	20.4
Personal Transfers	1.3	1.1	1.1	1.2	1.6	1.6	1.7	1.7	1.7	1.8	1.8
Statistical Discrepancy*	-8.1	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0
ADDENDA:											
Federal Deficit % of GNP.**	-3.5	-2.8	-2.8	-2.6	-2.4	-2.2	-1.9	-1.6	-1.2	-.7	-.4

* Billions of Dollars
** Percent

Altrnative #1: Flexible Freeze

A. Fiscal Policy

1) Current tax code is assumed.

2) All exogenous real federal outlays except Social Security benefits are held constant in real terms starting in 1989Q4.

3) Real Social Security benefits grow as in baseline.

4) Interest payments determined by model.

5) All exogenous real federal outlays resume same growth as in baseline starting in 1995Q4 (i.e., after budget is in balance).

B. Monetary Policy

Monetary policy is used to keep real GNP roughly along the baseline path. That is, the fiscal initiative is "fully accommodated".

Alt #1: "Flexible Freeze"

MAJOR ECONOMIC INDICATORS

	YEAR OVER YEAR % CH										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Gross National Product (82$)											
%ch annual rate.....	5.0	3.2	2.2	2.9	2.7	2.4	2.7	2.4	2.9	2.7	2.2
Composition of Real GNP Growth											
Final Sales.....	3.0	4.4	2.2	2.6	2.7	2.5	2.6	2.4	2.9	2.6	2.3
Change in Inventories....	2.1	-1.2	.0	.3	.1	-.1	.1	.0	.0	.1	-.1
--- INDICATORS OF REAL ACTIVITY ---											
Housing Starts (pvt).....1633.9		1471.9	1348.7	1415.5	1372.9	1299.5	1273.7	1245.9	1300.0	1319.5	1232.8
Auto Sales.....	10.3	10.5	10.2	10.6	10.9	11.3	11.9	12.4	12.8	13.2	13.4
Domestics.....	7.1	7.5	7.3	7.6	7.8	8.1	8.5	8.8	9.1	9.4	9.6
Imports.....	3.2	3.0	2.9	3.0	3.1	3.2	3.4	3.5	3.6	3.8	3.8
Industrial Production.....	129.8	136.7	139.9	143.7	148.3	152.1	156.3	160.3	164.5	169.8	173.0
Industrial Production (mfg)	134.6	142.2	145.8	150.2	155.5	159.9	164.7	169.4	174.2	180.3	186.1
Capacity Util. (mfg).....	81.0	83.2	83.8	84.7	85.2	84.4	85.1	84.8	84.9	85.3	84.8
Unemployment Rate (Civ)....	6.2	5.4	5.1	5.3	5.2	5.3	5.3	5.3	5.4	5.3	5.5
--- PRICES, PRODUCTIVITY & COSTS --											
GNP Deflator %c.....	3.1	3.4	3.8	4.0	4.3	4.6	4.7	4.6	4.4	4.5	4.4
CPI, (all urban) %c.....	4.5	4.3	4.8	4.4	4.7	4.9	4.8	4.8	4.7	4.7	4.7
PPI, (finished) %c.....	2.5	3.6	3.8	4.1	4.2	4.1	4.2	4.1	4.0	4.0	3.9
Exchange Rate (index).....	96.9	92.3	86.5	82.2	82.4	82.2	82.2	81.2	79.4	78.7	76.6
Price of Imported oil $/b..	18.1	15.7	17.0	17.6	18.2	18.9	19.5	20.2	20.9	21.6	22.4
Comp. per Manhour %c.....	2.8	4.3	5.6	5.6	6.0	6.1	6.2	6.2	6.1	6.1	6.1
Output per Hour %c.....	1.2	1.3	.7	1.8	2.0	2.0	2.1	1.9	2.1	1.7	1.6
Unit Labor Cost %c.....	1.5	3.0	4.9	3.7	3.9	3.9	4.0	4.2	3.9	4.4	4.5
--- MONEY AND INTEREST RATES ---											
Nonborrowed Reserves %c....	8.3	4.9	5.9	8.4	8.5	9.0	8.4	7.8	9.0	7.3	8.7
Money Supply (M1) %c.....	6.3	6.0	5.0	7.5	7.5	8.0	7.7	7.1	8.1	6.7	7.7
Prime Rate.....	8.2	9.3	10.0	9.3	8.9	8.3	8.0	7.8	7.3	7.4	6.8
Treasury Bill Rate (3m)....	5.8	6.6	7.1	6.7	6.3	5.8	5.6	5.4	5.0	5.1	4.7
Yield on 30 Year Gov'ts....	8.6	9.2	9.6	9.4	9.4	9.1	8.8	8.6	8.2	8.2	7.8
AAA Corporate Bond Yield...	9.4	10.0	10.4	10.1	10.1	9.8	9.5	9.2	8.8	8.7	8.4
--- INCOMES AND RELATED MEASURES --											
Corp Profits w/ivа & cccadj	3.9	6.7	1.9	1.8	8.1	6.5	9.7	7.8	7.4	8.5	1.4
Corp. Profits After-tax %c*	5.7	19.4	9.2	7.5	8.9	4.9	10.0	7.0	9.8	5.2	1.1
Real Pers. Disp. Income %c.	1.7	3.5	2.6	2.2	2.4	1.9	2.0	2.1	2.0	2.5	2.1
Personal Saving Rate.....	3.2	4.1	4.3	4.6	4.6	4.1	3.7	3.2	2.9	2.8	2.8
Federal Deficit (FY, UNI)..-147.5		-157.0	-158.6	-153.8	-137.6	-120.0	-96.2	-57.8	-18.8	29.1	61.9

* % chg from year-earlier period

Alt #1: "Flexible Freeze"

GROSS NATIONAL PRODUCT
(Billions of 1982 Dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
GROSS NATIONAL PRODUCT.....	3847.0	4001.9	4103.8	4208.3	4329.4	4436.5	4551.5	4668.4	4790.2	4934.4	5044.6
PERS. CONSUMPTION EXP'S....	2520.9	2585.8	2647.0	2699.0	2762.9	2828.9	2901.3	2976.0	3048.8	3128.6	3194.1
DURABLE GOODS.....	390.9	409.9	426.7	445.0	466.8	489.0	514.3	539.5	562.9	590.1	609.2
NEW AUTOS.....	80.1	83.8	83.5	85.8	88.7	91.2	95.2	98.4	100.7	104.1	104.6
OTHER.....	310.9	326.1	343.2	359.2	378.1	397.7	419.0	441.2	462.2	486.1	504.6
NONDURABLE GOODS.....	890.5	891.0	898.4	910.5	928.2	946.0	965.5	986.0	1006.2	1028.2	1046.9
SERVICES.....	1239.5	1284.9	1321.9	1343.5	1367.9	1393.9	1421.5	1450.4	1479.7	1510.3	1538.1
GROSS PVT DOM INVESTMENT...	674.8	722.1	725.5	755.4	790.6	814.4	844.9	878.2	910.9	959.1	975.5
FIXED INVESTMENT.....	640.3	681.7	701.8	727.2	757.0	782.6	813.5	844.7	879.0	921.8	962.9
NONRESIDENTIAL.....	445.1	491.4	515.2	530.5	552.5	579.4	609.1	637.4	664.1	695.6	719.6
STRUCTURES.....	125.5	127.4	131.4	135.0	139.3	144.4	155.5	165.5	175.5	187.1	197.3
EQUIPMENT.....	319.6	364.1	383.8	395.5	413.2	433.0	453.6	471.9	488.6	508.5	522.3
RESIDENTIAL.....	195.2	190.3	186.6	196.7	204.5	203.2	204.4	207.3	214.9	225.4	223.3
CHANGE IN INVENTORIES*.....	34.4	40.3	23.8	28.2	33.7	31.8	31.4	33.5	31.9	38.0	32.6
FARM.....	-2.5	3.8	-1.5	5.1	5.1	5.6	5.6	5.6	5.6	5.6	5.6
NONFARM.....	36.9	36.5	25.2	23.1	28.5	26.2	25.8	27.9	26.3	32.4	27.0
NEW AUTOS.....	5.5	-1.1	2.2	2.1	2.3	2.2	2.3	2.5	2.1	2.5	2.2
OTHER.....	31.4	37.6	23.1	21.0	26.2	24.0	23.5	25.4	24.2	29.9	24.8
NET EXPORTS*.....	-128.9	-90.8	-71.9	-54.3	-39.9	-29.3	-24.0	-22.3	-13.7	-6.2	15.6
EXPORTS.....	427.9	503.8	549.0	582.6	613.6	630.8	666.1	664.5	687.4	715.6	744.3
NONAG MERCHANDISE.....	265.2	305.2	338.3	363.8	382.4	392.4	400.3	409.3	421.2	435.5	450.1
AG MERCHANDISE.....	34.9	41.4	46.0	50.0	53.5	55.9	57.8	59.8	62.1	64.9	67.7
SERVICES.....	147.7	157.3	164.7	168.8	177.5	182.5	188.1	195.5	204.1	215.3	226.6
IMPORTS.....	556.7	593.8	620.9	636.9	653.4	660.0	670.1	686.8	701.1	721.9	728.7
NONPETRO MERCHANDISE...	361.0	374.3	388.2	397.6	406.7	408.1	413.8	425.3	435.3	450.1	453.8
PETRO & PRODUCTS.....	77.9	85.8	89.1	92.0	95.6	98.8	102.2	105.6	109.1	113.1	116.2
SERVICE.....	117.8	133.8	143.6	147.4	151.1	153.0	154.1	155.9	156.7	158.7	158.6
GOVERNMENT PURCHASES OF GOODS & SERVICES.....	780.2	784.0	803.2	808.2	815.8	822.5	829.3	836.5	844.1	853.1	859.3
FEDERAL.....	339.0	331.3	343.0	340.5	340.7	340.8	340.8	340.9	341.1	341.2	341.4
DEFENSE.....	264.9	261.1	259.0	259.1	259.2	259.2	259.3	259.3	259.4	259.5	259.6
NONDEFENSE.....	74.1	70.2	84.0	81.5	81.5	81.6	81.6	81.6	81.7	81.7	81.8
STATE & LOCAL.....	441.2	452.7	460.2	467.7	475.1	481.7	488.4	495.5	503.1	511.9	518.0
ADDENDUM:											
FINAL SALES (NIPA).....	3812.6	3961.6	4080.1	4180.1	4295.8	4404.7	4520.1	4634.9	4758.3	4896.4	5012.8
CONSUMPTION (MODEL DEF.).	2544.1	2613.9	2682.7	2740.3	2806.9	2876.1	2949.7	3027.2	3105.5	3188.0	3264.7
HH NET WORTH, EQUITIES**	3655.7	3313.3	3437.1	3833.7	4265.8	4841.0	5423.8	6468.2	7422.1	8142.5	9011.3

* Billions of 1982 Dollars
** Billions of Current Dollars

Alt #1: "Flexible Freeze"

FEDERAL RECEIPTS & EXPENDITURES
(Billions of dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
RECEIPTS.....	916.5	983.2	1053.6	1131.4	1214.8	1296.4	1384.8	1482.0	1584.9	1702.5	1808.9
PERSONAL TAX.....	405.6	417.9	447.4	483.4	522.7	563.1	607.5	655.5	706.5	764.1	822.1
CORPORATE PROFITS TAX.....	105.8	116.1	129.5	136.3	148.8	156.5	167.7	179.5	191.8	206.6	210.3
INDIRECT BUSINESS TAX.....	56.0	56.6	59.4	62.0	65.2	68.6	72.3	76.1	80.0	84.3	88.5
CONT FOR SOC INS.....	351.0	392.6	417.1	449.7	478.1	506.2	537.2	570.8	606.6	647.4	688.0
EXPENDITURES.....	1074.2	1120.3	1200.7	1266.6	1330.7	1392.8	1454.2	1514.9	1575.2	1647.5	1723.4
PURCHASES OF G&S.....	382.0	382.9	409.5	425.3	446.3	468.2	490.9	514.7	539.4	565.8	593.1
NATIONAL DEFENSE.....	295.3	296.9	306.8	320.8	336.8	353.6	370.7	388.7	407.4	427.4	448.2
EX COMPENSATION.....	186.4	183.8	189.2	198.4	208.5	218.7	229.4	240.5	251.7	263.4	275.4
COMPENSATION, MIL.....	35.7	37.4	38.6	40.1	42.1	44.2	46.3	48.6	51.1	53.8	56.7
COMPENSATION, CIV.....	73.2	75.8	79.1	82.2	86.2	90.5	94.9	99.6	104.7	110.2	116.1
NONDEFENSE.....	86.7	85.9	102.8	104.5	109.6	114.8	120.3	126.0	131.9	138.3	145.0
EX COMPENSATION & CCC.	47.9	53.0	54.6	57.0	59.7	62.5	65.4	68.4	71.4	74.6	77.8
COMPENSATION.....	42.1	44.3	45.7	47.5	49.8	52.3	54.9	57.6	60.5	63.8	67.2
CCC PURCHASES*.....	-1.4	-11.7	1.3	1.3	.0	.0	.0	.0	.0	.0	.0
TRANSFER PAYMENTS.....	414.2	440.1	471.5	499.6	527.1	554.6	583.5	612.5	643.2	684.8	730.9
TO PERSONS.....	402.0	429.0	460.0	487.3	514.2	540.9	569.1	597.3	627.2	667.7	712.6
UNEM BENEFITS.....	14.7	13.3	13.4	14.5	15.0	16.0	16.9	17.8	19.1	19.7	21.8
OTHER.....	387.3	415.7	446.6	472.9	499.2	524.9	552.2	579.6	608.1	648.0	690.8
TO FOREIGNERS.....	12.2	11.1	11.5	12.2	12.9	13.6	14.4	15.2	16.0	17.1	18.3
GRANTS-IN-AID.....	102.7	108.8	113.7	119.2	124.7	130.3	136.2	142.2	148.5	156.5	165.1
NET INTEREST PAID.....	143.0	155.0	170.4	183.5	196.2	201.8	206.4	208.5	207.1	203.6	197.4
TO FOREIGNERS.....	24.0	26.6	29.0	31.2	33.0	34.3	35.1	35.4	35.2	34.6	33.5
SUBSIDIES LESS CURRENT SURPLUS*.....	29.7	34.9	34.9	38.3	38.8	38.0	37.3	36.9	36.9	36.9	37.0
Less: WAGE ACCRUALS*.....	.1	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
DEFICIT, NIPA (-)*.....	-163.5	-142.7	-144.6	-140.8	-120.6	-103.0	-78.2	-41.8	-2.8	45.1	77.9
DEFICIT, UNI (-)*.....	-147.5	-157.0	-158.6	-153.8	-137.6	-120.0	-94.2	-57.8	-18.8	29.1	61.9
ADDENDA:											
YRLY COMP, CIVILIAN.....	26.4	27.6	28.5	29.6	31.0	32.6	34.2	35.9	37.7	39.7	41.9
EMPLOYMENT, CIVILIAN....	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
YRLY COMP, MILITARY.....	32.4	33.5	35.0	36.4	38.2	40.1	42.0	44.1	46.3	48.8	51.4
EMPLOYMENT, MILITARY....	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3

* BILLIONS OF DOLLARS (FY)

Alt #1: "Flexible Freeze"

MONEY, RESERVES, & INTEREST RATES

	YEAR OVER YEAR % CH										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
-- MONETARY MEASURES (% ch) --											
MONEY SUPPLY (M1).....	11.6	4.8	5.4	6.8	7.5	7.8	7.8	7.3	7.8	7.2	7.4
CURRENCY.....	8.3	8.7	6.2	5.2	5.4	5.6	5.8	5.7	5.6	5.7	5.4
CHECKABLE DEPOSITS.....	12.8	3.4	5.1	7.5	8.3	8.6	8.6	7.8	8.5	7.7	8.1
NONBORROWED RES + EX. CR...	14.9	4.9	5.3	7.8	8.4	8.9	8.6	7.9	8.8	7.6	8.4
FREE RES. + EX. CREDIT. *..	.5	.3	.4	.7	.8	1.2	1.3	1.5	1.9	1.9	2.5
-- INTEREST RATES (%) --											
FEDERAL FUNDS RATE.....	6.7	7.5	8.0	7.4	7.0	6.4	6.1	5.9	5.4	5.5	5.0
TREASURY BILL RATE.....	5.8	6.6	7.1	6.7	6.3	5.8	5.6	5.4	5.0	5.1	4.7
PRIME RATE.....	8.2	9.3	10.0	9.3	8.9	8.3	8.0	7.8	7.3	7.4	6.8
DISCOUNT RATE.....	5.7	6.0	6.3	5.9	5.6	5.2	4.9	4.8	4.5	4.5	4.2
YIELD ON 10-YR GOV'TS.....	8.4	9.0	9.4	9.2	9.1	8.8	8.5	8.3	7.9	7.8	7.4
YIELD ON 30-YR GOV'TS.....	8.6	9.2	9.6	9.4	9.4	9.1	8.8	8.6	8.2	8.2	7.8
YIELD ON SEASONED AAA CORPS	9.4	10.0	10.4	10.1	10.1	9.8	9.5	9.2	8.8	8.7	8.4
MORTGAGE RATE (SECONDARY)..	10.2	10.6	11.0	10.7	10.6	10.3	9.9	9.6	9.2	9.1	8.7
-- RENTAL RATES (%) --											
NEW AUTOS.....	20.5	21.4	21.8	21.5	21.4	21.0	20.5	19.9	19.6	19.3	19.0
OTHER CONSUMER DURABLES....	26.3	26.8	26.7	26.1	25.6	25.0	24.5	24.1	23.7	23.7	23.5
SINGLE FAMILY HOUSING.....	11.3	11.9	11.8	11.1	10.7	10.4	10.2	10.0	9.8	9.7	9.5
MULTI-FAMILY HOUSING.....	14.3	14.6	14.7	14.1	13.9	13.7	13.4	13.1	12.8	12.7	12.4
PRODUCERS' DUR. EQUIPMENT..	23.2	23.0	22.8	22.2	21.9	21.9	21.6	21.4	21.2	21.4	21.5
NONRESIDENTIAL STRUCTURES..	22.1	22.9	23.6	23.0	22.8	22.3	21.5	20.9	20.4	20.3	20.0
NONFARM INVENTORIES.....	4.2	3.0	2.3	1.6	1.1	.4	.4	.5	.0	.1	-.5
-- REAL INTEREST RATES (%) --											
DIVIDEND PRICE RATIO.....	3.1	3.7	3.7	3.5	3.4	3.2	3.0	2.8	2.6	2.6	2.5
REAL CORPORATE BOND YIELD..	5.1	6.4	6.9	6.4	6.2	5.7	5.1	4.7	4.2	4.1	3.9
SPREAD:GOV'T BOND - T'BILL.	2.6	2.5	2.5	2.7	3.0	3.3	3.2	3.2	3.2	3.0	3.2
EFFECTIVE T-BILL RATE	6.1	6.9	7.6	7.0	6.7	6.1	5.9	5.7	5.3	5.4	4.9
EFFECTIVE FED FUNDS RATE	7.0	7.9	8.4	7.8	7.4	6.7	6.4	6.2	5.7	5.8	5.2

* Level, billions of $

Alt #1: "Flexible Freeze"

GROSS SAVING & INVESTMENT
(Billions of dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Gross Saving.....	560.4	643.1	670.3	734.1	817.9	891.8	987.7	1088.8	1201.4	1344.9	1462.9
Gross Private Saving.....	665.3	728.3	761.2	810.6	870.4	923.5	985.0	1044.5	1110.2	1202.1	1285.5
Personal Saving.....	104.2	142.7	161.0	180.1	191.4	184.9	174.4	163.8	154.5	161.6	172.5
Undistributed Profits....	47.4	58.3	72.4	77.5	91.6	95.9	105.2	114.0	123.3	134.8	126.8
IVA*	-18.0	-24.0	-30.0	-29.1	-32.7	-33.9	-33.3	-35.3	-37.6	-39.8	-43.0
CCadj.....	51.7	44.6	19.4	4.3	-2.9	-1.2	2.1	2.2	1.3	1.6	2.8
CCA with CCadj.....	480.0	506.7	538.3	577.8	623.0	677.8	736.6	799.9	868.7	943.9	1026.3
Federal Wage Accruals*...	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
S&L Wage Accruals*.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Government Surplus or Deficit (-), NIPA's.....	-104.8	-85.2	-90.9	-76.5	-52.5	-31.7	2.7	44.3	91.3	142.9	177.4
Federal.....	-157.8	-137.1	-147.1	-135.3	-115.9	-98.4	-69.6	-32.9	9.8	54.9	85.5
State & Local.....	52.9	51.9	56.2	58.8	63.4	66.7	72.1	77.2	81.5	87.9	91.9
Capital Grants Received By the United States (net)*.	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Gross Investment.....	552.3	628.1	655.3	719.1	802.9	876.8	972.7	1073.8	1186.4	1329.9	1447.9
Gross Pvt. Domestic Invest.	712.9	756.1	777.1	842.0	920.6	996.3	1085.3	1183.9	1290.0	1427.2	1523.1
Net Foreign Investment.....	-160.6	-128.0	-121.8	-122.9	-117.6	-119.5	-112.6	-110.1	-103.5	-97.2	-75.3
Net Exports.....	-123.0	-89.2	-80.1	-78.3	-70.2	-69.9	-61.5	-57.8	-50.6	-43.7	-21.6
Less Payments to Foreigners											
Federal Net Interest...	24.0	26.6	29.0	31.2	33.0	34.3	35.1	35.4	35.2	34.6	33.5
Federal Transfers.....	12.2	11.1	11.5	12.2	12.9	13.6	14.4	15.2	16.0	17.1	18.3
Personal Transfers.....	1.3	1.1	1.1	1.2	1.6	1.6	1.7	1.7	1.7	1.8	1.8
Statistical Discrepancy*...	-8.1	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0
ADDENDA:											
Federal Deficit % of GNP.**	-3.5	-2.8	-2.8	-2.5	-2.0	-1.6	-1.0	-.5	.1	.7	1.0

* Billions of Dollars
** Percent

Alternative #2: Temporary 17% Income Tax Surcharge

A. Fiscal Policy

1) Outlays are the same as in the baseline.

2) A 17% surcharge (that is, 1.17*baseline) is applied to both personal and corporate income tax rates in starting in 1990Q1. Starting in 1994Q1, the surcharge is phased out by 1997Q1.

B. Monetary Policy

Monetary policy is used to keep real GNP roughly along the baseline path. That is, the fiscal initiative is "fully accommodated".

Alt #2: Temporary 8.5% Inc Tax Surchg

MAJOR ECONOMIC INDICATORS

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
				YEAR OVER YEAR % CH							
Gross National Product (82$)											
%ch annual rate.....	5.0	3.2	2.2	2.1	3.7	2.1	2.9	2.1	2.5	3.5	2.0
Composition of Real GNP Growth											
Final Sales.....	3.0	4.4	2.2	2.0	3.2	2.4	2.8	2.1	2.7	3.3	2.1
Change in Inventories....	2.1	-1.2	.0	.1	.5	-.2	.0	.1	-.2	.2	-.1
--- INDICATORS OF REAL ACTIVITY ---											
Housing Starts (pvt).....1633.9		1472.6	1347.6	1453.8	1522.1	1322.1	1300.9	1193.6	1164.3	1271.4	1113.1
Auto Sales.....	10.3	10.5	10.2	10.0	10.8	11.3	11.8	12.5	12.7	13.5	13.7
Domestics.....	7.1	7.5	7.3	7.2	7.7	8.1	8.5	8.9	9.1	9.6	9.8
Imports.....	3.2	3.0	2.9	2.9	3.1	3.2	3.4	3.6	3.6	3.9	3.9
Industrial Production.....	129.8	136.7	139.9	142.2	148.8	152.8	156.4	160.9	163.1	169.2	173.1
Industrial Production (mfg)	134.6	142.2	145.9	148.5	156.1	160.6	164.8	170.0	172.5	179.6	184.2
Capacity Util. (mfg).....	81.0	83.2	83.9	83.8	85.6	84.9	85.2	85.1	84.1	85.0	84.9
Unemployment Rate (Civ)....	6.2	5.4	5.1	5.6	6.8	4.7	4.8	4.6	5.2	5.1	5.2
--- PRICES, PRODUCTIVITY & COSTS --											
GNP Deflator %c.....	3.1	3.4	3.8	3.9	4.8	5.2	5.2	5.4	4.8	4.9	4.9
CPI, (all urban) %c.....	4.5	4.3	4.8	4.4	5.4	5.5	5.4	5.5	5.0	5.2	5.3
PPI, (finished) %c.....	2.5	3.6	3.8	4.0	4.7	4.7	4.7	4.8	4.3	4.5	4.4
Exchange Rate (index).....	96.9	92.3	86.6	81.1	81.0	81.0	80.8	79.9	78.0	76.5	73.6
Price of Imported oil $/b..	18.1	15.7	17.0	17.6	18.2	18.9	19.5	20.2	20.9	21.6	22.4
Comp. per Manhour %c.....	2.8	4.3	5.6	5.5	6.3	6.7	6.8	7.0	6.7	6.6	6.6
Output per Hour %c.....	1.2	1.3	.7	1.8	2.3	1.7	2.2	1.5	2.2	2.1	1.3
Unit Labor Cost %c.....	1.5	3.0	4.9	3.7	3.9	4.9	4.5	5.4	4.3	4.4	5.3
--- MONEY AND INTEREST RATES ---											
Nonborrowed Reserves %c....	8.3	4.9	5.5	9.6	10.6	7.9	8.5	6.0	7.7	7.1	7.7
Money Supply (M1) %c.....	6.3	6.0	4.9	8.0	9.0	7.5	8.0	6.1	7.4	7.2	7.0
Prime Rate.....	8.2	9.3	10.0	8.6	8.3	8.1	7.9	8.5	8.3	8.7	8.5
Treasury Bill Rate (3m)....	5.8	6.6	7.2	6.1	5.8	5.7	5.5	6.1	5.9	6.1	6.0
Yield on 30 Year Gov'ts....	8.6	9.2	9.6	9.1	9.0	8.9	8.6	8.8	8.7	8.8	8.9
AAA Corporate Bond Yield...	9.4	10.0	10.4	9.9	9.7	9.6	9.3	9.4	9.3	9.4	9.5
--- INCOMES AND RELATED MEASURES --											
Corp Profits w/ivа & cccadj	3.9	6.7	2.0	-4.0	15.8	6.8	9.4	9.9	4.6	12.5	3.1
Corp. Profits After-tax %c*	5.7	19.6	8.9	-3.2	17.4	2.8	12.6	7.5	11.0	16.3	-.3
Real Pers. Disp. Income %c.	1.7	3.5	2.6	-.4	2.7	2.2	2.1	3.2	2.4	3.4	2.8
Personal Saving Rate.....	3.2	4.1	4.4	3.6	3.5	3.1	2.6	2.6	2.8	3.1	3.6
Federal Deficit (FY, UNI)..	-147.5	-157.0	-158.4	-99.5	-51.2	-24.7	-9.0	10.1	-5.6	4.4	-4.2

* % chg from year-earlier period

Alt #2: Temporary 8.0% Inc Tax Surchg

GROSS NATIONAL PRODUCT
(Billions of 1982 Dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
GROSS NATIONAL PRODUCT.....	3847.0	4002.1	4104.7	4172.6	4324.7	4438.5	4546.8	4674.9	4765.5	4926.0	5050.3
PERS. CONSUMPTION EXP'S....	2520.9	2585.8	2647.3	2662.2	2734.1	2806.5	2881.4	2973.7	3044.0	3138.4	3212.1
DURABLE GOODS.....	390.9	409.9	426.8	428.8	460.8	485.6	510.6	543.7	561.4	595.9	617.7
NEW AUTOS.....	80.1	83.8	83.5	79.8	86.7	89.9	93.7	99.8	101.0	107.9	108.7
OTHER.....	310.9	326.1	343.3	349.8	374.0	395.8	416.8	443.9	460.4	488.0	509.0
NONDURABLE GOODS.....	890.5	891.0	898.5	901.5	919.3	939.0	959.6	984.7	1005.5	1030.6	1051.8
SERVICES.....	1239.5	1284.9	1322.0	1331.9	1354.1	1381.9	1411.2	1445.3	1477.1	1511.9	1542.6
GROSS PVT DOM INVESTMENT...	674.8	722.1	726.0	744.2	803.1	827.1	866.5	883.9	886.4	943.4	968.6
FIXED INVESTMENT.....	640.3	681.8	702.0	721.8	766.8	789.3	816.0	846.8	860.8	908.0	931.7
NONRESIDENTIAL.....	445.1	491.4	515.4	523.4	547.5	579.8	608.8	639.4	659.1	689.9	719.0
STRUCTURES.....	125.5	127.4	131.5	133.3	137.1	144.5	153.2	163.7	172.3	183.5	194.8
EQUIPMENT.....	319.6	364.1	383.9	390.1	410.5	435.3	455.6	475.8	486.8	506.5	524.2
RESIDENTIAL.....	195.2	190.3	186.6	198.4	219.3	209.6	207.3	207.4	201.7	218.0	212.7
CHANGE IN INVENTORIES*	34.4	40.3	24.0	22.5	36.3	37.8	38.4	37.1	25.6	35.4	36.9
FARM.....	-2.5	3.8	-1.5	5.8	5.1	5.5	5.6	5.6	5.6	5.6	5.5
NONFARM.....	36.9	36.5	25.4	17.4	31.2	32.3	24.8	31.4	20.0	29.9	31.4
NEW AUTOS.....	5.5	-1.1	2.2	1.7	2.4	2.6	2.1	2.9	1.9	2.2	2.8
OTHER.....	31.4	37.6	23.3	15.7	28.8	29.7	22.7	28.5	18.1	27.6	28.6
NET EXPORTS*.....	-128.9	-90.0	-72.4	-42.8	-30.4	-21.1	-14.9	-24.9	-15.7	-15.8	.0
EXPORTS.....	427.9	503.8	549.0	585.7	618.8	639.4	653.0	668.1	686.7	712.5	742.4
NONAG MERCHANDISE.....	245.2	305.2	338.3	364.6	385.5	396.9	403.4	410.4	419.7	432.6	447.9
AG MERCHANDISE.....	34.9	41.4	46.0	50.1	54.0	56.7	58.7	60.7	63.0	65.8	69.0
SERVICES.....	147.7	157.3	164.7	168.9	179.3	185.7	191.0	197.0	204.1	214.0	225.5
IMPORTS.....	556.7	593.8	621.3	626.4	649.2	660.4	668.0	693.0	702.4	728.3	742.4
NONPETRO MERCHANDISE...	361.0	374.3	388.5	390.8	405.8	410.3	412.5	428.8	432.8	450.6	459.4
PETRO & PRODUCTS.....	77.9	85.8	89.1	91.2	95.5	98.9	102.3	106.0	108.9	113.4	117.0
SERVICE.....	117.8	133.8	143.7	144.4	147.9	151.2	153.2	158.2	160.7	164.3	166.0
GOVERNMENT PURCHASES OF											
GOODS & SERVICES.....	780.2	784.2	803.8	809.0	817.9	825.9	833.9	842.2	850.9	860.0	869.6
FEDERAL.....	339.0	331.3	343.0	340.5	340.7	340.9	341.0	341.2	341.4	341.6	341.8
DEFENSE.....	264.9	261.1	259.0	259.1	259.2	259.3	259.4	259.5	259.6	259.7	259.9
NONDEFENSE.....	74.1	70.2	84.0	81.5	81.5	81.6	81.7	81.7	81.8	81.9	82.0
STATE & LOCAL.....	441.2	452.9	460.8	468.4	477.1	485.0	492.8	501.0	509.5	518.4	527.8
ADDENDUM:											
FINAL SALES (NIPA).....	3812.6	3961.8	4080.7	4150.2	4288.4	4400.7	4516.3	4637.8	4740.0	4890.5	5013.4
CONSUMPTION (MODEL DEF.).	2544.1	2614.0	2682.9	2718.0	2779.5	2852.3	2928.6	3017.1	3099.6	3189.8	3274.5
NH NET WORTH, EQUITIES**	3655.7	3313.1	3432.8	3874.2	4312.8	4936.7	5797.3	6595.1	7420.0	8109.3	8642.8

* Billions of 1982 Dollars
** Billions of Current Dollars

Alt #2: Temporary 8.5% Inc Tax Surchg

FEDERAL RECEIPTS & EXPENDITURES
(Billions of dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
RECEIPTS.....	916.5	983.2	1053.9	1212.5	1319.4	1416.1	1520.6	1605.4	1678.3	1772.9	1871.3
PERSONAL TAX.....	405.6	417.9	447.6	561.7	610.6	662.0	716.7	746.6	776.1	805.0	848.6
CORPORATE PROFITS TAX.....	105.8	116.2	129.7	142.9	166.4	176.8	190.1	202.7	207.0	223.8	228.3
INDIRECT BUSINESS TAX.....	54.0	56.7	59.5	61.4	64.8	68.7	72.8	77.4	81.8	86.7	91.6
CONT FOR SOC INS.....	351.0	392.6	417.2	446.5	477.5	508.6	541.0	578.7	613.4	657.4	702.8
EXPENDITURES.....	1074.2	1120.3	1201.3	1273.2	1343.9	1421.0	1500.1	1582.1	1668.2	1757.2	1856.2
PURCHASES OF G&S.....	382.0	382.9	409.6	425.1	447.6	472.4	497.9	525.7	553.3	582.4	614.0
NATIONAL DEFENSE.....	295.3	296.9	306.8	320.6	337.7	356.6	376.0	397.1	418.1	440.2	464.1
EX COMPENSATION.....	186.4	183.8	189.2	198.2	209.0	220.7	232.8	245.9	258.5	271.6	285.6
COMPENSATION, MIL.....	35.7	37.4	38.6	40.1	42.2	44.6	47.0	49.6	52.4	55.3	58.6
COMPENSATION, CIV.....	73.2	75.8	79.1	82.2	86.5	91.3	96.2	101.6	107.2	113.2	119.9
NONDEFENSE.....	86.7	85.9	102.8	104.5	109.9	115.8	121.9	128.6	135.2	142.3	149.9
EX COMPENSATION & CCC.	47.9	53.0	54.6	57.0	59.9	63.0	66.3	69.8	73.2	76.7	80.5
COMPENSATION.....	42.1	44.3	45.7	47.5	50.0	52.8	55.6	58.8	62.0	65.5	69.4
CCC PURCHASES*.....	-1.4	-11.7	1.3	1.3	.0	.0	.0	.0	.0	.0	.0
TRANSFER PAYMENTS.....	414.2	440.1	471.9	508.8	545.4	587.4	632.8	677.8	726.9	776.9	833.1
TO PERSONS.....	402.0	429.0	460.2	496.2	531.8	572.8	617.1	661.0	708.9	757.6	812.3
UNEM BENEFITS.....	14.7	13.3	13.3	15.2	13.9	14.4	15.6	15.8	18.9	19.4	21.2
OTHER.....	387.3	415.7	446.9	481.0	518.0	558.4	601.6	645.2	690.0	738.2	791.1
TO FOREIGNERS.....	12.2	11.1	11.7	12.6	13.6	14.6	15.7	16.8	18.1	19.4	20.8
GRANTS-IN-AID.....	102.7	108.8	113.8	120.5	128.0	136.7	145.8	155.3	164.6	174.5	185.1
NET INTEREST PAID.....	143.0	155.0	170.5	179.8	186.6	186.2	185.9	185.7	185.5	185.4	185.8
TO FOREIGNERS.....	24.0	26.6	29.0	30.6	31.3	31.6	31.6	31.6	31.5	31.5	31.6
SUBSIDIES LESS CURRENT SURPLUS*.....	29.7	34.9	34.9	38.3	38.8	38.3	37.8	37.6	37.8	37.9	38.1
Less: WAGE ACCRUALS*.....	.1	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
DEFICIT, NIPA (-)*.....	-163.5	-142.7	-144.6	-86.5	-34.2	-7.7	11.0	26.1	10.4	20.4	11.8
DEFICIT, UNI (-)*.....	-147.5	-157.0	-158.4	-99.5	-51.2	-24.7	-5.0	10.1	-5.6	4.4	-4.2
ADDENDA:											
YRLY COMP, CIVILIAN.....	26.4	27.6	28.5	29.6	31.1	32.9	34.7	36.6	38.6	40.8	43.2
EMPLOYMENT, CIVILIAN....	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
YRLY COMP, MILITARY.....	32.4	33.5	35.0	36.4	38.3	40.4	42.6	45.0	47.4	50.1	53.1
EMPLOYMENT, MILITARY....	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3

* BILLIONS OF DOLLARS (FY)

Alt #2: Temporary 8.5% Inc Tax Surchg

MONEY, RESERVES, & INTEREST RATES

	YEAR OVER YEAR % CH										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
-- MONETARY MEASURES (% ch) --											
MONEY SUPPLY (M1).....	11.6	4.8	5.3	7.1	8.6	8.1	7.8	6.9	6.8	7.4	7.0
CURRENCY.....	8.3	8.7	6.2	4.5	5.9	6.4	6.3	6.7	6.0	6.3	6.1
CHECKABLE DEPOSITS.....	12.8	3.4	5.0	8.0	9.6	8.6	8.3	6.9	7.1	7.8	7.3
NONBORROWED RES + EX. CR...	14.9	4.9	5.2	8.9	9.6	8.6	8.4	6.5	7.3	7.5	7.6
FREE RES. + EX. CREDIT. *..	.5	.3	.4	1.0	1.1	1.2	1.3	1.1	1.4	1.2	1.5
-- INTEREST RATES (%) --											
FEDERAL FUNDS RATE.....	6.7	7.5	8.0	6.7	6.4	6.2	6.1	6.7	6.4	6.8	6.6
TREASURY BILL RATE.....	5.8	6.6	7.2	6.1	5.8	5.7	5.5	6.1	5.9	6.1	6.0
PRIME RATE.....	8.2	9.3	10.0	8.6	8.3	8.1	7.9	8.5	8.3	8.7	8.5
DISCOUNT RATE.....	5.7	6.0	6.3	5.5	5.2	5.0	4.8	5.2	5.1	5.3	5.3
YIELD ON 10-YR GOV'TS.....	8.4	9.0	9.5	8.8	8.8	8.6	8.3	8.5	8.4	8.5	8.6
YIELD ON 30-YR GOV'TS.....	8.6	9.2	9.6	9.1	9.0	8.9	8.6	8.8	8.7	8.8	8.9
YIELD ON SEASONED AAA CORPS	9.4	10.0	10.4	9.9	9.7	9.6	9.3	9.4	9.3	9.4	9.5
MORTGAGE RATE (SECONDARY)..	10.2	10.6	11.0	10.4	10.2	10.0	9.7	9.9	9.7	9.9	10.0
-- RENTAL RATES (%) --											
NEW AUTOS.....	20.5	21.4	21.8	21.2	21.0	20.6	20.0	19.7	19.5	19.6	19.7
OTHER CONSUMER DURABLES....	26.3	26.8	26.7	25.8	25.2	24.6	24.1	23.9	23.8	23.9	24.1
SINGLE FAMILY HOUSING.....	11.3	11.9	11.8	10.4	9.9	9.6	9.4	9.6	9.7	10.0	10.2
MULTI-FAMILY HOUSING.....	14.3	14.6	14.7	13.7	13.4	13.1	12.8	13.1	13.1	13.3	13.5
PRODUCERS' DUR. EQUIPMENT..	23.2	23.0	22.9	22.2	21.7	21.7	21.4	21.3	21.3	21.6	21.9
NONRESIDENTIAL STRUCTURES..	22.1	22.9	23.6	23.8	23.2	22.7	21.8	21.3	20.7	20.5	20.5
NONFARM INVENTORIES.....	4.2	3.0	2.4	.6	-.1	-.6	-.6	.3	.3	.7	.4
-- REAL INTEREST RATES (%) --											
DIVIDEND PRICE RATIO.....	3.1	3.7	3.7	3.4	3.3	3.1	2.8	2.7	2.6	2.6	2.7
REAL CORPORATE BOND YIELD..	5.1	6.4	7.0	6.2	5.7	5.3	4.7	4.5	4.3	4.3	4.4
SPREAD:GOV'T BOND - T'BILL.	2.6	2.5	2.5	3.0	3.2	3.2	3.1	2.7	2.8	2.7	2.9
EFFECTIVE T-BILL RATE	6.1	6.9	7.6	6.4	6.1	6.0	5.8	6.4	6.2	6.5	6.3
EFFECTIVE FED FUNDS RATE	7.0	7.9	8.5	7.0	6.7	6.5	6.3	7.0	6.7	7.1	7.0

* Level, billions of $

Alt #2: Temporary 6.5% Inc Tax Surchg

GROSS SAVING & INVESTMENT
(Billions of dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Gross Saving.....	560.4	643.1	670.3	732.3	848.7	929.5	1022.9	1128.5	1207.7	1361.7	1492.8
Gross Private Saving.....	665.3	728.4	762.0	740.6	811.6	867.7	929.4	1022.9	1114.3	1251.6	1381.5
Personal Saving.....	104.2	142.7	161.6	132.4	143.3	136.6	124.9	135.4	151.0	185.3	229.9
Undistributed Profits....	47.4	58.4	72.6	55.6	84.1	89.3	97.6	115.8	120.2	148.9	148.8
IVA*	-18.0	-24.0	-29.9	-29.3	-35.5	-36.5	-36.3	-39.3	-39.7	-44.0	-48.4
CCadj	51.7	44.6	19.4	4.2	-4.9	-6.0	-4.5	-6.8	-8.5	-9.5	-10.6
CCA with CCadj.....	480.0	506.7	538.4	577.6	624.6	684.4	747.7	817.8	891.3	971.0	1061.8
Federal Wage Accruals*...	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
S&L Wage Accruals*.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Government Surplus or Deficit (-), NIPA's.....	-104.8	-85.3	-91.7	-8.3	37.1	61.9	98.4	105.6	93.4	110.1	111.4
Federal.....	-157.8	-137.0	-147.4	-60.8	-24.5	-4.9	20.5	23.2	10.1	15.6	15.1
State & Local.....	52.9	51.7	55.7	52.5	61.6	66.8	72.9	82.3	83.3	94.4	96.2
Capital Grants Received By the United States (net)*.	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Gross Investment.....	552.3	628.1	655.3	717.3	833.7	914.5	1007.9	1113.5	1192.7	1346.7	1477.8
Gross Pvt. Domestic Invest.	712.9	756.2	777.6	830.1	942.0	1023.6	1104.1	1217.6	1284.7	1444.8	1565.3
Net Foreign Investment.....	-160.6	-128.0	-122.3	-112.8	-108.3	-109.0	-96.2	-104.0	-92.0	-98.1	-87.4
Net Exports.....	-123.0	-89.2	-80.5	-68.4	-61.8	-61.2	-47.3	-53.9	-40.7	-45.4	-33.3
Less Payments to Foreigners											
Federal Net Interest...	24.0	26.6	29.0	30.6	31.3	31.6	31.6	31.6	31.5	31.5	31.6
Federal Transfers.....	12.2	11.1	11.7	12.6	13.6	14.6	15.7	16.8	18.1	19.4	20.8
Personal Transfers.....	1.3	1.1	1.1	1.2	1.6	1.6	1.7	1.7	1.7	1.8	1.8
Statistical Discrepancy*...	-8.1	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0
ADDENDA:											
Federal Deficit % of GNP.**	-3.5	-2.8	-2.8	-1.1	-.4	-.1	.3	.3	*	.2	.2

* Billions of Dollars
** Percent

Alternative #3: Taxes & Spending Cuts

A. Fiscal Policy

1) An 8.5% (or 1.085*baseline) surcharge is imposed on both corporate and personal income tax rates in 1990Q1 and rescinded in 1992Q1. This allows two years to set up the adminstrative machinery for a VAT.

2) A 2% VAT is introduced in 1992Q1

3) COLAs for transfer payments are reduced in 1992 by the amount of the impact that the VAT has on the CPI.

4) Real spending assumptions of the flexible freeze are imposed.

B. Monetary Policy

Monetary policy is used to keep real GNP roughly along the baseline path.

Alt #3: 8.5% Surchg then 2% VAT; Flex Freeze

MAJOR ECONOMIC INDICATORS

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
				YEAR OVER YEAR % CH							
Gross National Product (BEA)											
%ch annual rate.....	5.0	3.2	2.1	2.4	3.5	2.8	3.0	2.2	2.3	2.7	1.6
Composition of Real GNP Growth											
Final Sales.....	3.0	4.4	2.2	2.3	3.2	2.2	2.9	2.2	2.4	2.6	1.8
Change in Inventories....	2.1	-1.2	.0	.2	.3	-.3	.1	.0	-.1	.1	-.2
--- INDICATORS OF REAL ACTIVITY ---											
Housing Starts (pvt).....1633.9		1471.9	1346.5	1432.1	1477.9	1275.7	1293.8	1229.7	1242.0	1290.4	1173.4
Auto Sales.....	10.3	10.5	10.2	10.3	10.9	11.2	11.8	12.3	12.4	12.8	12.9
Domestics.....	7.1	7.5	7.3	7.4	7.8	8.0	8.4	8.8	8.9	9.2	9.2
Imports.....	3.2	3.0	2.9	2.9	3.1	3.2	3.4	3.5	3.6	3.7	3.7
Industrial Production.....	129.8	136.7	139.9	142.8	148.8	152.5	156.6	160.8	163.8	168.4	171.2
Industrial Production (mfg)	134.6	142.2	145.8	149.2	156.1	160.3	165.1	169.9	173.4	178.7	182.0
Capacity Util. (mfg).....	81.0	83.2	83.8	84.2	85.5	84.7	85.3	85.0	84.4	84.5	83.8
Unemployment Rate (Civ)....	6.2	5.4	5.1	5.5	5.1	5.1	5.3	5.2	5.6	5.7	6.1
--- PRICES, PRODUCTIVITY & COSTS --											
GNP Deflator %c.....	3.1	3.4	3.8	3.9	4.5	6.2	5.8	4.8	4.4	4.2	4.0
CPI, (all urban) %c.....	4.5	4.3	4.8	4.4	5.1	7.3	5.1	5.0	4.6	4.5	4.3
PPI, (finished) %c.....	2.5	3.6	3.8	4.0	4.5	4.6	4.5	4.3	3.9	3.8	3.5
Exchange Rate (index).....	96.9	92.3	86.6	81.5	81.3	80.8	81.6	80.3	79.1	78.3	76.5
Price of Imported oil $/b..	18.1	15.7	17.0	17.6	18.2	18.9	19.5	20.2	20.9	21.6	22.4
Comp. per Manhour %c.....	2.8	4.3	5.6	5.5	6.1	6.2	6.5	6.5	6.2	6.0	5.8
Output per Hour %c.....	1.2	1.3	.7	1.8	2.3	1.7	2.3	1.7	2.0	1.9	1.4
Unit Labor Cost %c.....	1.5	3.0	4.9	3.7	3.7	4.4	4.1	4.7	4.1	4.0	4.3
--- MONEY AND INTEREST RATES ---											
Nonborrowed Reserves %c....	8.3	4.9	5.6	9.5	10.6	10.5	7.6	7.6	8.0	7.7	8.1
Money Supply (M1) %c.....	6.3	6.0	4.9	8.0	9.0	9.5	7.4	7.0	7.2	7.0	7.0
Prime Rate.....	8.2	9.3	10.0	8.8	8.2	7.6	7.5	7.5	7.1	7.0	6.5
Treasury Bill Rate (3m)....	5.8	6.6	7.2	6.2	5.8	5.3	5.3	5.2	4.9	4.8	4.4
Yield on 30 Year Gov'ts....	8.6	9.2	9.6	9.2	9.0	8.7	8.4	8.3	8.0	7.9	7.6
AAA Corporate Bond Yield...	9.4	10.0	10.4	9.9	9.7	9.3	9.0	8.8	8.6	8.5	8.2
--- INCOMES AND RELATED MEASURES --											
Corp Profits w/ivs & cccadj	3.9	6.7	1.9	-1.6	12.7	.2	11.4	7.6	4.7	7.6	-.3
Corp. Profits After-tax %c*	5.7	19.4	8.9	1.8	15.0	2.8	12.3	4.2	5.3	5.7	-4.3
Real Pers. Disp. Income %c.	1.7	3.5	2.6	.8	2.5	1.7	1.9	2.2	1.8	2.3	1.9
Personal Saving Rate.....	3.2	4.1	4.3	3.9	3.9	3.4	3.0	2.6	2.3	2.3	2.4
Federal Deficit (FY, UMI)..-147.5		-157.0	-158.6	-123.8	-84.7	-49.2	-21.7	26.9	65.6	111.7	148.8

* % chg from year-earlier period

Alt #3: 8.5% Surchg then 2% VAT; Flex Freeze

GROSS NATIONAL PRODUCT
(Billions of 1982 Dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
GROSS NATIONAL PRODUCT	3847.0	4001.9	4103.5	4187.0	4329.4	4437.0	4550.3	4668.6	4768.8	4899.8	4999.0
PERS. CONSUMPTION EXP'S	2520.9	2585.8	2646.8	2677.6	2746.3	2807.7	2875.0	2949.5	3011.8	3082.5	3136.3
DURABLE GOODS	390.9	409.9	426.5	435.9	464.2	483.5	506.7	532.1	546.6	567.6	578.5
NEW AUTOS	80.1	83.8	83.4	82.2	88.0	89.3	93.3	96.5	96.1	99.1	98.0
OTHER	310.9	326.1	343.1	353.8	376.2	394.2	413.4	435.6	450.4	468.6	480.5
NONDURABLE GOODS	890.5	891.0	898.4	905.0	922.6	938.0	955.9	976.5	995.5	1015.9	1032.7
SERVICES	1239.5	1284.9	1321.9	1336.6	1359.6	1386.3	1412.4	1440.9	1469.7	1499.1	1525.0
GROSS PVT DOM INVESTMENT	674.8	722.1	725.4	748.2	799.6	821.1	867.1	886.7	908.5	952.6	971.5
FIXED INVESTMENT	640.3	681.7	701.7	723.4	764.2	785.9	817.8	852.2	880.5	920.1	940.8
NONRESIDENTIAL	445.1	491.4	515.2	526.3	550.4	581.6	612.9	644.9	669.9	698.8	722.4
STRUCTURES	125.5	127.4	131.4	134.0	138.2	146.2	156.2	168.0	178.6	190.0	200.0
EQUIPMENT	319.6	364.1	383.7	392.3	412.2	435.4	456.7	476.9	491.4	508.8	522.5
RESIDENTIAL	195.2	190.3	186.5	197.2	213.8	204.3	204.9	207.3	210.5	221.3	218.4
CHANGE IN INVENTORIES*	34.4	40.3	23.8	24.8	35.4	35.2	29.3	34.5	28.1	32.5	30.7
FARM	-2.5	3.8	-1.5	5.0	5.1	5.5	5.6	5.7	5.6	5.6	5.6
NONFARM	36.9	36.5	25.2	19.8	30.3	29.6	23.7	28.9	22.5	26.9	25.0
NEW AUTOS	5.5	-1.1	2.2	1.9	2.3	2.4	2.1	2.7	2.1	2.3	2.4
OTHER	31.4	37.6	23.1	17.9	28.0	27.2	21.6	26.2	20.4	24.6	22.7
NET EXPORTS*	-128.9	-90.0	-72.0	-47.0	-32.3	-14.5	-1.4	-4.4	4.0	11.3	31.7
EXPORTS	427.9	503.8	549.0	583.3	617.4	637.7	653.1	668.1	687.3	712.6	739.8
NONAG MERCHANDISE	245.2	305.2	338.3	364.3	384.8	396.2	403.6	410.4	420.6	433.0	447.3
AG MERCHANDISE	36.9	41.6	46.0	50.1	53.9	56.5	58.6	60.4	62.6	65.1	67.8
SERVICES	147.7	157.3	164.7	168.9	178.8	185.0	190.9	197.3	204.2	214.5	224.8
IMPORTS	556.7	593.8	621.0	630.3	649.8	652.2	654.5	672.5	683.3	701.3	708.2
NONPETRO MERCHANDISE	361.0	374.3	388.2	393.4	405.9	403.4	401.6	414.1	420.5	433.3	437.5
PETRO & PRODUCTS	77.9	85.8	89.1	91.5	95.6	98.8	102.1	105.5	108.4	112.8	114.8
SERVICE	117.8	133.8	143.7	145.4	148.2	150.0	150.8	152.9	154.4	156.0	155.8
GOVERNMENT PURCHASES OF GOODS & SERVICES	788.2	784.0	803.2	808.2	815.8	822.7	829.5	836.8	844.6	853.4	859.6
FEDERAL	339.0	331.3	343.0	340.5	340.7	341.1	341.2	341.3	341.4	341.6	341.7
DEFENSE	264.9	261.1	259.0	259.1	259.2	259.4	259.4	259.5	259.6	259.7	259.8
NONDEFENSE	74.1	70.2	84.0	81.5	81.5	81.7	81.7	81.8	81.8	81.9	81.9
STATE & LOCAL	441.2	452.7	460.2	467.7	475.1	481.6	488.4	495.5	503.0	511.8	517.9
ADDENDUM:											
FINAL SALES (NIPA)	3812.6	3961.6	4079.7	4162.2	4294.1	4401.9	4521.8	4634.1	4740.7	4867.3	4968.3
CONSUMPTION (MODEL DEF.)	2544.1	2613.9	2682.7	2727.0	2790.3	2857.6	2926.9	3003.0	3077.8	3153.7	3222.3
NW NET WORTH, EQUITIES**	3465.7	3313.3	3434.9	3874.0	4368.9	5093.9	6026.7	6979.7	8087.6	8782.7	9518.2

* Billions of 1982 Dollars
** Billions of Current Dollars

Alt #3: 8.5% Surchg then 2% VAT; Flex Freeze

FEDERAL RECEIPTS & EXPENDITURES
(Billions of dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
RECEIPTS.....	916.5	983.2	1053.4	1170.6	1266.8	1369.5	1464.3	1570.5	1669.9	1785.6	1883.6
PERSONAL TAX.....	405.6	417.9	447.4	522.2	566.4	564.7	610.3	660.6	710.2	764.5	818.6
CORPORATE PROFITS TAX.....	105.8	116.1	129.5	139.0	157.6	157.4	166.2	177.4	184.1	195.4	194.7
INDIRECT BUSINESS TAX.....	54.0	56.6	59.4	61.6	64.9	69.7	73.5	77.6	81.6	85.6	89.5
CONT FOR SOC INS.....	351.0	392.6	417.1	447.7	477.9	508.2	539.9	575.2	609.4	647.7	685.5
EXPENDITURES.....	1076.2	1120.3	1200.7	1264.4	1326.5	1396.7	1457.6	1517.9	1576.9	1644.1	1713.6
PURCHASES OF G&S.....	382.0	382.9	409.5	425.1	446.8	479.2	503.9	529.7	555.5	581.2	607.5
NATIONAL DEFENSE.....	295.3	296.9	306.8	320.6	337.1	361.8	380.6	400.2	419.7	439.2	459.2
EX COMPENSATION.....	186.4	183.8	189.1	198.3	208.6	224.5	236.2	248.3	260.0	271.4	282.8
COMPENSATION, MIL.....	35.7	37.4	38.6	40.1	42.1	45.0	47.4	49.8	52.4	55.1	57.9
COMPENSATION, CIV.....	73.2	75.8	79.1	82.2	86.3	92.3	97.1	102.1	107.4	112.8	118.5
NONDEFENSE.....	86.7	85.9	102.8	104.5	109.7	117.4	123.3	129.5	135.7	142.0	148.4
EX COMPENSATION & CCC.	47.9	53.0	54.6	57.0	59.8	64.1	67.2	70.5	73.6	76.7	79.8
COMPENSATION.....	42.1	44.3	45.7	47.5	49.9	53.3	56.1	59.0	62.1	65.3	68.6
CCC PURCHASES*.....	-1.4	-11.7	1.3	1.3	.0	.0	.0	.0	.0	.0	.0
TRANSFER PAYMENTS.....	414.2	440.1	471.5	500.0	527.3	558.5	589.8	620.3	652.8	694.4	739.7
TO PERSONS.....	402.0	429.0	460.0	487.8	514.4	544.6	575.1	604.8	636.3	676.9	721.1
UNEM BENEFITS.....	14.7	13.3	13.4	15.0	14.6	15.8	17.2	17.8	20.1	21.6	24.3
OTHER.....	387.3	415.7	446.6	472.8	499.8	528.8	557.9	587.0	616.2	655.3	696.8
TO FOREIGNERS.....	12.2	11.1	11.5	12.2	12.9	13.9	14.7	15.6	16.4	17.5	18.6
GRANTS-IN-AID.....	102.7	108.8	113.7	119.1	124.8	131.0	137.3	143.8	150.2	157.9	166.0
NET INTEREST PAID.....	143.0	155.0	170.5	181.2	187.2	189.4	188.7	186.1	180.6	172.8	162.6
TO FOREIGNERS.....	24.0	26.6	29.0	30.8	31.8	32.2	32.1	31.6	30.7	29.4	27.6
SUBSIDIES LESS CURRENT SURPLUS*.....	29.7	34.9	34.9	38.3	38.8	38.6	38.1	37.8	37.9	37.8	37.8
Less: WAGE ACCRUALS*.....	.1	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
DEFICIT, NIPA (-)*.....	-163.5	-142.7	-144.6	-110.8	-67.7	-32.2	-5.7	42.9	81.6	127.7	164.8
DEFICIT, UNI (-)*.....	-147.5	-157.0	-158.6	-123.8	-84.7	-49.2	-21.7	26.9	65.6	111.7	148.8
ADDENDA:											
YRLY COMP, CIVILIAN.....	26.4	27.6	28.5	29.6	31.1	33.2	34.9	36.8	38.7	40.7	42.7
EMPLOYMENT, CIVILIAN....	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
YRLY COMP, MILITARY.....	32.4	33.5	35.0	36.4	38.2	40.8	42.9	45.2	47.5	49.9	52.4
EMPLOYMENT, MILITARY....	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3

* BILLIONS OF DOLLARS (FY)

Alt #3: 8.5% Surchg thon 2% VAT; Flex Freeze

MONEY, RESERVES, & INTEREST RATES

	1987	1988	1989	YEAR OVER YEAR % CH 1990	1991	1992	1993	1994	1995	1996	1997
-- MONETARY MEASURES (% ch) --											
MONEY SUPPLY (M1).....	11.6	4.8	5.3	7.1	8.6	9.7	7.9	7.0	7.2	7.0	7.0
CURRENCY.....	8.3	8.7	6.2	4.8	5.7	7.4	6.0	6.0	5.5	5.3	5.0
CHECKABLE DEPOSITS.....	12.8	3.4	5.0	7.9	9.7	10.5	8.6	7.4	7.8	7.5	7.6
NONBORROWED RES + EX. CR...	14.9	4.9	5.2	8.7	9.9	10.8	8.5	7.5	8.0	7.6	8.0
FREE RES. + EX. CREDIT. *..	.5	.3	.4	.9	1.1	1.5	1.5	1.7	2.0	2.2	2.7
-- INTEREST RATES (%) --											
FEDERAL FUNDS RATE.....	6.7	7.5	8.0	6.9	6.3	5.7	5.7	5.6	5.3	5.2	4.7
TREASURY BILL RATE.....	5.8	6.6	7.2	6.2	5.8	5.3	5.3	5.2	4.9	4.8	4.6
PRIME RATE.....	8.2	9.3	10.0	8.8	8.2	7.6	7.5	7.5	7.1	7.0	6.5
DISCOUNT RATE.....	5.7	6.0	6.3	5.6	5.1	4.7	4.5	4.6	4.3	4.3	4.0
YIELD ON 10-YR GOV'TS.....	8.4	9.0	9.4	8.9	8.7	8.4	8.1	7.9	7.6	7.5	7.2
YIELD ON 30-YR GOV'TS.....	8.6	9.2	9.6	9.2	9.0	8.7	8.4	8.3	8.0	7.9	7.6
YIELD ON SEASONED AAA CORPS	9.4	10.8	10.4	9.9	9.7	9.3	9.0	8.8	8.6	8.5	8.2
MORTGAGE RATE (SECONDARY)..	10.2	10.6	11.0	10.5	10.2	9.8	9.4	9.2	8.9	8.8	8.6
-- RENTAL RATES (%) --											
NEW AUTOS.....	20.5	21.4	21.8	21.3	21.0	20.7	20.1	19.6	19.2	19.1	19.1
OTHER CONSUMER DURABLES....	26.3	26.8	26.7	25.9	25.3	24.7	24.2	23.8	23.6	23.6	23.5
SINGLE FAMILY HOUSING.....	11.3	11.9	11.8	10.7	10.1	10.1	9.8	9.7	9.5	9.6	9.5
MULTI-FAMILY HOUSING.....	14.3	14.6	14.7	13.9	13.4	13.2	12.9	12.7	12.5	12.5	12.3
PRODUCERS' DUR. EQUIPMENT..	23.2	23.0	22.9	22.1	21.7	21.4	21.1	20.9	20.8	20.9	21.1
NONRESIDENTIAL STRUCTURES..	22.1	22.9	23.6	23.3	22.7	21.3	20.6	20.0	19.6	19.5	19.4
NONFARM INVENTORIES.....	4.2	3.0	2.3	1.0	.2	-.6	-.3	-.1	-.2	.0	-.5
-- REAL INTEREST RATES (%) --											
DIVIDEND PRICE RATIO.....	3.1	3.7	3.7	3.5	3.3	3.0	2.8	2.6	2.4	2.4	2.4
REAL CORPORATE BOND YIELD..	5.1	6.4	7.0	6.3	5.7	5.2	4.6	4.2	3.9	3.8	3.7
SPREAD:GOV'T BOND - T'BILL.	2.6	2.5	2.5	2.9	3.3	3.4	3.2	3.1	3.1	3.0	3.2
EFFECTIVE T-BILL RATE	6.1	6.9	7.6	6.6	6.1	5.6	5.5	5.4	5.2	5.1	4.6
EFFECTIVE FED FUNDS RATE	7.0	7.9	8.5	7.2	6.6	6.0	5.9	5.9	5.5	5.4	4.8

* Level, billions of $

Alt #3: 8.5% Surchg then 2% VAT; Flex Freeze

GROSS SAVING & INVESTMENT
(Billions of dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Gross Saving.....	560.4	643.1	670.2	732.6	839.2	926.5	1037.0	1149.7	1253.1	1391.4	1507.0
Gross Private Saving.....	665.3	728.3	761.3	771.7	834.7	889.6	962.7	1024.7	1088.1	1177.5	1263.3
Personal Saving.....	104.2	142.7	161.1	153.6	160.5	153.4	144.2	134.2	125.5	132.1	148.3
Undistributed Profits....	47.6	58.3	72.3	65.4	88.8	99.2	102.5	108.3	106.7	113.0	97.7
IVA*.....	-18.0	-24.0	-29.9	-29.2	-34.3	-47.2	-34.7	-37.6	-37.0	-39.3	-40.8
CCadj.....	51.7	44.6	19.4	4.3	-3.9	-12.4	-8.5	-7.7	-6.3	-2.6	1.8
CCA with CCadj.....	480.0	506.7	538.3	577.6	623.7	696.6	759.2	827.4	899.2	974.3	1056.2
Federal Wage Accruals*...	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
S&L Wage Accruals*.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Government Surplus or Deficit (-), NIPA's.....	-104.8	-85.2	-91.1	-39.1	4.5	36.9	74.3	125.1	165.0	214.0	243.7
Federal.....	-157.8	-137.1	-147.3	-93.8	-57.8	-27.2	6.7	52.7	93.0	139.5	170.0
State & Local.....	52.9	51.9	56.1	54.8	62.3	64.1	67.6	72.4	72.0	74.5	73.7
Capital Grants Received By the United States (net)*.	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Gross Investment.....	552.3	628.1	655.2	717.6	824.2	911.5	1022.0	1134.7	1238.1	1376.4	1492.0
Gross Pvt. Domestic Invest.	712.9	756.1	776.9	834.0	934.9	1032.9	1121.7	1233.4	1328.5	1459.9	1557.4
Net Foreign Investment.....	-160.6	-128.0	-121.8	-116.4	-110.7	-121.4	-99.7	-100.7	-90.4	-83.5	-65.3
Net Exports.....	-123.0	-89.2	-80.1	-72.2	-64.3	-73.7	-51.3	-51.8	-41.5	-34.8	-17.3
Less Payments to Foreigners											
Federal Net Interest...	24.0	26.6	29.0	30.8	31.8	32.2	32.1	31.6	30.7	29.4	27.6
Federal Transfers.....	12.2	11.1	11.5	12.2	12.9	13.9	14.7	15.6	16.4	17.5	18.6
Personal Transfers.....	1.3	1.1	1.1	1.2	1.6	1.6	1.7	1.7	1.7	1.8	1.8
Statistical Discrepancy*...	-8.1	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0
ADDENDA:											
Federal Deficit % of GNP.**	-3.5	-2.8	-2.8	-1.7	-1.0	-.4	.1	.7	1.2	1.6	1.9

* Billions of Dollars
** Percent

Alternative #4: Taxes, Spending Cuts and ITC

A. Fiscal Policy

Same as #3 with two exceptions: 1) A 10% ITC on equipment is introduced in 1990Q1; 2) A 3% VAT (instead of 2%), introduced in 1992Q1, pays for the ITC.

B. Monetary Policy

Monetary policy is used to keep real GNP roughly along the baseline path.

Alt #6: 8.5% Surchg then 3% VAT; ITC & Flex Freeze

MAJOR ECONOMIC INDICATORS

	YEAR OVER YEAR % CH										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Gross National Product (BEA)											
%ch annual rate.....	5.0	3.2	2.1	2.7	4.0	1.2	2.9	2.1	3.1	2.9	2.1
Composition of Real GNP Growth											
Final Sales.....	3.0	4.4	2.2	2.5	3.7	1.7	2.7	2.1	3.0	2.8	2.3
Change in Inventories....	2.1	-1.2	.0	.2	.4	-.5	.2	-.1	.1	.1	-.2
--- INDICATORS OF REAL ACTIVITY ---											
Housing Starts (pvt).....1633.9		1471.9	1346.5	1449.3	1518.5	1202.8	1251.5	1167.9	1250.0	1278.3	1186.9
Auto Sales.....	10.3	10.5	10.2	10.4	11.2	11.3	11.8	12.4	12.8	13.4	13.6
Domestics.....	7.1	7.5	7.3	7.4	8.0	8.0	8.5	8.8	9.2	9.6	9.7
Imports.....	3.2	3.0	2.9	3.0	3.2	3.2	3.4	3.5	3.7	3.8	3.9
Industrial Production.....	129.8	136.7	139.9	143.2	150.3	153.2	157.2	161.2	165.4	171.1	176.7
Industrial Production (mfg)	134.6	142.2	145.8	149.6	157.8	161.1	165.7	170.3	175.2	181.9	186.8
Capacity Util. (mfg).....	81.0	83.2	83.8	84.3	86.2	84.5	84.6	83.7	83.3	83.4	82.5
Unemployment Rate (Civ)....	6.2	5.4	5.1	5.4	4.7	4.9	5.2	5.2	5.5	5.4	5.7
--- PRICES, PRODUCTIVITY & COSTS --											
GNP Deflator %c.....	3.1	3.4	3.8	3.9	4.6	7.0	5.0	4.6	4.2	4.0	4.0
CPI, (all urban) %c.....	4.5	4.3	4.8	4.4	5.2	8.4	5.1	4.9	4.4	4.4	4.3
PPI, (finished) %c.....	2.5	3.6	3.8	4.1	4.6	4.7	4.5	4.1	3.8	3.7	3.5
Exchange Rate (index).....	96.9	92.3	86.6	81.6	81.4	80.6	82.1	80.5	79.3	78.4	76.0
Price of Imported oil $/b..	18.1	15.7	17.0	17.6	18.2	18.9	19.5	20.2	20.9	21.6	22.4
Comp. per Manhour %c.....	2.8	4.3	5.6	5.5	6.3	6.4	6.7	6.6	6.2	6.0	6.0
Output per Hour %c.....	1.2	1.3	.7	1.9	2.3	1.4	2.3	1.9	2.4	1.9	1.6
Unit Labor Cost %c.....	1.5	3.0	4.9	3.6	3.8	4.9	4.2	4.6	3.7	4.1	4.2
--- MONEY AND INTEREST RATES ---											
Nonborrowed Reserves %c....	8.3	4.9	5.6	9.3	10.3	10.1	6.3	7.7	8.4	7.8	8.6
Money Supply (M1) %c.....	6.3	6.0	4.9	8.0	9.0	9.4	6.5	6.9	7.6	6.9	7.5
Prime Rate.....	8.2	9.3	10.0	8.9	8.5	8.1	8.4	8.2	7.8	7.8	7.1
Treasury Bill Rate (3m)....	5.8	6.6	7.2	6.3	6.0	5.7	5.9	5.8	5.5	5.5	4.9
Yield on 30 Year Gov'ts....	8.6	9.2	9.6	9.2	9.2	9.0	8.9	8.8	8.5	8.5	8.1
AAA Corporate Bond Yield...	9.4	10.0	10.4	9.9	9.8	9.6	9.5	9.4	9.2	9.2	8.9
--- INCOMES AND RELATED MEASURES --											
Corp Profits w/ivs & cccadj	3.9	6.7	1.9	-.7	14.4	-7.3	10.2	3.9	4.7	5.7	-4.1
Corp. Profits After-tax %c*	5.7	19.4	8.9	9.8	18.4	-3.6	10.3	1.2	6.8	1.7	-5.3
Real Pers. Disp. Income %c.	1.7	3.5	2.6	.9	2.8	1.0	1.9	2.1	2.1	2.7	2.2
Personal Saving Rate.....	3.2	4.1	4.3	3.9	3.9	3.4	3.3	3.3	3.1	3.2	3.4
Federal Deficit (FY, UNI)..-147.5		-157.0	-158.6	-129.3	-93.3	-45.0	-23.6	15.8	51.2	102.6	136.6

* % chg from year-earlier period

Alt #4: 8.5% Surchg then 3% VAT; ITC & Flex Freeze

GROSS NATIONAL PRODUCT
(Billions of 1982 Dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
GROSS NATIONAL PRODUCT.....	3847.0	4001.9	4103.5	4192.9	4355.6	4447.1	4553.0	4663.2	4782.2	4934.0	5047.8
PERS. CONSUMPTION EXP'S....	2520.9	2585.8	2646.8	2680.4	2757.4	2803.0	2858.3	2923.0	2990.4	3068.0	3129.4
DURABLE GOODS.....	390.9	409.9	426.5	437.7	470.9	481.4	500.1	521.5	540.5	565.9	581.7
NEW AUTOS.....	80.1	83.8	83.4	82.8	90.1	87.4	91.1	96.5	97.0	101.2	101.7
OTHER.....	310.9	326.1	343.1	354.8	380.8	394.0	408.9	427.0	443.4	464.6	480.1
NONDURABLE GOODS.....	890.5	891.0	898.4	905.6	926.9	936.3	951.0	968.9	988.3	1010.1	1028.1
SERVICES.....	1239.5	1284.9	1321.9	1337.1	1361.6	1385.2	1407.2	1432.6	1461.6	1492.1	1519.6
GROSS PVT DOM INVESTMENT...	674.8	722.1	725.4	752.8	822.1	839.7	866.5	909.1	948.3	1010.3	1033.4
FIXED INVESTMENT.....	640.3	681.7	701.7	727.5	783.2	804.8	840.9	877.2	919.5	972.6	1000.2
NONRESIDENTIAL.....	445.1	491.4	515.2	529.3	565.9	605.1	640.1	676.2	710.3	751.9	782.0
STRUCTURES.....	125.5	127.4	131.4	134.2	139.6	147.7	156.8	167.1	176.9	188.6	198.9
EQUIPMENT.....	319.6	364.1	383.7	395.1	426.3	457.4	483.3	509.2	533.4	563.3	583.1
RESIDENTIAL.....	195.2	190.3	186.5	198.2	217.3	199.7	200.8	201.0	209.2	220.5	218.2
CHANGE IN INVENTORIES*.....	34.4	40.3	23.8	25.3	38.9	34.9	25.6	31.9	28.9	37.9	33.3
FARM.....	-2.5	3.8	-1.5	5.0	5.1	5.6	5.6	5.7	5.6	5.6	5.6
NONFARM.....	36.9	36.5	25.2	20.2	33.8	29.3	20.0	26.2	23.2	32.3	27.7
NEW AUTOS.....	5.5	-1.1	2.2	1.8	2.4	2.5	2.1	2.6	2.1	2.6	2.3
OTHER.....	31.4	37.6	23.1	18.4	31.4	26.9	17.9	23.6	21.2	29.7	25.3
NET EXPORTS*.....	-128.9	-90.0	-72.0	-48.4	-39.7	-18.4	-1.5	-5.8	-1.0	2.2	25.2
EXPORTS.....	427.9	503.8	549.0	583.2	617.0	636.2	651.0	663.4	681.7	708.3	737.2
NONAG MERCHANDISE.....	265.2	305.2	338.3	364.3	384.5	395.4	402.3	407.5	417.5	430.7	446.0
AG MERCHANDISE.....	34.9	41.4	46.0	50.1	53.8	56.4	58.5	60.1	62.2	64.8	67.6
SERVICES.....	147.7	157.3	164.7	168.9	178.7	186.5	190.2	195.8	201.9	212.9	223.7
IMPORTS.....	556.7	593.8	621.0	631.6	656.8	654.6	652.4	669.2	682.7	706.2	712.0
NONPETRO MERCHANDISE...	361.0	374.3	388.2	396.4	411.3	404.4	398.3	410.1	419.0	436.6	440.0
PETRO & PRODUCTS.....	77.9	85.8	89.1	91.6	96.2	99.0	102.1	105.2	108.6	112.6	115.7
SERVICE.....	117.8	133.8	143.7	145.6	149.3	151.1	152.1	153.8	155.1	157.0	156.3
GOVERNMENT PURCHASES OF GOODS & SERVICES.....	780.2	784.0	803.2	808.2	815.8	822.8	829.6	836.9	844.5	853.5	859.7
FEDERAL.....	339.0	331.3	343.0	340.5	340.7	341.2	341.3	341.4	341.6	341.7	341.8
DEFENSE.....	264.9	261.1	259.0	259.1	259.2	259.5	259.5	259.6	259.7	259.8	259.9
NONDEFENSE.....	74.1	70.2	84.0	81.5	81.5	81.7	81.8	81.8	81.9	81.9	81.9
STATE & LOCAL.....	441.2	452.7	460.2	467.7	475.1	481.6	488.4	495.5	503.0	511.8	517.9
ADDENDUM:											
FINAL SALES (NIPA).....	3812.6	3961.6	4079.7	4167.6	4316.6	4412.2	4527.4	4631.3	4753.4	4896.1	5014.5
CONSUMPTION (MODEL DEF.).	2544.1	2613.9	2682.7	2728.1	2795.7	2856.9	2917.2	2985.3	3058.4	3136.5	3208.5
HH NET WORTH, EQUITIES**.	3655.7	3313.3	3434.9	3898.5	4410.8	5074.2	5853.9	6631.5	7536.7	8077.7	8711.0

* Billions of 1982 Dollars
** Billions of Current Dollars

Alt #4: 8.5% Surchg than 3% VAT; ITC & Flex Freeze

FEDERAL RECEIPTS & EXPENDITURES
(Billions of dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
RECEIPTS.....	916.5	983.2	1053.4	1163.1	1260.1	1390.2	1479.1	1577.8	1678.4	1794.4	1894.1
PERSONAL TAX.....	405.6	417.9	447.4	522.8	569.8	568.9	614.7	664.9	716.1	774.1	831.3
CORPORATE PROFITS TAX.....	105.8	116.1	129.5	130.5	144.6	134.9	136.3	139.3	141.6	146.0	136.5
INDIRECT BUSINESS TAX.....	54.0	56.6	59.4	61.6	65.1	70.4	74.1	77.9	81.8	85.9	89.9
CONT FOR SOC INS.....	351.0	392.6	417.1	448.2	480.6	511.0	542.0	576.2	611.5	652.3	692.4
EXPENDITURES.....	1076.2	1120.3	1200.7	1264.7	1326.3	1411.3	1475.9	1538.7	1597.9	1665.2	1735.0
PURCHASES OF GDS.....	382.0	382.9	409.5	425.1	447.2	484.9	510.3	535.9	561.0	586.4	612.7
NATIONAL DEFENSE.....	295.3	296.9	306.8	320.6	337.5	366.2	385.5	404.9	424.0	443.2	463.1
EX COMPENSATION.....	186.4	183.8	189.1	198.3	208.9	227.6	239.6	251.5	262.9	274.2	285.5
COMPENSATION, MIL.....	35.7	37.4	38.6	40.1	42.2	45.5	47.8	50.3	52.8	55.5	58.3
COMPENSATION, CIV.....	73.2	75.8	79.1	82.2	86.4	93.2	98.0	103.1	108.2	113.6	119.3
NONDEFENSE.....	86.7	85.9	102.8	104.5	109.8	118.7	124.8	130.9	137.0	143.2	149.6
EX COMPENSATION & CCC.	47.9	53.0	54.6	57.0	59.9	64.9	68.1	71.4	74.4	77.5	80.5
COMPENSATION.....	42.1	44.3	45.7	47.5	49.9	53.8	56.7	59.6	62.6	65.7	69.0
CCC PURCHASES*.....	-1.4	-11.7	1.3	1.3	.0	.0	.0	.0	.0	.0	.0
TRANSFER PAYMENTS.....	414.2	440.1	471.5	499.8	526.8	563.1	595.4	626.3	657.8	698.3	743.3
TO PERSONS.....	402.0	429.0	460.0	487.6	513.8	549.1	580.5	610.6	641.2	680.6	724.5
UNEM BENEFITS.....	14.7	13.3	13.4	14.9	13.6	15.3	17.0	18.1	20.1	20.7	23.0
OTHER.....	387.3	415.7	446.6	472.8	500.2	533.8	563.6	592.6	621.1	659.9	701.6
TO FOREIGNERS.....	12.2	11.1	11.5	12.2	12.9	14.0	14.9	15.7	16.6	17.6	18.8
GRANTS-IN-AID.....	102.7	108.8	113.7	119.1	124.9	131.4	137.8	144.1	150.3	157.9	166.0
NET INTEREST PAID.....	143.8	155.8	178.5	181.5	188.9	192.8	194.1	196.2	190.6	184.5	175.1
TO FOREIGNERS.....	24.0	26.6	29.0	30.8	32.1	32.7	33.0	33.0	32.4	31.3	29.7
SUBSIDIES LESS CURRENT SURPLUS*.....	29.7	36.9	34.9	38.3	38.8	38.9	38.5	38.2	38.2	38.1	38.0
Less: WAGE ACCRUALS*.....	.1	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
DEFICIT, NIPA (-)*.....	-163.5	-142.7	-144.6	-116.3	-76.3	-28.0	-7.6	31.8	67.2	118.6	152.6
DEFICIT, UMI (-)*.....	-147.5	-157.0	-158.6	-129.3	-93.3	-45.0	-23.6	15.8	51.2	102.6	136.6
ADDENDA:											
YRLY COMP, CIVILIAN.....	26.4	27.6	28.5	29.6	31.1	33.5	35.3	37.1	39.0	40.9	43.0
EMPLOYMENT, CIVILIAN....	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
YRLY COMP, MILITARY.....	32.4	33.5	35.0	36.4	38.2	41.2	43.4	45.6	47.9	50.2	52.8
EMPLOYMENT, MILITARY....	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3

* BILLIONS OF DOLLARS (FY)

Alt #4: 8.5% Surchg then 3% VAT; ITC & Flex Freeze

MONEY, RESERVES, & INTEREST RATES

	YEAR OVER YEAR % CH										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
-- MONETARY MEASURES (% ch) --											
MONEY SUPPLY (M1).....	11.6	4.8	5.3	7.1	8.6	9.7	7.3	6.6	7.5	6.9	7.4
CURRENCY.....	8.3	8.7	6.2	4.8	5.9	8.1	5.8	5.7	5.4	5.4	5.1
CHECKABLE DEPOSITS.....	12.8	3.4	5.0	7.9	9.6	10.3	7.8	6.9	8.2	7.5	8.1
NONBORROWED RES + EX. CR...	14.9	4.9	5.2	8.6	9.7	10.5	7.4	7.1	8.3	7.5	8.5
FREE RES. + EX. CREDIT. *..	.5	.3	.4	.9	1.0	1.3	1.0	1.4	1.6	1.8	2.4
-- INTEREST RATES (%) --											
FEDERAL FUNDS RATE.....	6.7	7.5	8.0	7.0	6.7	6.2	6.5	6.4	6.0	6.0	5.3
TREASURY BILL RATE.....	5.8	6.6	7.2	6.3	6.0	5.7	5.9	5.8	5.5	5.5	4.9
PRIME RATE.....	8.2	9.3	10.0	8.9	8.5	8.1	8.4	8.2	7.8	7.8	7.1
DISCOUNT RATE.....	5.7	6.0	6.3	5.7	5.3	5.1	5.0	5.1	4.8	4.8	4.4
YIELD ON 10-YR GOV'TS.....	8.4	9.0	9.4	8.9	8.9	8.7	8.6	8.5	8.2	8.1	7.8
YIELD ON 30-YR GOV'TS.....	8.6	9.2	9.6	9.2	9.2	9.0	8.9	8.8	8.5	8.5	8.1
YIELD ON SEASONED AAA CORPS	9.4	10.0	10.4	9.9	9.8	9.6	9.5	9.4	9.2	9.2	8.9
MORTGAGE RATE (SECONDARY)..	10.2	10.6	11.0	10.4	10.3	10.1	10.0	9.9	9.6	9.6	9.3
-- RENTAL RATES (%) --											
NEW AUTOS.....	20.5	21.4	21.8	21.3	21.1	20.9	20.5	20.1	19.8	19.9	19.7
OTHER CONSUMER DURABLES....	26.3	26.8	26.7	25.9	25.3	25.0	24.6	24.4	24.2	24.3	24.2
SINGLE FAMILY HOUSING.....	11.3	11.9	11.8	10.7	10.2	10.3	10.2	10.2	10.1	10.2	10.1
MULTI-FAMILY HOUSING.....	14.3	14.6	14.7	13.9	13.5	13.5	13.4	13.4	13.2	13.3	13.0
PRODUCERS' DUR. EQUIPMENT..	23.2	23.0	22.9	19.3	19.0	18.9	18.7	18.7	18.6	18.8	19.0
NONRESIDENTIAL STRUCTURES..	22.1	22.9	23.6	23.3	22.8	21.5	21.0	20.7	20.3	20.3	20.2
NONFARM INVENTORIES.....	4.2	3.0	2.3	1.1	.4	-.2	.4	.6	.6	.8	.1
-- REAL INTEREST RATES (%) --											
DIVIDEND PRICE RATIO.....	3.1	3.7	3.7	3.5	3.3	3.1	2.9	2.8	2.7	2.7	2.6
REAL CORPORATE BOND YIELD..	5.1	6.4	7.0	6.2	5.8	5.6	5.0	4.8	4.4	4.5	4.3
SPREAD:GOV'T BOND - T'BILL.	2.6	2.5	2.5	2.9	3.1	3.3	2.9	3.0	3.0	3.0	3.2
EFFECTIVE T-BILL RATE	6.1	6.9	7.6	6.7	6.4	6.0	6.2	6.1	5.8	5.7	5.1
EFFECTIVE FED FUNDS RATE	7.0	7.9	8.5	7.3	7.0	6.5	6.8	6.7	6.2	6.2	5.5

* Level, billions of $

Alt #4: 8.5% Surchg then 3% VAT; ITC & Flex Freeze

GROSS SAVING & INVESTMENT
(Billions of dollars)

	ANNUAL LEVELS										
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Gross Saving.....	560.4	643.1	670.2	736.3	857.5	946.6	1066.6	1180.3	1301.4	1460.4	1586.2
Gross Private Saving.....	665.3	728.3	761.3	782.2	857.9	904.1	999.6	1076.1	1155.3	1261.8	1358.1
Personal Saving.....	104.2	142.7	161.1	153.7	163.6	154.1	161.2	167.2	167.0	187.1	210.1
Undistributed Profits....	47.4	58.3	72.3	75.8	108.0	110.8	107.6	105.7	104.2	105.6	83.4
IVA*.....	-18.0	-24.0	-29.9	-29.2	-35.0	-53.8	-34.6	-37.4	-36.3	-39.3	-41.9
CCadj.....	51.7	44.6	19.4	4.3	-4.0	-16.6	-10.7	-7.7	-3.8	2.4	8.9
CCA with CCadj.....	480.0	506.7	538.3	577.6	625.3	709.6	776.2	848.3	924.2	1006.0	1097.6
Federal Wage Accruals*...	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
SSL Wage Accruals*.....	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Government Surplus or Deficit (-), NIPA's.....	-106.8	-85.2	-91.1	-45.9	-.3	42.5	67.0	104.2	146.1	198.6	228.1
Federal.....	-157.8	-137.1	-147.3	-101.5	-66.2	-21.1	3.3	39.1	80.5	129.3	159.1
State & Local.....	52.9	51.9	56.1	55.6	65.8	63.6	63.8	65.1	65.6	69.3	69.0
Capital Grants Received By the United States (net)*.	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Gross Investment.....	552.3	628.1	655.2	721.3	842.5	951.6	1051.6	1165.3	1286.4	1445.4	1571.2
Gross Pvt. Domestic Invest.	712.9	756.1	776.9	839.0	961.2	1066.7	1158.4	1276.5	1395.9	1556.2	1665.6
Net Foreign Investment.....	-160.6	-128.0	-121.8	-117.7	-118.7	-115.0	-106.8	-111.2	-109.4	-110.8	-94.4
Net Exports.....	-123.0	-89.2	-80.1	-73.5	-72.1	-86.6	-57.3	-60.8	-58.7	-60.0	-44.1
Less Payments to Foreigners											
Federal Net Interest...	24.0	26.6	29.0	30.8	32.1	32.7	33.0	33.0	32.4	31.3	29.7
Federal Transfers.....	12.2	11.1	11.5	12.2	12.9	14.0	14.9	15.7	16.6	17.6	18.8
Personal Transfers.....	1.3	1.1	1.1	1.2	1.6	1.6	1.7	1.7	1.7	1.8	1.8
Statistical Discrepancy*...	-8.1	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0	-15.0
ADDENDA:											
Federal Deficit % of GNP.**	-3.5	-2.8	-2.8	-1.9	-1.1	-.3	.0	.5	1.0	1.5	1.7

* Billions of Dollars
** Percent

ROBERT A. JONES
POST OFFICE BOX 7498
INCLINE VILLAGE, NEVADA 89450
(702) 831-2612

17 February 1989

The Honorable Stephen L. Neal, Chairman
Subcommittee on Domestic Monetary Policy of the
Committee on Banking, Finance and Urban Affairs
One Hundredth Congress
Washington, DC 20515

Dear Chairman Neal:

I am honored by your request of January 13 to testify before your Subcommittee on March 1, 1989. I applaud your initiative to assess Mr. Greenspan's Humphrey-Hawkins testimony in the context of appropriate policy objectives and procedures.

Since my initial phone conversations with the Subcommittee's Staff Director about my testimony, a conflicting date of closing had to be set for the acquisition of MMS International by another corporation. As Chairman of MMS International, representing the interests of its shareholders, I must be present at closing in San Francisco instead of Washington, D.C. This conflict arose yesterday, which for fiduciary reasons, was beyond my authority and ability to change.

It is with deep regret that I must respectfully decline your invitation, but not without trying to fulfill my pledge to assist you and your Subcommittee in the exercise of monetary policy oversight responsibilities, so critical to the well-being of our nation.

The attachment to this letter represents some of the comments I would have submitted to your Subcommittee for consideration, had I been able to testify. This submission, of course, cannot address specifics of Mr. Greenspan's testimony. Yet it hopefully addresses policy issues that Mr. Greenspan may want to avoid during his testimony, even though these issues are critical to any validation of his projections and interest rate dispositions.

My submission lacks academic character because I did not clutter my text with documentary footnotes and equations. Such can be done, however, if you so desire.

I sincerely hope that my submission can attract time for Staff and Committee review because if nothing else, it certainly has potential value in terms of formulating productive questions for Mr. Greenspan. I also hope that Mr. Greenspan will not deflect such questions with answers that are general observations instead of answers.

The Honorable Stephen L. Neal, Chairman
Subcommittee on Domestic Monetary Policy
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Perhaps I should apologize for the critical tone of my analyses, but I will not because my job is to focus on policy problems rather than on commendable policy achievements. Of the latter, the conduct of Fed officials in terms of statements and actions has dampened inflation psychology to a remarkable extent. Considering that the nutrients of inflation psychology have been quite strong, I think that the Fed deserves thanks and recognition of success in sustaining favorable psychology in financial markets and real sectors. Such well-done job, however, could be undermined by some of the problems noted in the attached statement.

My personal conclusion is that while both interest and inflation rates are likely to rise through summer months, their increase will be relatively moderate. I am therefore not concerned as much about potential bad news as I am about how much better the outlook could be with better policy.

Good luck in your most important endeavor.

Very truly yours,

Robert A. Jones

RAJ:sh

Enclosure

Federal Reserve Objectives and Procedures and Inherent Risks of Higher Rates of Interest and Inflation

Submitted by Robert A. Jones
to the
Subcommittee on Domestic Monetary Policy
February 7, 1989

Fed Policy is NOT a monetary policy

Reserve management by Fed officials is used as a tool of interest rate control, not as a tool of monetary control. Policy makers at the Fed currently operate with the belief that the funds rate is the key transmission of policy actions to the financial markets and to the economy. In short, this means that Fed targeting of the funds rate, to which many important interest rates are structurally linked, can influence the growth of aggregate demand with a still-unknown lag of many months. Why is there such policy emphasis on aggregate product demand?

Fed Policy IS an anti-inflation policy

Federal Reserve domestic objectives are full employment of economic resources and price stability. Whenever the full employment objective is met or nearly achieved, Fed policy makers have usually given greater priority to the stable price objective, particularly if there is evidence of rising prices.

At present, the underlying rate of inflation appears to be somewhere between the annual rates of 4.5% and 5%. By any account, such rate of inflation significantly exceeds any reasonably modest rate of inflation consistent with the stable price objective. Under these conditions, the Fed has adopted what is widely recognized to be an anti-inflation policy.

Anti-inflation policy can incorporate tactics of a monetary policy seeking to moderate the growth of money and credit. Alternatively, the anti-inflation objective can be sought by restraining the growth of aggregate product demand commensurate with the growth of output capacity. Such desired equilibrium can theoretically be monitored by data on capacity utilization. This second alternative tactical approach toward combating inflationary pressures is basically the one used by Fed policy makers, not the monetary alternative.

The impact of BAD DATA on Fed policy tactics

One reason why there is such little monetary importance to anti-inflation policy is the questionable meaningfulness of monetary aggregates in the wake of financial deregulation. Oddly, Fed officials have not made known any recent research attempts to improve both definitions and measurements of monetary aggregates. Yet private research has offered reasonable hopes that significant improvement can be made to make monetary data more meaningful. The apparent willingness of Fed officials to leave monetary data distorted by definitional and measurement flaws seems to indicate a desire to keep Fed policy detached from any appreciable monetary emphasis. This, of course, partly belies, the spirit of Federal Reserve accountability to Congress through Humphrey-Hawkins reporting requirements.

While seeking to avoid potentially misleading use of monetary data, Fed officials have not improved their policy vision in using capacity utilization data, widely viewed with suspect and uncertain meaning. So, if such data do not fairly represent the relationship of aggregate demand to output capacity, then how can policy makers monitor this crucial relationship?

Fed policy makers have been forced to closely monitor wage and price evidence of inflation as a sign of capacity limits being strained by aggregate demand. But history shows that once such inflationary pressures become rooted, it is too late for policy actions to quickly moderate these pressures. In fact, history shows that either severe monetary restraint or extraordinarily high real interest rates will be required over a sustained period of time to root-out inflationary pressures and related psychology. Often such severe restraint forsakes the full employment objective to the extent of creating an economic recession.

The WORST of two evils

If tardy policy reaction to inflationary influences requires a severe dose of anti-inflation policy, which strategy is least efficient; monetary (reserve) restraint or aggregate demand (interest rate) restraint? Fed officials often claim that there is no interest rate difference arising from either reserve or interest rate restraint. Such a claim is false.

There once was a time, several decades ago, when reserve management was used as a tool of monetary restraint. Commercial banks, at times of tight monetary policy, were simply unable to extend more loans (which create new dollar deposit credit) for want of reserves. Yet borrowers were more than willing to pay prime (plus) to obtain new bank credit (loans). Compared with today's interest rate standards, borrowing rates several decades ago were relatively low despite very tight credit conditions. Today's society has forgotten the term "credit crunch." Credit crunches were distinguished by tight availability of money and credit in spite of affordable borrowing rates in most real sectors except housing.

Such restraint was deemed inequitable by Fed officials early in the seventies because the apportionment of credit seemed rather arbitrary relative to a free market allocation based on higher interest rates. The strategic shift to interest rate targeting, that subsequently occurred, was accompanied by the false claim that higher rates reduced money demands, thus affecting monetary restraint simultaneous with interest rate restraint on aggregate product demand. Though it is quite true that mortgage credit demands have a high degree of interest rate elasticity, private research has documented that, in the aggregate, the demand for bank credit is highly inelastic to interest rate changes.

Accordingly, high interest rate targets of Fed anti-inflation policy exert much more restraint on aggregate demand as opposed to monetary growth within a given period of time. The demand for credit will eventually succumb to high real interest rates, but only after rate-induced weakness in the real sector spreads and multiplies itself through depressed income flows.

The claim that reserve and funds rate targets produce equal interest results is made false also by official Federal Reserve recognition that the funds rate is determined by both reserve availability and the discount rate. Specifically, the funds rate is basically floored by the discount rate, above which the funds rate will predicably rise in accordance with the amount of reserve restraint applied. A very low discount rate, as an example, can keep the funds rate quite low relative to a significant amount of reserve (monetary) restraint imposed.

Post-war history of anti-inflation policies of the Fed seem to validate theoretical claims that reserve restraint on monetary growth is far less damaging to the economy and living standards than interest rate restraint on aggregate demand growth. In other words, reserve management rather than interest rate management more effectively addresses the need for stable price behavior and full employment. Such strategic advantage of reserve restraint on monetary growth is partly due to the fact that long term monetary growth trends precede (as one causative factor) long term inflation trends. Reserve management is therefore more likely to be more proactive and less reactive than interest rate management to inflation risks.

Why doesn't the Fed use the LEAST PAINFUL method of restraint?

Because financial deregulation was accompanied by a mandated drop in stipulated (as well as average) reserve requirements, Fed officals believe that potential monetary control has been structurally weakened beyond salvation. This too is false. Though structural weakness occurred, its impact was limited to forsaking moderation of the money multiplier; it did not impair the Fed's ability to constrict money center bank abilities to extend new credit through tight reserve conditions.

The Fed's inability to make the foregoing distinction needlessly prompted dismissal of reserve management as an effective tool of monetary control. In turn, efforts to better define and measure monetary aggregates were thought to be of little policy value. Even a proper recourse to targeting bank credit, as the major source of dollar deposit growth worldwide, was considered to be without much appropriateness as long as it was mistakenly believed that bank credit growth was beyond the influence of reserve management; indeed, there still remains a predictable linkage.

Time for the Fed to TELL the TRUTH

Fed officials have avoided candid public discussions about strategic options of anti-inflation policy, probably because they would rather veil their interest rate control (particularly the funds rate target) from public view. Free market forces of supply and demand are suppose to govern interest rates, not a select few who lack accountability to the people so dramatically impacted by interest rate policies.

The Fed's veil of secrecy is not sustained by failing to tell the truth, but by not telling the full truth. As an example, current targeting of a specific funds rate level requires Fed officials to also target both borrowed and nonborrowed reserves in the daily conduct of open market operations. If the Fed Chairman is asked whether the funds rate is targeted, Mr. Greenspan can quite honestly assure the public that reserve targets are used in the conduct of open market operations. When pressed further about funds rate objectives, the Chairman can refer to broad funds rate guidelines set by the FOMC, but not as the specific objective that is not publically disclosed (even as to its existence).

The question is which target of open market operations is the primary target? Clearly the funds rate is primary with reserve targets subordinated as a means of hitting a funds rate target. Why is this so clear? Because the object of a primary target is control and thus stability. Mere comparison of time series of the funds rate with any reserve aggregate will vividly display reserve variations relative to funds rate stability.

The funds rate target, moreover, has to be primary because Fed officials believe the funds rate to be the key link between policy actions and the economy, not monetary growth or reserve management. Such reality make the Humphrey-Hawkins requirement of disclosing monetary growth targets a cruel hoax. Yes, there is some monetary monitoring in the formulation of anti-inflation policy; but surely there is not much money in the so-called "monetary policy equation."

The RISK of Monetary blindness

From 1982 to 1987 the rates of monetary and bank credit growth were in excess of any historical, non-inflationary standard. Yet as long as inflation remained in apparent control, the inevitable rise in inflation to be expected was conveniently dismissed, particularly when money velocities seemed so irregular. Unfortunately, monetary growth flooded world financial markets with astounding volumes of liquidity. Such evidence was quite clear.

In theory, the twin deficits (fiscal and trade) should have crowded-out domestic private credit demands from the marketplace. Yield curves should have displayed record-breaking positive slopes. Dislocated financial flows should have created a severe recession. But, none of this happened. Indeed, enormous dollar liquidity volumes blasted through the economic barriers of trade and fiscal deficits. Liquidity inverted yield curves even as the Fed tightened and inflation rates rose (rather than receded).

Financial assets rose from roughly $.95 for each GNP dollar in 1982 to about $1.15 (plus) last year. Such dramatic increase in dollar liquidity occurred at a time of significant dollar devaluation. World market dollar pricing of commodities had to be adjusted upward to a weaker vehicle (dollar) currency, not at all restrained by scarce liquidity; in fact, excessive liquidity may become a more visible force in commodity markets this year than Fed officials would dare admit as a possibility.

Liquidity has also sustained economic growth well beyond previous expectations. Notably the consumer, supposedly out of savings and liquidity, has led the way to recovery more than manufacturing investment and expansion. Wage inflation has clearly surfaced in many regions of the nation, raising the question of if the Fed can really apply sudden brakes to consumer demand fueled by liquidity? Though a definitive answer may not be possible, partly due to the known power of psychology, it nonetheless seems clear that the current inflation risk is on the upside, not the downside of Fed projections. Why? Because of monetary blindness not overcome through Humphrey-Hawkins hearings.

Fed officials in recent years seemed to have two objectives in mind when establishing monetary growth targets for review by Senate and House Banking Committees. The first objective is to present the Banking Committees (and the public) with an internally consistent argument for a constructive outlook. The second objective has, in recent years, seemingly been one of accommodating sufficient latitude for growth rate variations so that actual monetary growth rates will not hold Fed policy hostage to monetarism.

Indeed, very few market participants think it appropriate for the Fed to limit policy prerogatives only to monetary growth rates, as was done in the seventies. Monetarism then created a monetary blindness in the opposite extreme, being blind to all incoming data except monetary growth rates. Today's opposite blindness to the importance of money and monetary policy needs to be shifted towards a more balanced monitoring of the economy, as the basis for formulating monetary policy.

In Conclusion

Federal Reserve considerations of becoming more candid about its policy objectives and procedures should be encouraged, because the current veil of secrecy has prevented an open debate about important policy issues so critical to our future well-being.

Lacking quality data to confidently monitor the current and prospective behavior of money and prices, anti-inflation policy may risk more inflationary pressures than most people would like to admit; and, the Fed might be more prone toward a high interest rate over-reaction without due consideration of strategic options which, available evidence suggests, could be far less harmful to the economic well-being of each and every American.