

## APPENDIX

## **Notes for FOMC Meeting**

**February 4-5, 1992**

**William J. McDonough**

The period since your last meeting has seen some significant rate movements in the foreign exchange market. The dollar's decline that began in the summer of 1991 continued through the end of the year and brought the dollar close to its all-time lows. Then, in a sudden reversal, the dollar strengthened in the first weeks of January. As the dollar's upward movement seemed to slow, at the initiative of the U.S. Treasury the U.S. and Japanese monetary authorities surprised the market by intervening to sell dollars. That settled the dollar into a new trading range centered around 125 yen and 1.6 DM.

The dollar's continued decline in December is relatively straightforward to explain. Around the time you last met, sentiment toward the prospects for a U.S. recovery were still rather gloomy. Thus, most market participants believed dollar interest rates still had room to fall. In contrast, the prevailing view on Germany was that policy tightening had yet to run its course. Although a further reduction in Japanese interest rates was expected, the timing was thought to be well into the first quarter.

The market was surprised by the rapid succession of monetary policy decisions at year end. The Bundesbank raised official interest rates 50 basis points on December 19th, the Federal Reserve lowered the discount rate a full percentage point on December 20th, and the Bank of Japan cut its official rate by 50 basis points on December 30th. In terms of direction, none of these changes came as a surprise. But their timing and magnitude had

certainly not been anticipated. The dollar declined from December 18th through the first weeks of January by roughly two and three-quarters percent on a trade-weighted basis, and slightly more than three and a half percent against the mark.

Then why did we experience the sudden reversal that occurred at the end of the first full week of trading in January?

Most market participants concluded in early January that interest rate differentials had become about as stretched as they were likely to get. They held the view that there was sufficient monetary accommodation in the pipeline for the Federal Reserve to avoid the need for any further reduction in rates. Moreover, the Bundesbank's December rate increase appeared to be its final tightening. In part, this view grew out of early evidence that the German economy was beginning to turn down and the strong, negative reaction of Germany's European neighbors to the Bundesbank's December rate hike. Japan is still considered to have further to go in reducing interest rates.

Shifting sentiment on expectations for interest rate differentials alone, however, cannot account for the speed and magnitude of the reversal. These appear largely to be the result of the market's technical condition. By late December, the dollar was well into its sixth month of an uninterrupted downtrend. Market participants of all types had built up substantial oversold positions. Thus, as sentiment shifted on the interest rate outlook, the need to cover short positions accelerated the dollar's rise.

The short position of the overall market was demonstrated on the morning of January 8th, when several news services announced that President Bush had "collapsed" at

a state dinner in Tokyo. Such reports would normally cause a substantial dollar sell-off. But the dollar moved only slightly lower and recovered within about 30 minutes, indicating that market participants were unwilling to extend their existing short positions. In fact, there were two waves of short covering which carried the dollar to its period high on January 16.

On January 17, what on the surface appeared to be very good trade figures for November were interpreted gloomily, attributing the better numbers to lower imports caused by a weak economy. The dollar weakened somewhat. Then, at the initiative of the Treasury, the U.S. and Japan intervened based on Treasury's view that the still significant strength of the dollar was excessive in relation to economic fundamentals. The desk sold \$100 million against yen, half for Japan and half shared equally by the Treasury and the Federal Reserve. We entered first at 127.20 yen and went as low as 125.40, with the average yen rate at 126.09.

There are several reasons why the market was surprised by the intervention. First, the dollar was about steady at the time we entered the market, but had weakened during the morning. Second, the intervention occurred at an unusual time. The operation began in the afternoon of a Friday just preceding a long weekend and, thus, at a time when the market tends to be relatively illiquid. Third, by pure chance, the wire services began carrying a report of a speech Bundesbank President Schlesinger was giving in Toronto, which was bullish for the mark and gave the impression that the U.S.-Japanese intervention was being given verbal support by the Germans and that this must have been all planned in advance.

Fourth, the market did not think any official action would take place until after the G-7 meeting.

Because of the surprise, market participants searched for a reason. Some saw it as a direct result of the Bush visit to Japan and interpreted the intervention as an effort to counter calls for protectionist measures against Japan. Others believed that it was linked to the Administration's world growth initiative and, perhaps, was designed to demonstrate the dollar's weakness in order to make the idea of a reduction in German interest rates more palatable to the Bundesbank. Most just scratched their heads and decided to worry about the G-7 meeting. The intervention does seem to have had the positive effect of lessening the appetite for large speculative positions going into that meeting and of the continuing uncertainty since, resulting in choppy intra-day trading without a major one-way move.

There is a lot of confusion on likely exchange rate developments, which I fully share. The macrosituations of the three major countries and interest rate differentials suggest that the present exchange rate ranges could endure for the period until your next meeting. The major uncertainty now comes from capital flows which could be triggered by political concerns about all three major currencies. The weakness of the Miyazawa government causes nervousness about the yen, but concern about President Bush's fiscal proposals and what the Congress may do to increase them creates an overhang for the dollar. Yesterday's wage settlement of a 6.4% increase for German steelworkers is more than German

productivity improvement justifies and further dents Germany's reputation for managing itself well.

These uncertainties, especially with the speculators not having big positions and therefore having their ammunition fully available is rather menacing because it means that an unanticipated event could move the market a lot more than the event would appear to justify. Careful watching is in order.

On another point, I would like to inform the Committee that we have begun discussions with the Bundesbank on the possibility of another exchange of reserve balances. The final leg of last year's DM 10 billion exchange settled in December and, in January, Jerry Corrigan and I proposed a similar transaction to Dr. Tietmeyer for 1992. At the same time, Dr. Tietmeyer is pressing us to agree to a restructuring of both the System's and the U.S. Treasury's investment facilities to fit our deposits with the Bundesbank better into their asset-liability structure and their domestic monetary operations. We are also discussing moving a portion of our mark holdings from the Bundesbank to the B.I.S. to help reduce the size of the Bundesbank's balance sheet. On each of these three issues, both sides have already agreed in principle that these changes will be made and I hope we will be able to reach consensus on the details before your next meeting. When we do, I will inform the Committee of the proposals.

I would also like to inform you that we have now received confirmation of renewal of all of the System's reciprocal swap arrangements.

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Mr. Chairman, I request the Committee's approval for the Federal Reserve's sale of \$25 million against yen on January 17th, our only operation on behalf of the System during the period. This represents the Federal Reserve's half of the \$50 million sold by the U.S. authorities as part of the joint intervention with the Japanese monetary authorities.

**Notes for FOMC Meeting  
February 4-5, 1992  
Washington, D.C.  
Peter D. Sternlight**

The System's policy stance was initially held unchanged following the December 17 Committee meeting, but soon afterward--on December 20--an easing move was made in light of the weak performance of the economy, the subsidence of inflationary pressures and slow growth in the broad money measures. This move entailed a full percentage point reduction in the discount rate, to 3 1/2 percent, and a 1/2 point cut in the expected Federal funds rate, to 4 percent, as outlined in a Committee conference call on the morning of the 20th. Associated with the move, the path borrowing allowance was raised by a net \$25 million to reflect the re-emergence of a spread in the Fed funds rate over the discount rate, partly offset by a small downward technical adjustment in recognition of lower seasonal borrowing. Later in the period, the borrowing allowance was trimmed back by \$25 million in technical recognition of the further shrinkage of the seasonal component.

Actual funds rates receded from the 4 1/2 percent area in the opening days of the period to average around 4.20 percent in the weeks surrounding Christmas and year-end, as moderate seasonal pressures were encountered despite sizable Desk reserve injections. The volatility in funds rates around year-end was mild compared with the extraordinary gyrations encountered a year earlier, when we saw rates as high as 100 percent and as low as zero within a

matter of days. Once past the first week of the new year, the average funds rate held quite close to the expected 4 percent level, and somewhat below at times when reserves were released in abundance by declines in required reserves and shrinkages in currency in circulation. This past Friday saw some elevated rates, though, as the Treasury balance at the Fed spiked higher and clearing funds were needed in connection with the settlement of new Treasury issues.

Borrowing levels were fairly close to path allowances, except for a sharp surge at the end of the January 8 reserve maintenance period. A reserve shortage had been projected on that settlement day, but a soft funds market that morning discouraged us from injecting reserves lest we risk providing a misleading policy signal to the market.

Through year-end, and a few days beyond, the Desk faced large needs to add reserves, reflecting the usual seasonal factors such as currency outflows and higher required reserves, but also some unusually high Treasury balances. Since we were looking forward to a substantial over-abundance of reserves shortly after year-end, all of the heavy needs early in the interval were met through repurchase agreements, including both System and customer-related operations. On a few occasions the Desk entered the market a little earlier than the usual time, partly in view of early market closing schedules and partly to head off potential strains around the year-end date.

Fairly soon after year-end, the Desk turned to the task of seasonal reserve absorption. This was accomplished through sales of about \$1.6 billion of bills to foreign accounts, and run-offs of another \$1.6 billion of bills at weekly auctions. There were also several small run-offs of agency issues scattered through the period, totaling \$130 million. In addition, to drain reserves temporarily, the Desk arranged several rounds of matched sale-purchase transactions in the market, including yesterday and today. Last Friday, though, reserves were injected through weekend RPs to cope with that day's temporary shortage.

There were two distinct phases to market interest rate changes over the intermeeting period--first a broad downward sweep propelled by weak reports on the economy and especially by the December 20 policy-easing moves, but then an upswing beginning about January 9 or 10 as sentiment shifted on the likelihood of further easing and concern mounted with respect to current and prospective supplies of debt offerings. The net result for the period was mixed. Bills were still down by a net of 20 to 30 basis points--anchored by the lower funds rate and day-to-day financing costs. The commercial bank prime rate, which was cut by a full percentage point to 6 1/2 percent just after the discount rate move, stayed down at that level. Short to intermediate-term Treasury coupon issues rose by a net of some 10 to 20 basis points as increases of 40 to 60 basis points after early January swept aside earlier sharp declines. At the long end, the yield on the Treasury's 30-year bond was just about unchanged on balance,

beginning and ending a shade over 7 3/4 percent but touching a low just under 7.40 percent earlier in the new year. In the bill area, which saw a moderate net paydown by Treasury of about \$4 1/2 billion, the latest 3- and 6-month issues were auctioned at 3.86 and 3.93 percent, respectively, down from 4.14 and 4.19 percent just before the last meeting. At the same time, the Treasury raised about \$24 billion in the coupon market.

The change in sentiment in early January seemed to have as much to do with psychology as with hard evidence on the economy, although the December employment report on January 10, with its small rise in nonfarm payrolls, appeared to mark something of a critical point in market participants' minds. Some later downbeat reports on retail sales, industrial production, new orders, and consumer sentiment seemed to pack less punch in terms of stirring anticipations of further easing steps. Meantime, concerns increased over the prospects of Federal fiscal stimulus, while the market also coped with heavy corporate borrowing--some \$30 billion in the intermeeting period. Statements by Fed officials were seen to be playing down the likelihood for additional near-term easing steps and this, too, weighed on sentiment.

It should not be read from these comments that market participants are highly confident of a near-term pick-up in the economy. The current quarter is widely expected to be flat--a small plus or minus. Some see the flat trend extending to midyear but probably more look for a modest pick-up in the second quarter. A large majority anticipate moderate growth in the second half of

the year but this view is not held with rock-solid conviction. Many analysts remind themselves that they had anticipated a recovery a year ago that seemed to get off to a decent start but then evaporated. Against that background, a certain amount of skepticism remains regarding the current outlook. Nor has all the anticipation of further monetary policy easing been removed; some observers do anticipate further modest easing steps in coming months, although this view is not held with great conviction, either, and apparently is not priced in to current market levels.

A particular focus of market conjecture right now is the Treasury's quarterly financing package to be announced tomorrow afternoon, given all the speculation on whether the Treasury might reduce the size of its long term issues. Market comments suggest that a moderate reduction--perhaps a cut of \$2 to \$4 billion in what has recently been a \$12 billion offering--is anticipated and about priced in. This uncertainty, at least, will be resolved soon.

I'd like to add a few words about market reaction to the interagency report on the Government securities market. By and large, reaction has been rather low key. Particular interest has focused on the possibility for the Treasury to reopen scarce issues, with a major question in the minds of market participants as to just what set of conditions might cause the Treasury to act, and in what form they might act. My sense is that there would be appreciable interest in a lending program as distinct from outright reopenings, in order to deal with temporary scarcities in the

financing market. There is also considerable interest, but at this point much skepticism, in regard to the Report's proposal for a new type of open or iterative auction. I have yet to hear any degree of enthusiasm for the proposal from market sources but mainly they just want to gain a better understanding as to how it might work.

As to the revisions in the administration of the Fed's primary dealer arrangements, the documents are being read with interest. The dropping of our over-all market share requirement is being welcomed by most dealers, though I have also heard concern expressed about whether this might not impinge on the market's liquidity in difficult times. One also hears the comment that trading activity may tend to become more concentrated at a few large dealers. Further, I've heard some concerns expressed about the need to be more careful about one's counterparties given the Fed withdrawal from dealer surveillance--which seems to me a healthy reaction. So far there's no big line-up of potential applicants to be our counterparties.

M. J. Prell  
February 4, 1992

FOMC Chart Show Presentation: Research and Statistics

We shall be referring this afternoon to the packet of charts that has been placed before you.

The first of those charts provides a brief summary of the staff forecast. The plot of real GDP in the top panel illustrates several features of the current cycle. Notably, although the decline in activity in late 1990 and early 1991 was not large, neither is the upswing thereafter terribly dynamic. Indeed, the prior peak level of output is not reattained until the third quarter of 1992, an exceptionally prolonged recovery phase. And, of course, net growth over the 1989-1992 period as a whole is remarkably meager.

The box at the right shows that it is not until the second half of this year that we expect growth to move above a 2 percent annual rate. It is at that point that we anticipate that the unemployment rate, in the middle panel, will start to decline. Even at the end of 1993, however, the jobless rate is predicted still to be in the upper 6s.

With this slack in the economy, we project inflation, as measured by either the overall CPI or the CPI ex food and energy, will slow appreciably, to less than 3 percent next year.

Chart 2 highlights some of the key factors underlying this forecast. The first is our basic monetary policy assumption--namely, that the federal funds rate remains at the current level of 4 percent. Based on that assumption and our analysis of prospective pressures in credit markets, we project that long-term interest rates will fall--with the yield on 30-year Treasuries, for example, moving down to around 7 percent over the next year or so. We also expect that the restraints on economic activity associated with the credit crunch will ease somewhat by 1993, although we certainly don't anticipate a return to the liberal credit supply conditions that prevailed a few years ago.

As you know, our baseline Greenbook forecast is founded on the assumption that there will be no significant fiscal stimulus. As we see it, the change in withholding schedules ordered by the President, which we have incorporated, is likely to have only a minor effect. In fact, our tentative assessment is that enactment of the entire Administration budget plan probably would provide substantially less stimulus than the package simulated in the Greenbook, though the nature of a number of the proposals makes analysis difficult.

In foreign exchange markets, we anticipate that the dollar will not change appreciably in value.

And, finally, we have assumed that things will remain fairly calm in the international oil market, with a modest

firming in crude prices over the next few months followed by stability in the area of \$18 per barrel for imports.

With that brief introduction, I shall turn the floor over to Tom Simpson, who will flesh out some of the financial backdrop of our economic projection.

FOMC CHART SHOW  
Thomas D. Simpson  
February 4, 1992

Over the past year, financial markets generally have responded favorably as the System has eased policy. Despite the recent backup in long-term rates, the rate on the ten-year Treasury note, shown in the top panel of chart 3, is down about a full percentage point since the middle of last year, while the funds rate has fallen 1-3/4 points. And since most rates peaked in March of 1989, the ten-year rate is down about 2-1/4 percentage points. Declines at the shorter end of the coupon sector have been characteristically larger. This can be seen in the panel at the lower left, which shows the ratio of declines in Treasury coupon rates of three, ten, and thirty-year maturities to the change in the three-month bill rate during cyclical declines in the bill rate. The dark bar on the left shows the average response over seven previous periods of easing, the green bar the response over the period starting when rates began to decline in March of 1989 to July of last year, and the red bar the response over the period since last July. Over all the maturities shown, the response of long rates over the period since the spring of 1989 has been on a par with or bigger than what is typical, even at the long end. And, since last summer, the response has been uniformly greater.

Equity values, as seen in the lower right panel, have risen sharply of late after several months of modest gains. As a result, a good bit of the gap relative to previous periods of economic recovery has been closed. Current share prices stand at historically high levels in relation to both earnings and dividends.

The rally in bond and stock markets has prompted a surge in offerings. As shown in the top left panel of your next chart, gross public issuance of corporate bonds jumped to \$115 billion last year, a near-record volume, as firms saw conditions ripe for calling high coupon bonds and paying down bank loans and commercial paper. The bulk of volume has remained concentrated in the lower rungs of investment-grade issuers, although the market has again become receptive, on a selective basis, to junk bond issuers.

Gross equity offerings, the right panel, soared to a new record last year, and issuance, net of retirements, turned positive for the first time since 1983. Of particular note, shown in the inset, have been the offerings by firms with below investment-grade credit ratings seeking to strengthen balance sheets and improve access to credit markets or lower interest rates by pursuing reverse LBO and other deleveraging strategies.

Households, too, have gotten into the act. As shown in the lower left panel, applications for refinancing existing mortgages have skyrocketed in recent months. Those for purchasing homes, the right panel, recently have jumped higher to a pace in line with early last year, consistent with anecdotal reports of a revival of buying interest.

Declines in interest rates and brisk activity in capital markets have been showing through to the financial condition of households and businesses. As shown in the top panel of your next chart, nonfinancial corporations have begun to show progress in repairing their balance sheets. The book value of debt to equity has been on a gradual downtrend since 1989. We envision that firms will want to make further progress over the forecast period as the renewed

appeal of equity finance encourages more share offerings and limits growth in debt.

Meanwhile, mainly owing to the decline in interest rates, the claim of interest payments on corporate cash flow has been in retreat for several quarters and is projected to completely retrace the sharp rise of the late 1980s over this year and next. Moreover, the decline in interest rates has been feeding through to the corporate bottom line. Indeed, as shown in the side panel, lower interest rates are estimated to have reduced net interest payments \$12 billion last year, an amount that is expected to accumulate by another \$25 billion this year and \$9 billion next year. No doubt, thinking along these lines has been built into the outlook of investors and has contributed to the stock market rally.

Credit markets, also, have taken a more favorable view of firms' financial condition. As shown in the bottom chart, yield spreads on investment-grade debt, represented by A-rated industrials, have been drifting down for about a year to levels that are quite thin by historical standards, despite heavy supply. Moreover, spreads on junk bonds have retraced all of the bulge of the second half of 1990. The rating agencies, too, seem to be taking a more sanguine view of bond issuers as the number of upgrades edged higher near the end of last year while downgrades fell over the second half, as seen in the box on the right. A shift in financial restructurings, away from LBOs and toward reverse LBOs and other recapitalizations, has been cited by the rating agencies as an important contributor to this development.

In contrast, firms lacking access to public credit markets, principally medium-sized and smaller firms, have been facing more stringent credit supply. Firms in this category tend to be quite dependent on banks for credit and, as shown in the upper left panel of

your next chart, banks reported that they had progressively tightened underwriting standards for loans to businesses of all sizes over all of 1990 and into the first part of last year. Although it would appear that tightening has largely come to an end, banks' standards at this point would appear to be pretty restrictive. Also over this period, loan terms, shown in the right panel by spreads of business loan rates over the federal funds rate, have tightened appreciably. Moreover, the degree of that tightening probably is understated by the chart, given that many less creditworthy customers have been weeded out and thus the larger spreads that they typically would be paying is not factored into more recent averages. Additionally, banks have reported considerable firming of other terms over this period, such as the cost and size of credit lines. Recent surveys, though, suggest that these terms, too, by and large have stabilized.

It is hard to say how much restraints on credit have affected borrowing, and ultimately spending, by smaller and mid-sized firms. However, the unusual and protracted decline in business loans at smaller banks, shown in the center panel on the left, suggests the possibility of a nontrivial impact. This is consistent with information available for manufacturing firms, in the right panel, which indicates that for small and mid-sized firms, loans from banks rose a little in 1990 before turning down last year. Bank loans also fell at larger manufacturing firms in 1991, but at a time when many were funding short-term debt with the proceeds of bond offerings.

Other evidence, shown in the bottom panels, is somewhat mixed. Small businesses surveyed by the NFIB in January reported lessened difficulties in getting credit. Through much of last year, this survey had been showing that credit was harder to get, especially by firms in New England, although the overall level of the index never

reached the highs in the early 1980s. As shown in the right panel, in the third quarter of last year life insurance companies, an important source of longer-term financing for many below investment-grade firms, reduced further the share of their private placements going to below investment-grade firms.

Turning to households, this sector, too, has been making some progress in relieving debt burdens. In the 1980s, as shown in the top panel of your next chart, household sector borrowing surged. By the end of the decade, debt had climbed to more than 90 percent of disposable income, up from two-thirds several years earlier. Over this same period, households built up large amounts of financial assets. In the past two years, growth in both mortgage and consumer debt has weakened considerably, and we envision continued subdued growth this year, before a small pickup next year. Accompanying the rapid rise in household debt in the 1980s was a large increase in the claim of debt service on income, the center panel. As interest rates have been coming down, the debt servicing burden has begun to ease. In part, this owes to scheduled reductions in payments on adjustable-rate mortgages and the acceleration in mortgage refinancing. Of course, interest earnings from financial assets also have been declining, and because the household sector is a net creditor, interest received minus interest paid has been falling. Adverse effects of interest rate declines likely are being felt mainly by those with larger net worth positions, those thought to have lower propensities to spend out of income and to have offsetting gains from asset appreciation. Indeed, using household survey data for 1989, shown in the side panel, a decline in rates actually boosts net interest receipts of the lower wealth group and leaves essentially

unchanged the interest income of those with net worth of from \$10,000 to \$100,000.

With mortgage payments coming down further owing to strong refinancing activity and with additional declines in ARM payments in train, we foresee further sizable reductions in debt servicing burdens this year, leaving many households in a more comfortable financial position. In these circumstances, willingness to borrow, or to tap assets, to finance spending should move up from recent lows, shown in the bottom panel.

Some factors bearing on credit supply of banks and life insurance companies are presented in chart 8. The upper panel illustrates that the market's assessment of the outlook for banks has improved markedly since late last year, as shares of both money center and regional banks generally have outperformed broader market indexes. Meanwhile, spreads on bank debt, the center-left panel, have narrowed. Banks have begun to respond by issuing more equity and refinancing debt. Better access to capital and funding markets is providing banks with more scope to expand balance sheets. At the same time, investor demand for asset-backed securities and mortgages remains fairly strong, as suggested by the spreads shown in the right panel, continuing to provide banks with the flexibility to retain or sell off such loan originations. In these circumstances, it seems hard to believe that credit supplies will tighten further at banks, and it seems plausible that some loosening of restraints on supplies to businesses could emerge as banks pursue more profitable lending opportunities.

Life insurance companies, though, are more likely to display heightened caution. Shares of life insurance companies, the lower panel, have not registered gains of late comparable to those of banks,

as there appears to be more uncertainty about potential further losses from commercial real estate exposure. Moreover, their bond portfolios have come under greater regulatory and public scrutiny in the past couple of years. In these circumstances, below investment-grade, and even some marginal investment-grade, firms are likely to continue to encounter difficulties in obtaining longer-term financing from this source.

In sum, restraints on credit supply are not seen as impinging on the spending plans of investment-grade firms, as access to open market sources has been and should remain quite ample. Elsewhere, restraints on credit supply are expected to persist, although these should ease gradually as deleveraging proceeds and as banks, feeling a little more comfortable, become more willing lenders.

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Mr. Prell:

One of the important considerations in our assessment of the very near-term outlook for the economy is the inventory situation. If you pull out your magnifying glass and look at the top panel of chart 9, you'll see that the economy appeared last summer to be following the traditional recovery pattern in which output moves up relative to final sales, as businesses attempt to ensure that they have adequate stocks on hand to meet rising customer demand. Unfortunately, the thrust of final sales proved anemic, and inventory imbalances began to reemerge by the fall. As may be seen in the bottom panels, manufacturers, as a group, succeeded in keeping their stocks lean, but inventory-sales ratios backed up a bit in wholesale and retail trade.

Our expectation, indicated by the bar-chart inset in the top panel, is that the current quarter will be one in which nonfarm business inventories will be liquidated at a moderate pace; the resultant swing in inventory investment is sufficient to chop a percentage point off of GDP growth. As that liquidation abates in the second quarter, and accumulation

begins in the third quarter, inventory investment makes a small positive contribution to output growth.

But what about final demand? The failure of final demand to gather momentum last year was a major element in the shortfall of activity relative to our forecast. I'm almost tempted to preface my ensuing remarks with the admonition that you should stop me if you've heard this one before, because our story is much the same as we told last year. But even if it is, that doesn't mean that it is wrong this time--indeed, we think it has more going for it now, partly because of the financial adjustments that Tom just documented.

Chart 10 summarizes the picture in the residential construction sector, which has provided impetus to expansion over the past year and is projected to continue doing so, given our expectations regarding interest rates. As you can see in the top panel, we anticipate that virtually all of the improvement in homebuilding activity will come in the single family sector. The key force initially is the improvement in affordability, gauged in the middle left panel by the ratio of the monthly payment on a new fixed rate mortgage relative to disposable income. Obviously, home purchase decisions also are affected by the perceived attractiveness of a house as an investment, and the signs recently of firmer prices should work to bolster demand from that viewpoint. At the same time, though, we expect that the rise in prices over the next couple of years will be moderate enough not to damage affordability.

In any event, the indications are that home sales are picking up nicely from the already improved pace in the fourth quarter evidenced in the data charted at the right. And--as may be seen at the lower left--even at the relatively modest sales pace recorded on average in the fourth quarter, the overhang of unsold new homes looks less burdensome. If sales are up anywhere near as much recently as some anecdotal reports suggest, we may be able to tell by the middle of the year whether there is much to the industry complaint that single family homebuilding is being constrained by a shortage of credit for land acquisition and development. We believe that this is only a minor problem--and one that is likely to diminish as demand strengthens and gives lenders greater confidence.

We don't see that confidence materializing any time soon with regard to the multifamily sector, where--as the righthand panel indicates--the overhang of vacant rental units remains exceptionally high.

I should perhaps take brief note of the proposed tax credit for first-time homebuyers. Our assessment is that it would boost housing production only moderately this year, with some negative effect on 1993 activity. We believe that the quarter-million augmentation of 1992 starts predicted by the Homebuilders' association is probably vastly overblown; indeed, if their claims about credit and other supply constraints are

justified, much of the incremental demand could show up in prices rather than in added building.

With or without the tax credit, the continuing recovery in homebuilding and greater housing turnover will help to bolster consumer spending in coming months through the direct employment and income effects and through the associated demand for furnishings and other goods. But, as last year's experience showed, that alone may not be enough to get the ball rolling with any force. As you can see in the top panels of chart 11, we are projecting a gradual acceleration in real consumer outlays over the course of this year. Services are part of the story, but the more dynamic element is expenditures on goods, which we expect to level out this quarter and then post a moderate gain in the second quarter. This pattern is not dissimilar to that observed over the same period last year, but it certainly hasn't been signaled as it was a year ago by a surge in consumer confidence.

I would have to say that the current stunningly low level of consumer sentiment is a worry. It is precisely because sentiment appears to be so out of line with major macroeconomic variables that it may be providing some extra information. But it is very short-run information--perhaps no better than contemporaneous with spending. In that context, the tentative signs last month that the indexes may be leveling off are a little encouraging, but I'd certainly feel a lot

better about the outlook if there were to be some improvement in sentiment before too long.

Setting aside the sentiment indicators, several considerations appear to argue for a step-up in spending in the months ahead. As Tom noted, many households are bearing reduced debt-service burdens now, and the stock market rise has enhanced wealth. Expenditures have been low for some time now not just for motor vehicles and other durable goods, but also for clothing and semi-durable home furnishings; some backlog of desired purchases probably is developing.

As the middle panel shows, our forecast for the next two years has consumer spending rising roughly in line with disposable income. Obviously, these two variables can be expected to be highly correlated over time. But it is of interest to note that increases in consumption often have surpassed those in income in the first couple of years of business expansions. This is most easily seen in the bottom panel, which plots the personal saving rate. Notably, our current forecast does not anticipate a downward movement in the saving rate of the sort that occurred in these prior cycles. This might suggest an upside risk to our projection, but that possibility must be weighed against the uncertainty about the degree to which still high debt burdens and the greater sense of insecurity about employment might prompt many consumers to spend very cautiously. Moreover, the saving rate already is low by historical standards.

Our expectation is that spending by households for consumer goods and housing will, along with the anticipated inventory swing--and export growth, which Ted will discuss--provide sufficient momentum to demand to cause businessmen to increase their spending on new equipment. As indicated in the top panels of chart 12, we project a modest increase in equipment spending in the current quarter to be more than offset by a further substantial drop in nonresidential construction. Over coming quarters, equipment spending should gather steam and the drag from the structures side should begin to subside. Overall, the increase in expenditure this year looks very modest relative to the plans reported in the Commerce Department's plant and equipment spending survey--and certainly not at odds with what we learned from the recent canvas by the Reserve Banks.

One would like to be able to nail down the near-term outlook statistically by looking at the orders data, but unfortunately those data--plotted in the middle panels--don't provide a clear signal. We interpret the drop in computer orders in December as confirming our view that the fourth-quarter surge in spending was in large part related to the delivery of IBM's new mainframe, and the first quarter is likely to be a relatively lackluster one for real investment in computing and office equipment. The recent improvement in orders for other nondefense capital goods (excluding aircraft) shown in the right panel, however, points to a moderate upturn

in spending on industrial equipment. As we look beyond the current quarter, our story is one of the classical accelerator effect taking hold as overall output growth is sustained, with capital outlays being concentrated in equipment as opposed to new buildings.

As the bottom panel suggests, the trend for nonresidential construction is still decidedly negative; while we believe that the decline will moderate in the next year or so, we don't foresee an upturn before 1994. This probably puts us toward the pessimistic end of the spectrum of forecasters-- and there are some hints of a bottoming out in contracts in recent months. But the magnitude of the upside risk from this sector probably is not large, especially in terms of GDP impact.

On the other hand, the upside risk associated with our baseline projection for the federal sector is quite obvious. The top panels of chart 13 lay out our forecast for federal purchases of goods and services. I think this is a fairly solid picture, with an ongoing decline in defense spending outweighing the effects of an ongoing rise in nondefense purchases. Any legislative initiatives enacted are unlikely to alter greatly the path of federal purchases over the next two years.

The larger risks with respect to the federal budget probably reside in the tax and transfer programs. As the black bars in the middle panel indicate, the norm in the first year

and a half of recent cyclical upturns has been for there to be some discretionary fiscal stimulus. In contrast, in the current cycle the 1990 budget agreement put into place a small amount of restraint, as measured by the staff's measure of fiscal impetus. On our assumption of no change in fiscal policy, that slight restraint would continue through 1993. The President's proposals are so modest in the aggregate that, as best we can judge at this point, their passage would not reverse the situation. But one can not completely rule out something more substantial, which is why we included the simulation in the Greenbook. One thing is certain: no matter what happens, the budget deficit will remain huge, even on the NIPA basis shown at the right, which removes the distortion from the deposit insurance program.

Budget deficits appear likely also to continue afflicting states and localities. The box at the bottom right shows that, despite further tax increases and expenditure restraint, we don't expect the aggregate position of the state and local sector, excluding retirement funds, to reach balance until late next year. As shown at the left, we project that real purchases will fall further this year and then turn up in 1993-- but even that growth will be modest by past standards.

Chart 14 addresses the outlook for labor markets. There has been a lot of talk recently about restructuring and fundamental changes in productivity trends, especially in the service producing industries. There clearly is something

happening, but I would sound a note of caution. I think that what we have been seeing has more than a little in common with the sort of capitulation on the part of firms that reputedly has marked the ends of business slumps in the past, when the continuing pressures on profits and the failure of sales yet to pick up have prompted firms to throw in the towel and make the painful adjustments they've hoped to avoid. Once the process gets going, the fact that others are doing it undoubtedly provides psychological reinforcement. The burst in write-offs at the end of last year surely reflected a desire on the parts of many firms to get all the bad news behind them, given that 1991 already was a disaster.

Moreover, it has been overlooked in many recent accounts that white collar workers have not been totally immune from cost-cutting efforts in the past, and, besides, a lot of the employment cuts announced in recent months have involved assembly line workers in manufacturing firms.

The bottom line is that we think it is reasonable to assume that a better underlying trend in productivity performance will be forthcoming--but just a little better, at this point. The 1992-93 pickup in productivity shown in the top panels thus largely reflects the normal cyclical pattern.

By the same token, the relatively subdued upturn in employment this year, shown in the middle panels, is more a product of weak aggregate demand growth than it is of a radical change in operations.

The lackluster pace of hiring this year explains the further rise projected for the unemployment rate in the near term. As in the past couple of years, that rise is damped by weakness in the labor force participation rate. We think that a mixture of forces has been at work in the atypically large decline in the participation rate since 1989--some of them perhaps of a secular nature. But much of what we've seen probably reflects the normal responses to cyclical variations in labor demand, and once employment opportunities begin to multiply, participation should turn upward, producing a moderate increase in the labor force--indicated in the table at the right.

With the balance of changes in labor demand and labor supply holding the unemployment rate high through 1993, we expect that firms will be able to achieve substantial reductions in the pace of their wage and benefit increases--as indicated at the top of chart 15. Controlling medical insurance costs is likely to continue to be difficult, but employers will undoubtedly become increasingly aggressive in their efforts, and they will strive to make employees pick up some of the tab indirectly through smaller wage hikes. Clearly, our forecast implies some pressure on the norms that have conditioned decisions on nominal compensation increases in recent years: increments in wages of less than 3 percent and of well under 4 percent in total compensation sound low by the standards of the past quarter century. This may be why so many

other forecasters are less optimistic about the prospects for lower inflation next year.

However, we view the forecasted wage pattern as a natural part of the overall disinflation process that experience suggests ought to be sustained through 1993 at the projected levels of economic slack. The middle panel shows that our forecast fits nicely into the pattern of movements in core inflation that have occurred during periods when the unemployment rate has exceeded the so-called NAIRU, as estimated in econometric relations.

Finally, our overall inflation forecast anticipates that there will be no shocks arising from the volatile food and energy sectors. Food prices, the lower left panel, are expected to rise moderately, essentially in line with prices elsewhere in the economy. I should note that the risks in this forecast probably are skewed to the upside, however, given the extraordinarily low stocks of grains--especially wheat--at present.

A swing in energy prices is the main reason that the overall CPI is projected to rise faster this year than last. Our oil price forecast implies that, after declining substantially on net in 1991, retail energy prices will be rising moderately this year and next. There are always risks of surprises in this sphere--with volatile Middle East politics a continuing wildcard. Our assumption about crude prices is based on the belief that OPEC--that is, Saudi Arabia--will

adjust production fairly smoothly in response to rising Kuwaiti output and a resumption of Iraqi exports, and possibly to appreciable shortfalls output in the former Soviet Union.

With those international allusions, I should turn the proceedings over to Ted for a look at the external aspects of our projection.

E. M. Truman  
February 4, 1992

FOMC Chart Show Presentation: International Developments

My presentation on the external sector focuses primarily on three aspects of our forecast: the foreign exchange value of the dollar, growth prospects abroad, and cyclical influences on U.S. external accounts.

Chart 16 addresses the first of these issues: the dollar. As is shown by the red line in the top panel, the foreign exchange value of the dollar in terms of other G-10 currencies on a real, or price-adjusted, basis is trading near its lows of recent years, after its ups and downs over the past year. As can be seen by comparing the black line, the dollar's rise and fall over the past year appears to have been loosely associated with changes in the differential between U.S. and foreign real long-term interest rates.

The dollar's movements in nominal terms against the other G-10 currencies on the weighted-average basis tend to be dominated by movements against the DM, since all except two of the ten currencies in our index are now tied directly or indirectly to the DM through actual or shadow participation in the exchange rate mechanism of the European Monetary System. As is shown in the box on the left of the middle panel, the dollar has depreciated against the DM by 10 percent since last June, and its depreciation against the pound sterling has been almost as large.

The box at the right presents recent information on three-month and long-term interest rates in Germany, Japan and the United States, while the charts in the lower panel provide a somewhat longer perspective on the downtrend in interest rates here and, on average, abroad. Our outlook for interest rates abroad is that short rates and, to a much lesser extent, long rates will gradually drift lower as inflation pressures ease in Germany, and slow growth persists in Canada, the United Kingdom and Japan.

As Mike has indicated, we are projecting that, over the forecast period, the dollar will remain essentially unchanged on balance in nominal terms at around its recent level, and the same overall stability should prevail in real terms as well. This point forecast is almost certainly wrong, but we feel that the risks are reasonably well balanced.

Turning to economic conditions in the major foreign industrial economies, the top panels of the next chart display trends in industrial production on a year-over-year basis. In general, growth in industrial production has been declining or negative. For western Germany, the right panel, we believe that the recent data are broadly consistent with no growth in real GNP in the fourth quarter of last year. By contrast, France is a relative bright spot with a recent modest pick up in industrial production.

Inflation has been on a downward trend recently in most of the major industrial countries, with the general slowing of economic activity, declining oil prices, the appreciation of most

currencies against the dollar, and the passing of certain temporary factors. As is shown in the middle panels, this has been the case for Canada, Japan and France. However, Germany is an important exception to this pattern; boosted by increases in excise taxes at mid-year, German inflation has moved above the French rate.

The recent G-7 meeting articulated a shared consensus that actual and prospective growth in the G-7 countries has slowed. The issue is whether this diagnosis is likely to lead to significant changes in policies in the months to come. On the whole, our judgment is that it will not. To provide some perspective on this issue, the box in the lower panel presents, for the foreign G-7 countries, staff estimates of output gaps, as of the fourth quarter of last year, along with estimates of potential GDP growth rates going forward, and our projections of growth this year.

As is shown in the first two lines in the box, we estimate that in Japan and western Germany output at the end of last year was at or above potential. We are projecting that Japanese GDP growth this year will be below potential and below the official Japanese forecast; this will probably lead to further stimulative policy actions in that country as the year progresses.

The West German economy is producing at about its potential, and under current policies, growth this year is projected to keep it there. Moreover, Germany's budget deficit remains enlarged, wage pressures are a major concern, money

growth has increased, and inflation is relatively high. Consequently, we see little scope for stimulative policy actions in Germany aside from some easing of short-term interest rates when and if inflation pressures subside.

This situation for Germany limits the scope for monetary or fiscal stimulus by its major EMS partners, France, Italy and the United Kingdom. With the possible exception of the United Kingdom, where the March pre-election budget is expected to be mildly expansionary, we do not anticipate any significant stimulative policy actions in these countries despite the negative output gaps shown in the chart, and our projection that GDP growth rates this year will be less than potential.

In Canada, the estimated output gap is very large, but we do not expect a significant boost from macro-economic policies. Short-term interest rates are likely to continue to decline as long as the Bank of Canada is confident that it can hit its 3-percent inflation target for the year, which we think is likely. The scope for easier fiscal policy in Canada is constrained by continuing large deficits at the federal and provincial level. Indeed, last week the federal government froze hiring and discretionary spending for the balance of the fiscal year ending in March.

Chart 18 summarizes our outlook for growth and inflation abroad. As shown by the red bars in the top left panel, we are projecting a moderate acceleration of economic activity for all foreign countries on average over the two halves of 1992 and into 1993. The right panel shows that growth slowed in the G-6

countries in the second half of last year and is projected to pick up as 1992 progresses. Aside from the major industrial countries, growth held up quite well last year as lower oil prices helped some countries and conditions improved somewhat in Latin America, especially Mexico. For these other countries as a group, growth should be sustained this year and rise in 1993, stimulated in part by exports to the industrial countries.

The middle panel depicts our outlook for GDP growth in selected G-6 countries. The general pattern is quite similar across countries: following slowing or negative growth last year, we are projecting a moderate pick-up in the first half of this year, followed by somewhat faster growth in the second half and in 1993.

The bottom panel presents our forecast for consumer prices in the major industrial countries. Consistent with persistent or emerging output gaps in most G-7 countries, inflation is projected to remain subdued in the near term and drift lower over the forecast period. U.S. inflation is expected to be roughly in line with the average in the other G-7 countries.

One risk to the outlook for economic activity abroad that has received increased attention in recent months, and one that we have tried to take account of in our projection, is the possibility that an overhang of debt, or balance-sheet problems more generally, in some or all of the major foreign industrial economies will lead to a retrenchment, and retard the recovery or expansion of economic activity. The next chart tries to provide

some perspective on this possibility. It presents data on ratios of gross debt to GDP for non-financial firms and households in the United States and five other countries. The ratios are indexed to the average for each country from 1970 to 1980. Thus, the chart highlights the level of debt relative to that particular norm in 1985 as well as changes through 1990 -- when the slowdown in economic activity began and available, comprehensive data leave off.

Recognizing that these ratios can be affected by institutional changes as well as by changes in the stance of overall macro-economic policies, our cautious interpretation of them is that problems associated with an overhang of debt are likely to be present in Japan and the United Kingdom, the top panels. This is not surprising: The debt problems in the United Kingdom are well known, probably have retarded recovery in that country, but have begun to recede. In Japan, such problems have been long recognized as the other shoe that is yet to drop, following the substantial decline in the stock market. What may be surprising, and also encouraging, is that in Canada, Germany and France these measures suggest a relative absence of problems, at least judging by the data for these three countries -- middle right and bottom panels -- compared with those for the United States -- the middle left panel.

As Tom Simpson's detailed dissection of U.S. balance sheets has amply demonstrated, no single set of data on debt and financial problems is likely to be definitive. On balance, however, our judgment at this point is that problems associated

with an overhang of debt and inflated asset values represent only a limited risk to our overall projection of economic activity abroad and to the demand for U.S. exports.

The top left panel of chart 20 presents our outlook for real nonagricultural exports. With a relatively low dollar, only small increases in prices of U.S. exports, and a pick-up of economic activity abroad, we are projecting that U.S. nonagricultural exports will expand at an average annual rate of 8 to 9 percent over the next two years. One to two percentage points of that growth is expected to be due to computer exports. A larger contribution is expected to come from the capital goods sector as a whole, reflecting a recovery in investment demand as economic activity picks up abroad.

The growth rate of real non-oil imports -- the right panel -- is projected to be considerably slower -- averaging in the 5 to 6 percent range -- largely because of relatively low U.S. growth and our improved price competitiveness.

The bottom panel summarizes our outlook for the U.S. external accounts. The first line shows that, on an annual basis, our underlying current account balance (that is, abstracting from the influence of Desert Shield and Storm) was cut in half last year, is projected to record a further improvement this year, and less of an improvement next year. Trade in goods -- line 2 -- contributed importantly to the current account improvement last year, but helps little on balance this year and next. On the other hand, trade in services (line 3) continues to make a growing positive contribution to the

current account balance. With lower dollar interest rates and a recovery of profits on investments abroad as well as in the United States, investment income -- line 4 -- is expected to improve this year and next.

The last line shows that real GDP net exports of goods and services are projected not to change much over the forecast period, and therefore to provide little net contribution to the expansion of real GDP in 1992 and 1993. Although the projected increase in nonagricultural exports is larger than that in non-oil imports, the expected rise in oil imports largely offsets the difference. Oil imports increase as the growth of consumption picks up and domestic production declines. Nevertheless, exports provide an important boost to domestic income and production, and it is encouraging that the continuation of their rapid growth is sufficient to keep our overall external accounts headed in a positive direction.

The final international chart provides a longer-term perspective on the evolution of our external balance and the influence of cyclical factors on it. The top panel shows how, on a full-employment basis, the U.S. external balance moved with the federal budget deficit from 1981 to 1987. Over the past four years, the budget deficit (the black line) has stabilized at about three percent of GDP. Over the same period, the external balance (the red line) has narrowed, and with it our net access to foreign savings. I would submit that, on the margin, these

developments have contributed to upward pressure on U.S. long-term interest rates. Moreover, as shown in the chart, this trend is projected to continue.

The middle panel presents staff estimates of the evolution of the gap between actual and potential output since 1981 and over the projection period for the United States (the red line) and a U.S.-export-weighted average of the foreign G-7 countries (the black line). At the end of last year, the shortfall of U. S. output relative to potential was a bit larger than for the foreign G-7 countries, but the U.S. output gap is projected to narrow somewhat more rapidly over the forecast period.

The bottom panel compares the actual and projected external balance (the black line) with an estimate of the cyclically adjusted balance (the red line). The latter measure assumes output is at potential abroad as well as in the United States. By 1993, on this hypothetical, cyclically adjusted basis, the external deficit would be essentially eliminated.

On that, perhaps, surprising note, Mr. Chairman, I'll pass the baton back to Mike.

xxxxxxxxx

As a reward for your patient attention to our lengthy presentation, I shall conclude briefly. Chart 22 provides a summary of the forecasts you submitted for use in the Humphrey-Hawkins report. I must apologize for failing to incorporate a revision: The range for the unemployment rate should read 6-3/4 to 7-1/4 percent, not 6-1/2 to 7-1/4. The central tendency ranges I've defined encompass the Administration's numbers--at least for their forecast that incorporates the President's budget proposals. The Budget document also presents a so-called "business as usual" projection built on the assumption that those proposals are not adopted, and it shows real GDP growth of only 1.6 percent this year--around the low end of your full range of forecasts and below the staff's forecast, which, as I've noted, doesn't include a fiscal stimulus. Obviously, one question that may arise about the projections that are included in the Board's report to the Congress will be what fiscal assumptions are embedded in your numbers.

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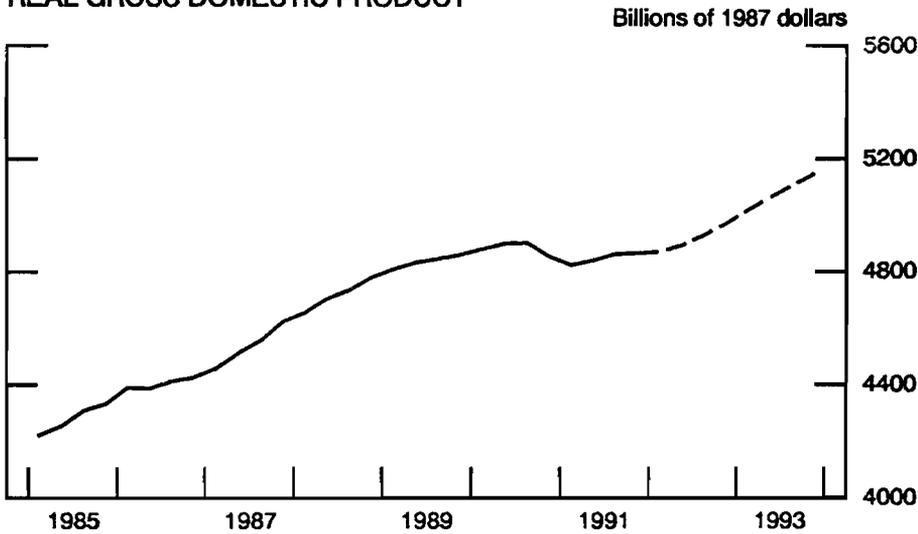
*Material for*

*Staff Presentation to the  
Federal Open Market Committee*

*February 4, 1992*

### Forecast Summary

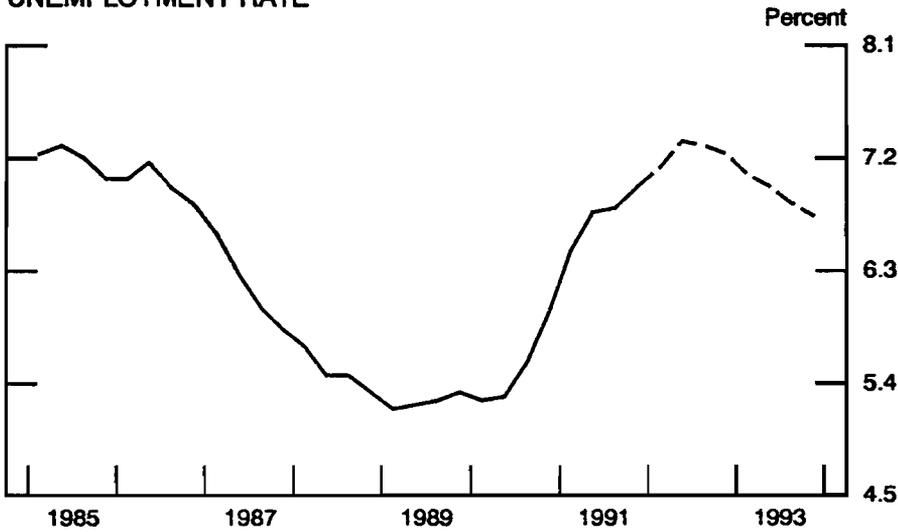
#### REAL GROSS DOMESTIC PRODUCT



#### GDP GROWTH

Percent, SAAR	
1992:Q1	.4
1992:Q2	1.9
1992:Q3	2.9
1992:Q4	3.3
1993:H1	3.6
1993:H2	3.3

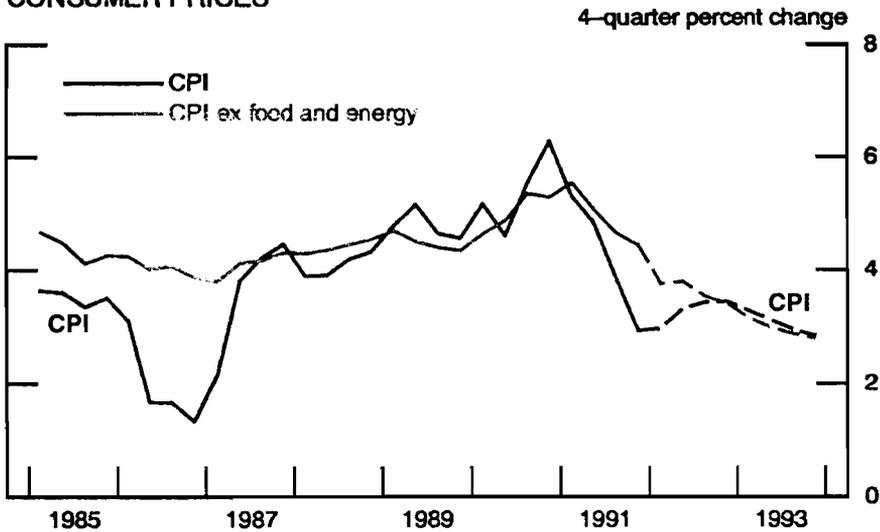
#### UNEMPLOYMENT RATE



#### UNEMPLOYMENT RATE

Percent	
1992:Q1	7.1
1992:Q2	7.3
1992:Q3	7.3
1992:Q4	7.2
1993:Q2	7.0
1993:Q4	6.7

#### CONSUMER PRICES



#### CPI INFLATION

Percent, SAAR	
1992:Q1	3.5
1992:Q2	3.5
1992:H2	3.3
1993:H1	2.9
1993:H2	2.8

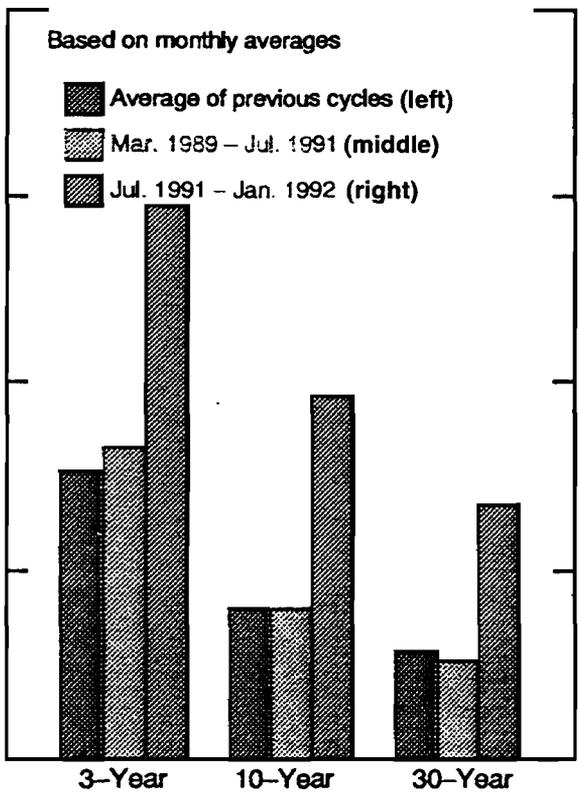
## **KEY FACTORS IN THE STAFF FORECAST**

- Federal funds rate assumed to remain at 4 percent through 1993.
- Long-term interest rates projected to fall further.
- Credit crunch should ease somewhat by 1993.
- Fiscal policy assumed unchanged—except for withholding adjustment.
- Dollar projected to be essentially unchanged from current level.
- Oil prices assumed to rise a little in the next several months and then to stabilize at \$18 per barrel for imported crude.

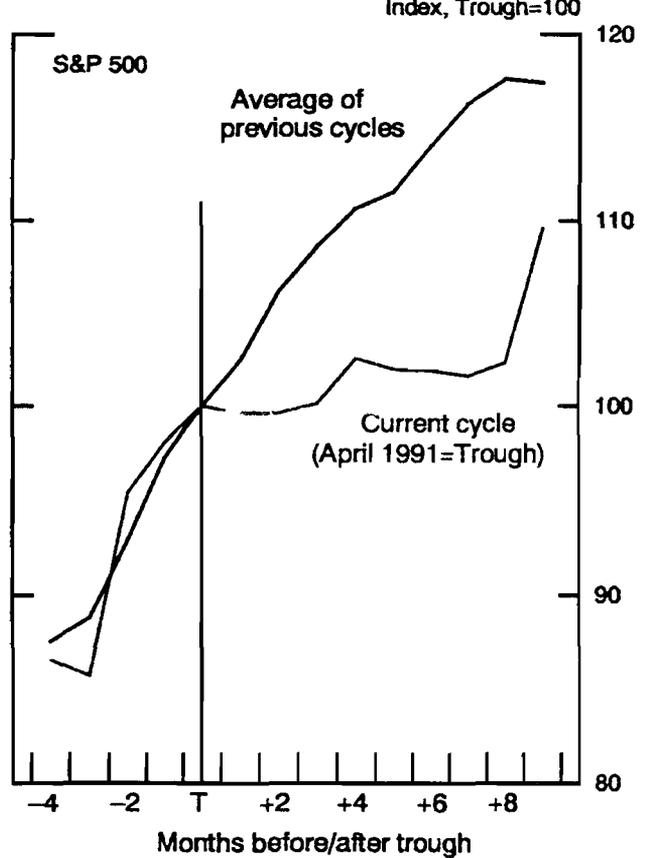
RATES ON FEDERAL FUNDS AND 10-YEAR TREASURY NOTES



RATIO OF CHANGE IN LONGER-TERM RATE TO CHANGE IN T-BILL RATE\*



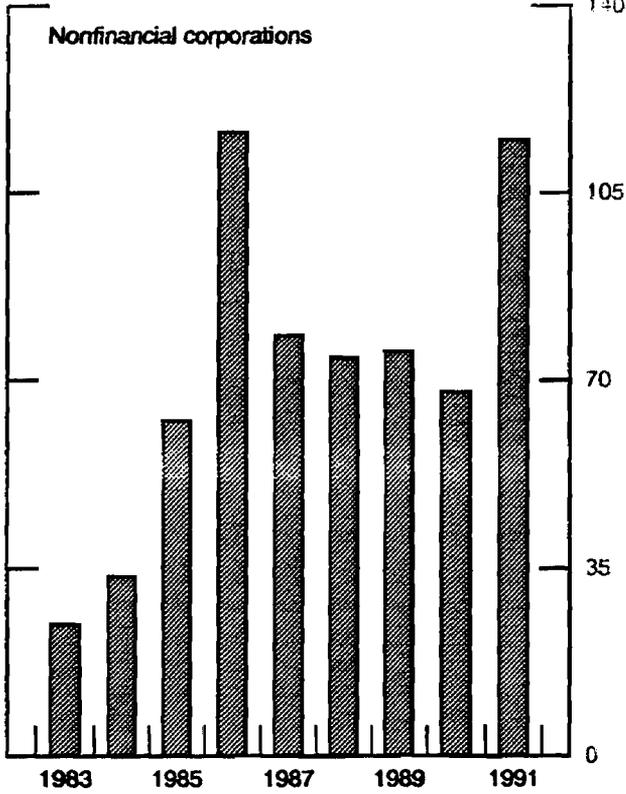
CYCLICAL BEHAVIOR OF STOCK PRICES



\*Ratio of peak-to-trough change in bond or note rate to change in bill rate over specific cycle in bill rate.

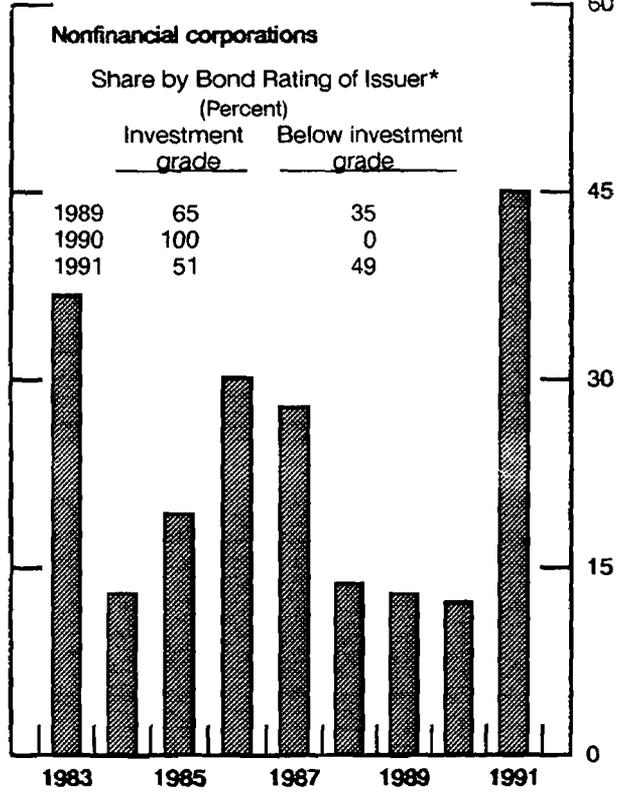
**GROSS PUBLIC ISSUANCE OF BONDS**

Billions of dollars



**GROSS PUBLIC ISSUANCE OF EQUITY**

Billions of dollars

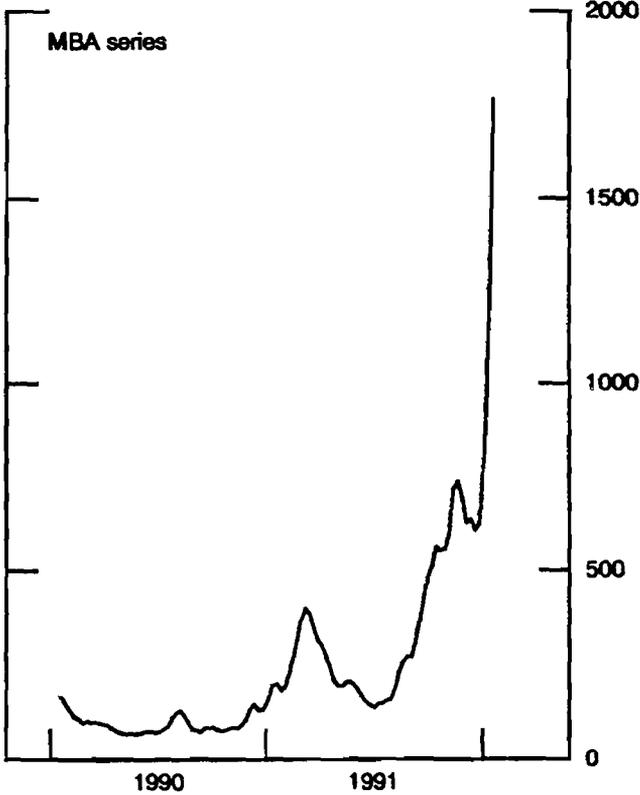


Share by Bond Rating of Issuer\*  
(Percent)

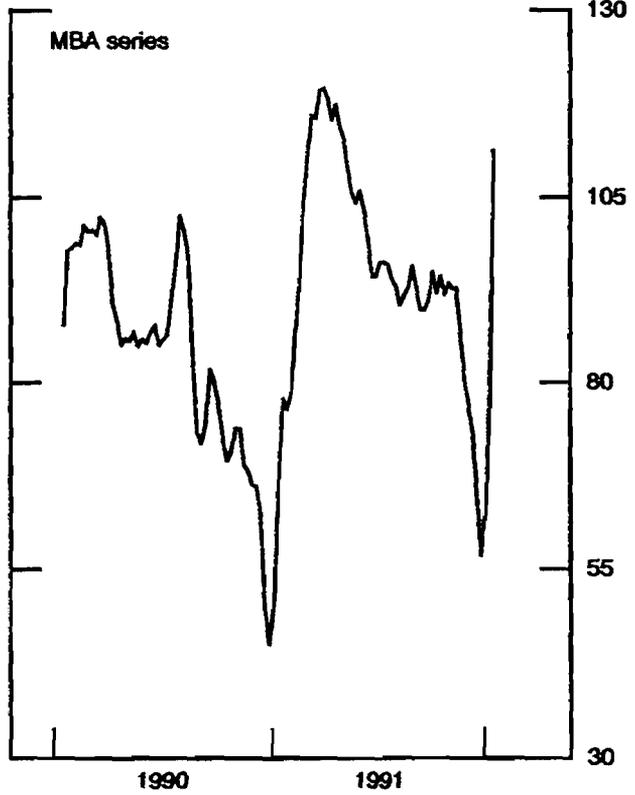
	Investment grade	Below investment grade
1989	65	35
1990	100	0
1991	51	49

\*Issues of \$200 million or more.

**MORTGAGE APPLICATIONS FOR REFINANCING**  
Index, 1990=100

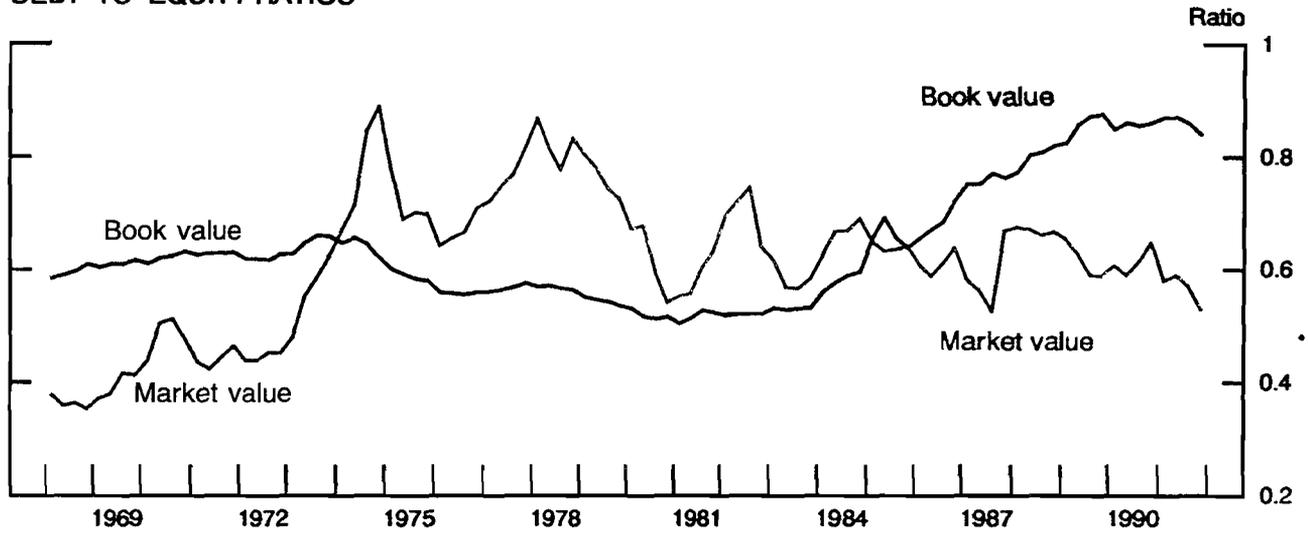


**APPLICATIONS FOR HOME PURCHASE**  
Index, 1990=100

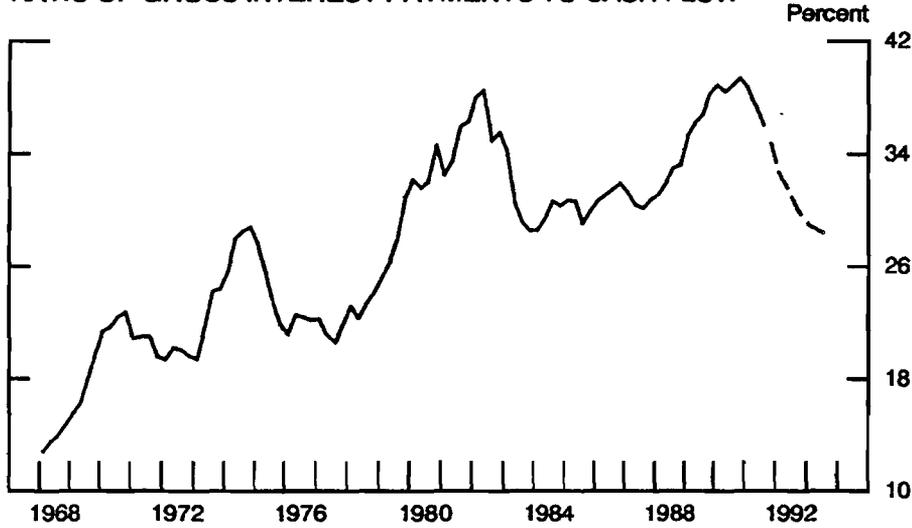


### Nonfinancial Corporations

#### DEBT-TO-EQUITY RATIOS



#### RATIO OF GROSS INTEREST PAYMENTS TO CASH FLOW

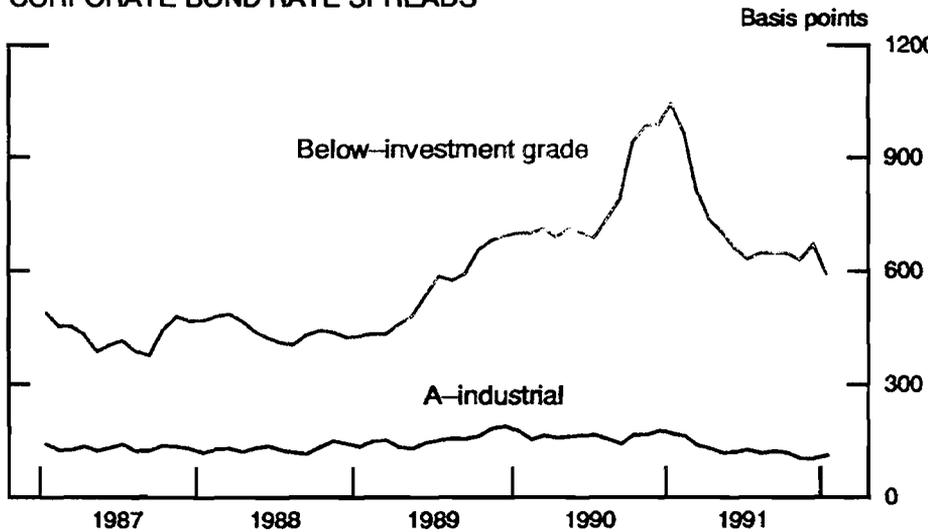


#### NET INTEREST EFFECT

Estimated impact of decline in interest rates on net interest payments (billions of dollars)

1991	-11.9
1992	-37.3
1993	-46.5

#### CORPORATE BOND RATE SPREADS

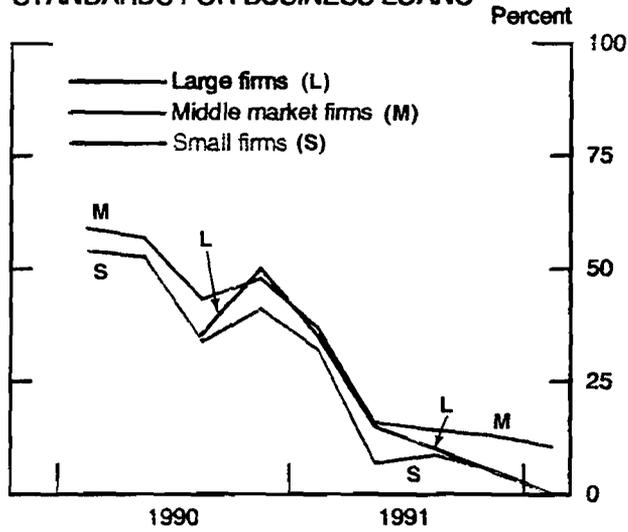


#### RATING ACTIONS\*

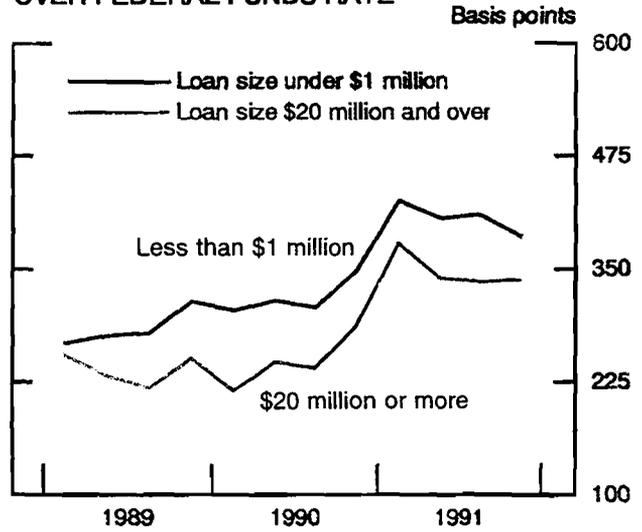
	Upgrades	Down-grades
1987	23	39
1988	26	44
1989	22	57
1990	20	72
1991		
Q1	25	66
Q2	24	71
Q3	21	48
Q4	25	45

\*Quarterly rate, Moody's

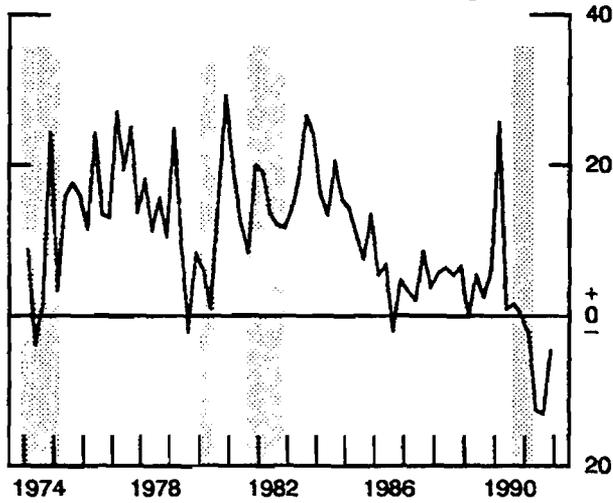
**BANKS TIGHTENING UNDERWRITING STANDARDS FOR BUSINESS LOANS**



**SPREAD OF BUSINESS LOAN RATES OVER FEDERAL FUNDS RATE**



**BUSINESS LOANS AT SMALL BANKS**  
Percent change, SAAR

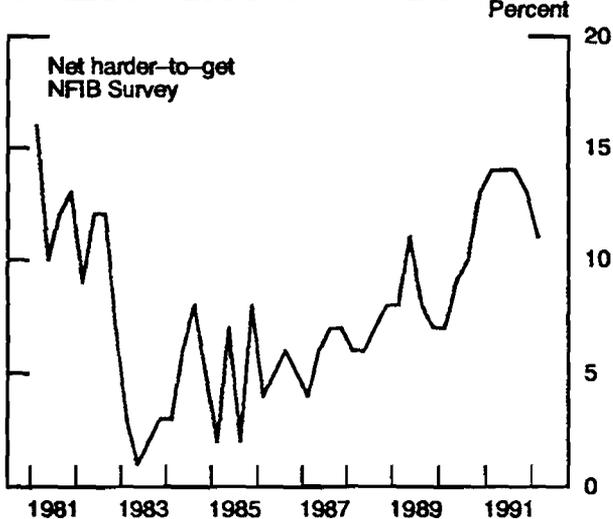


**BORROWING BY MANUFACTURING FIRMS**

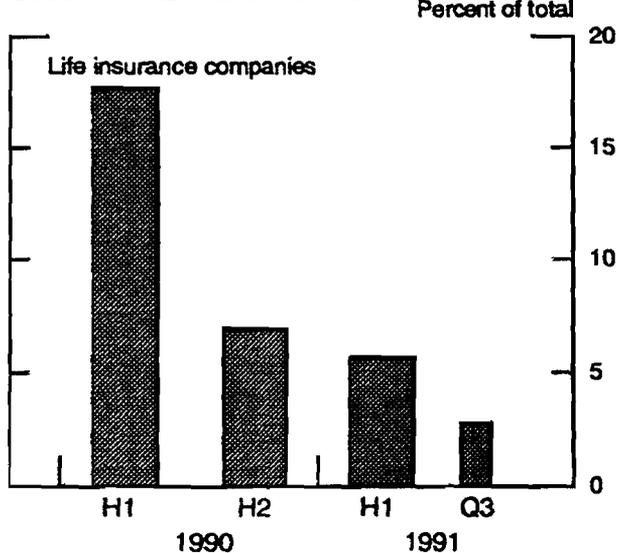
Q3 to Q3 changes, \$billions

	Small and mid-size		Large	
	Bank	Other	Bank	Other
1988	12.4	4.2	11.0	30.0
1989	25.6	13.8	26.0	60.0
1990	5.1	4.1	18.8	4.7
1991	-1.2	3.8	-1.0	21.4

**SMALL BUSINESS CREDIT AVAILABILITY**

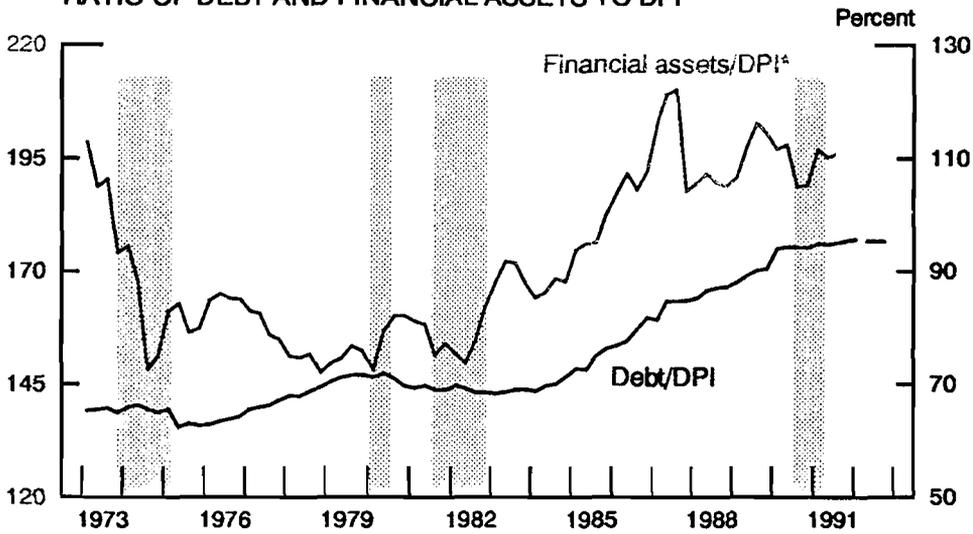


**SHARE OF PRIVATE PLACEMENTS BELOW INVESTMENT GRADE**



# Household Sector

**RATIO OF DEBT AND FINANCIAL ASSETS TO DPI**

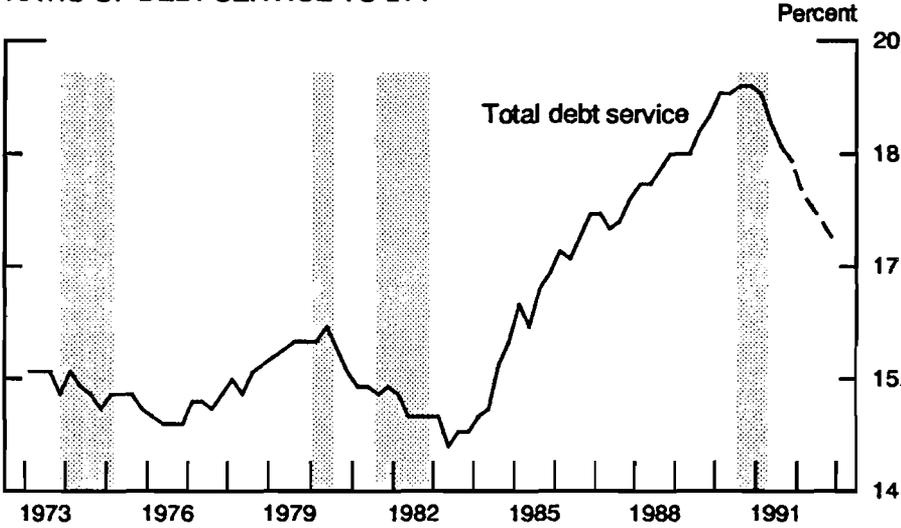


\*Deposits, credit market instruments, mutual fund shares, and equities.

**DEBT GROWTH**

	Percent	
	Cons. credit	Mortgage
1988	7.3	12.2
1989	5.8	10.3
1990	1.8	8.8
1991	-1.7	5.6
1992	.4	6.2
1993	5.4	7.3

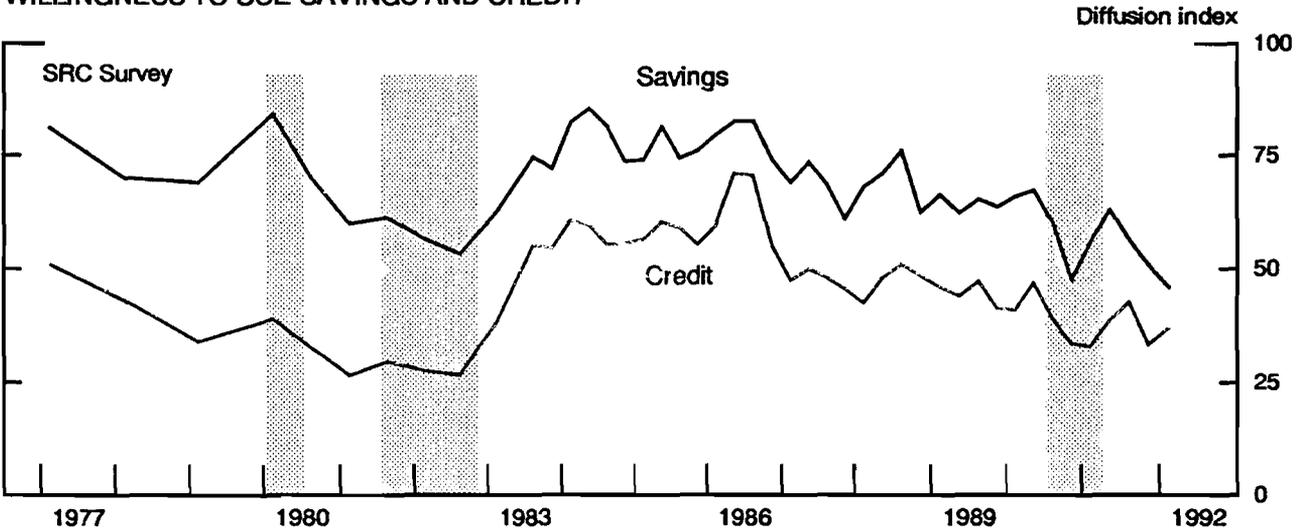
**RATIO OF DEBT SERVICE TO DPI**



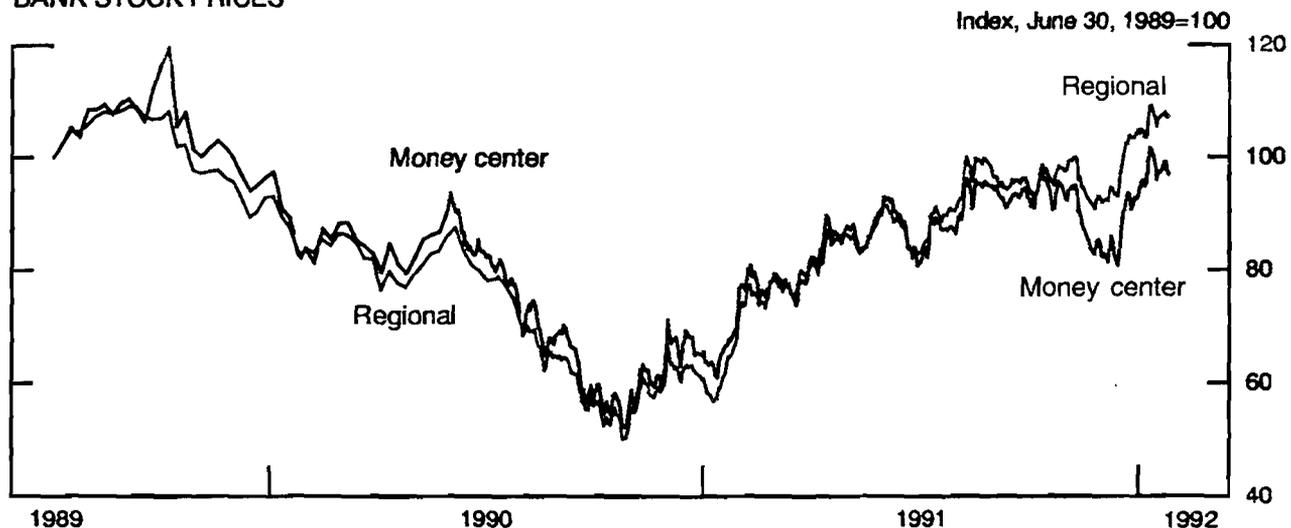
**NET INTEREST EFFECT**

Impact of decline in interest rates on interest income minus interest payments	
Family net worth	
\$10K or less	+
\$10K - \$100K	0
\$100K or more	-

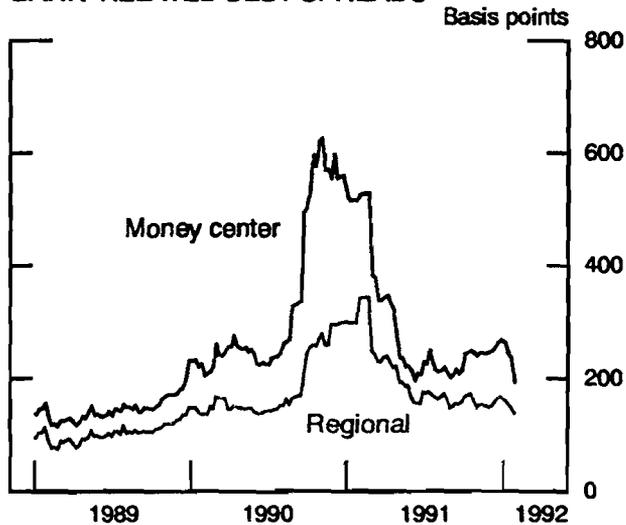
**WILLINGNESS TO USE SAVINGS AND CREDIT**



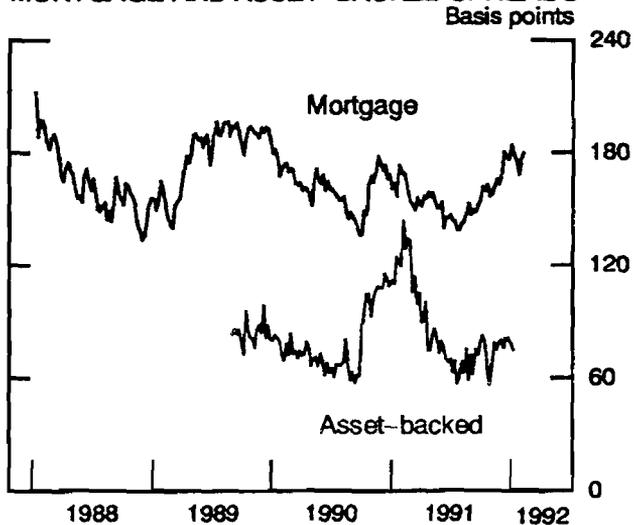
**BANK STOCK PRICES**



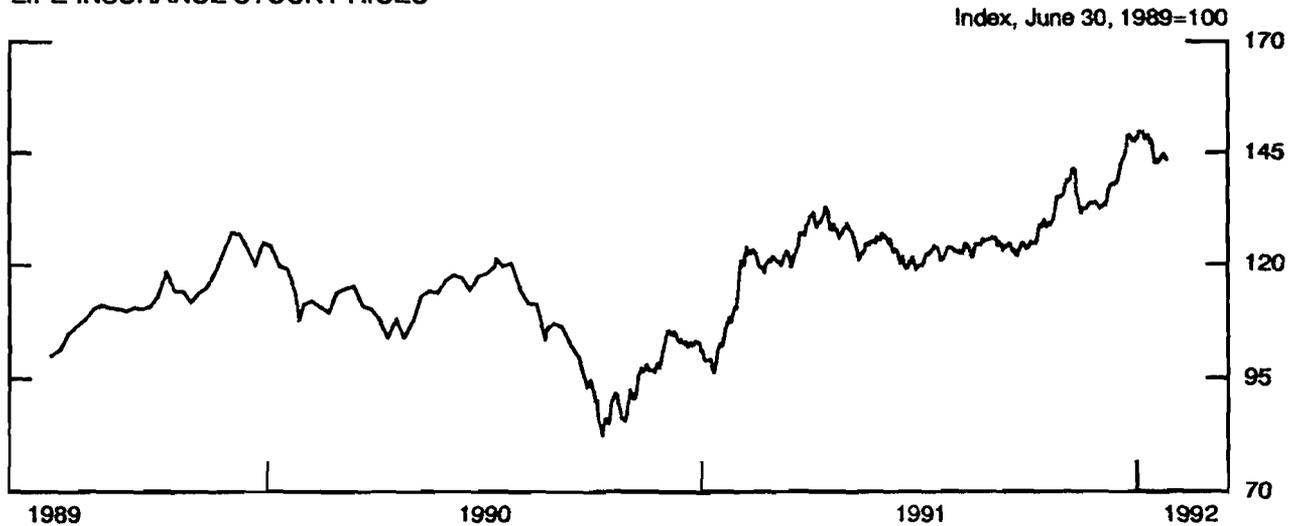
**BANK-RELATED DEBT SPREADS**



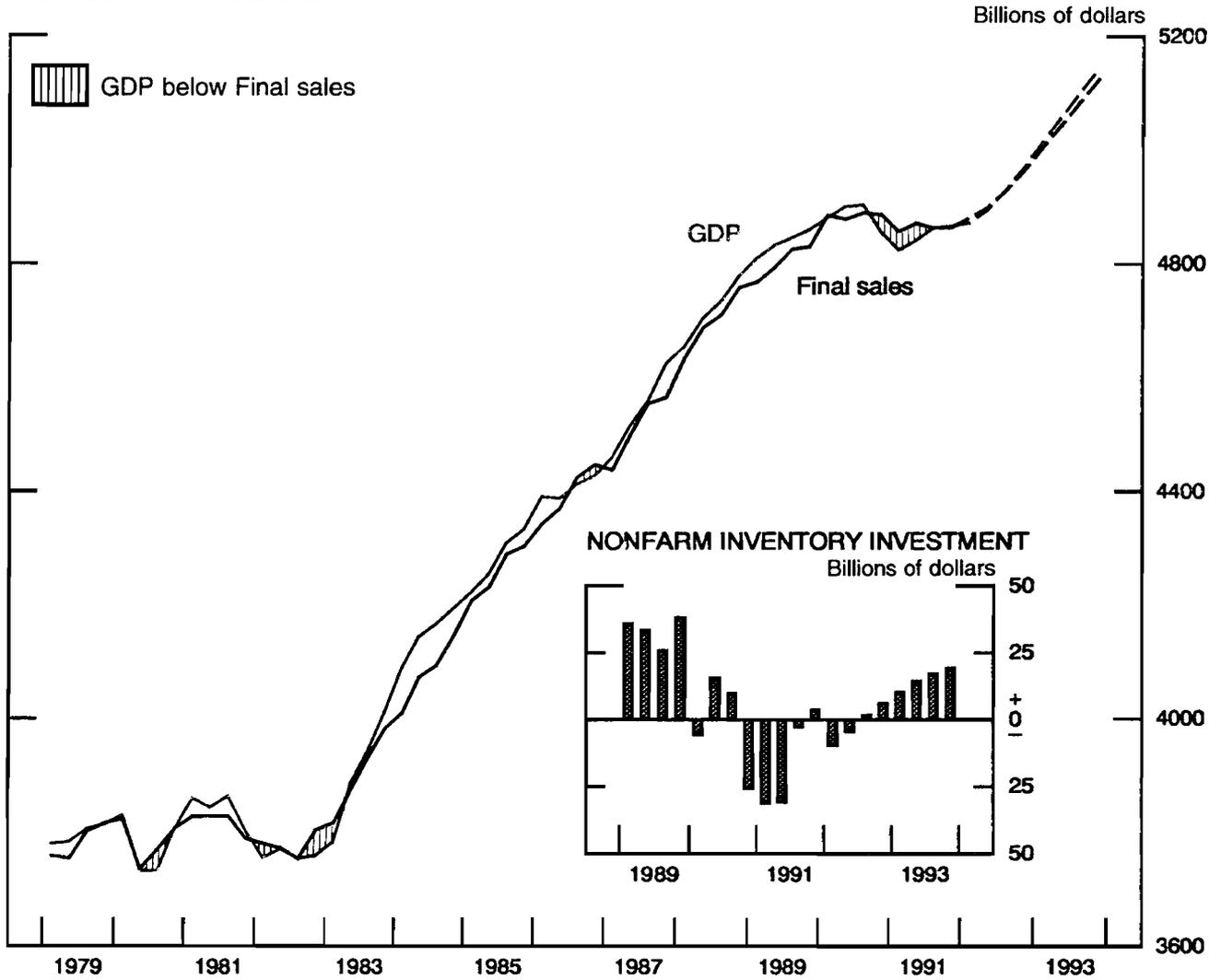
**MORTGAGE AND ASSET-BACKED SPREADS**



**LIFE INSURANCE STOCK PRICES**

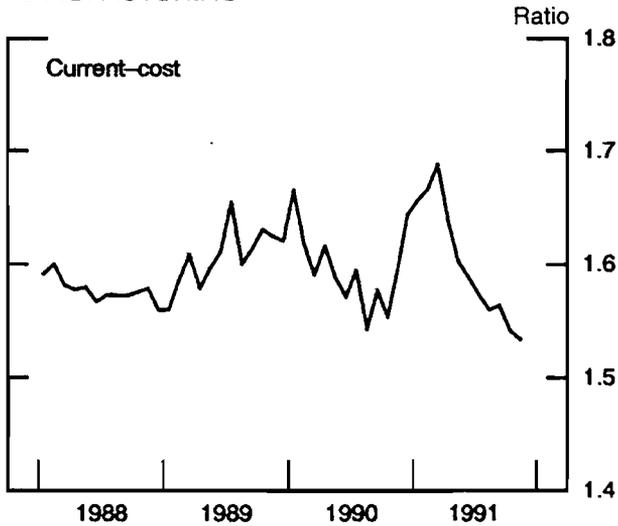


REAL GDP AND FINAL SALES

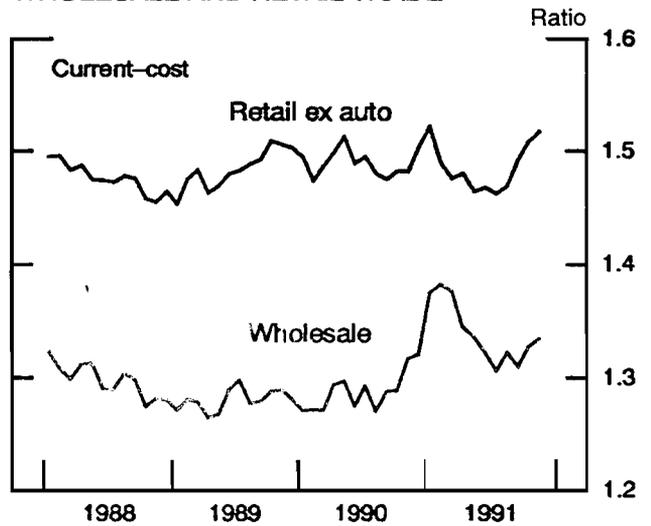


INVENTORY-SALES RATIOS

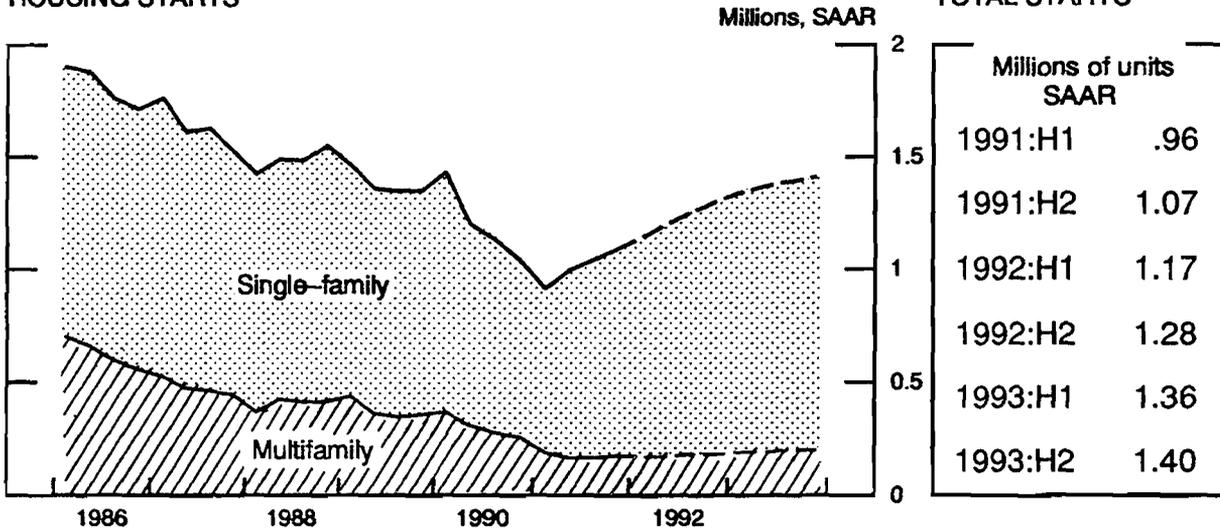
MANUFACTURING



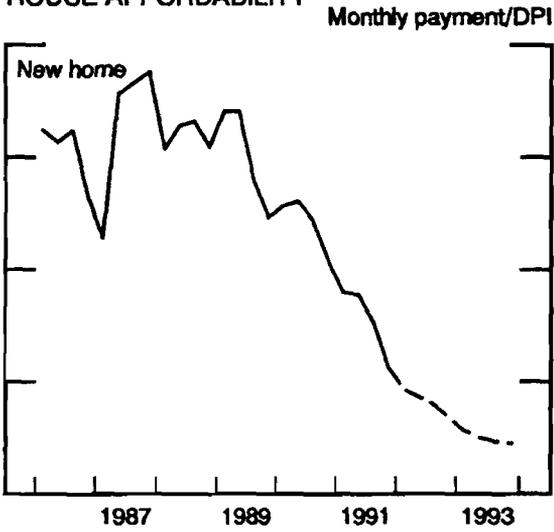
WHOLESALE AND RETAIL TRADE



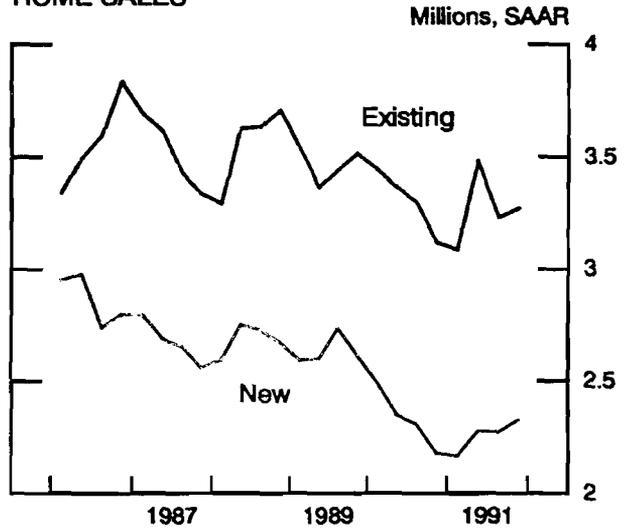
HOUSING STARTS



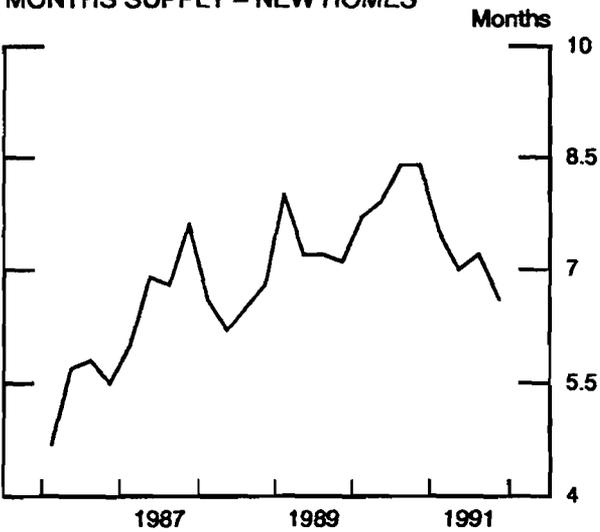
HOUSE AFFORDABILITY



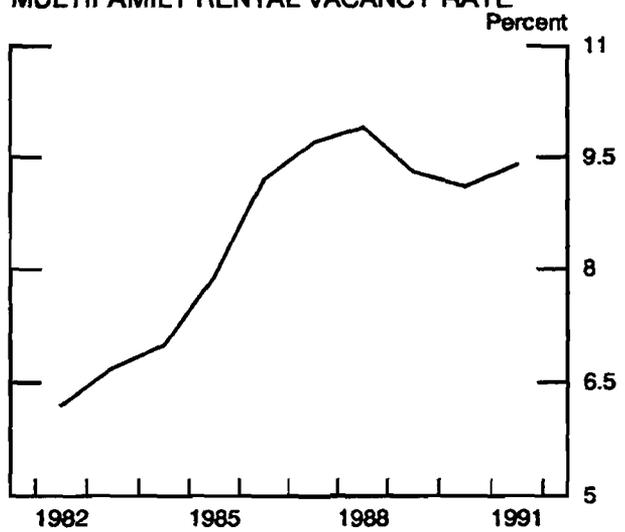
HOME SALES



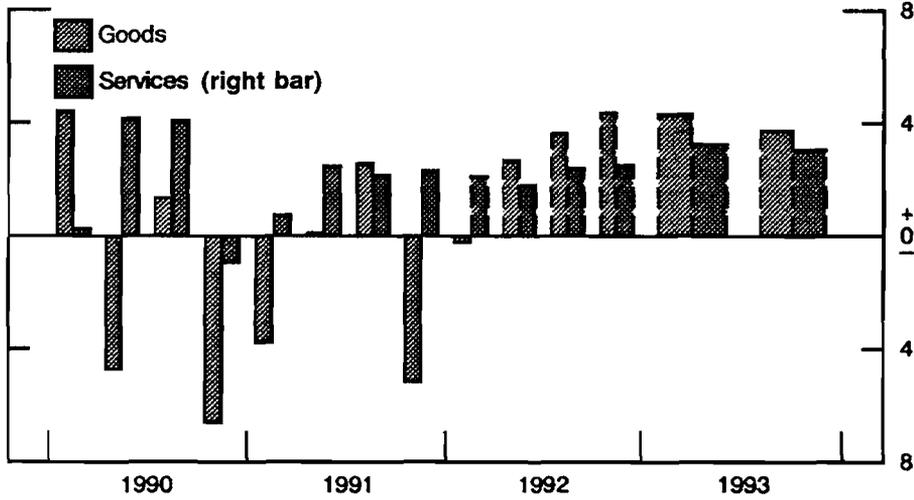
MONTHS SUPPLY - NEW HOMES



MULTIFAMILY RENTAL VACANCY RATE



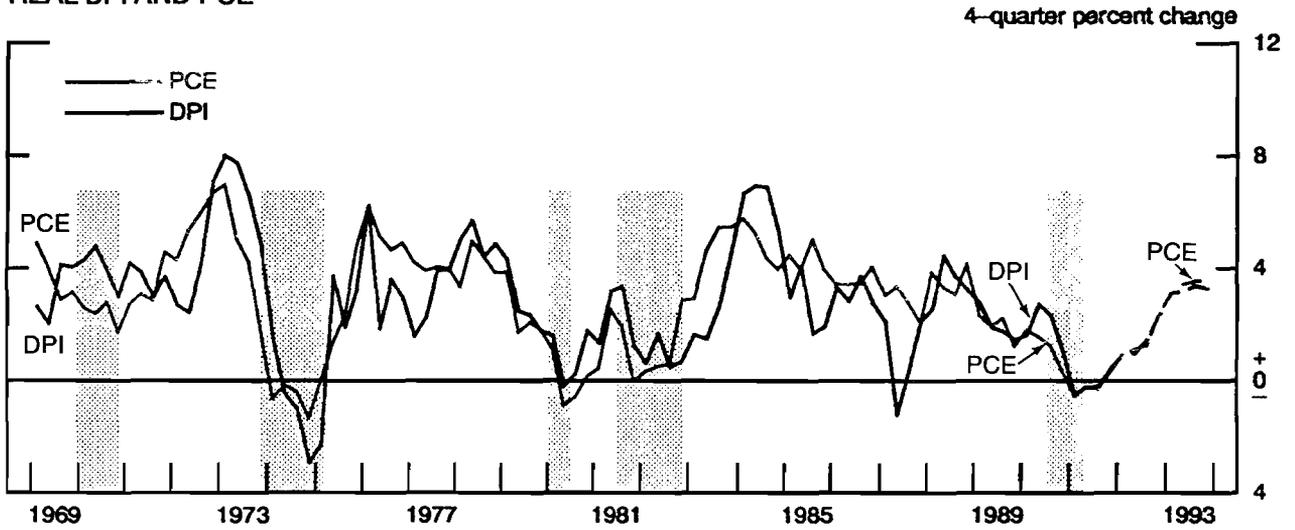
REAL CONSUMER SPENDING



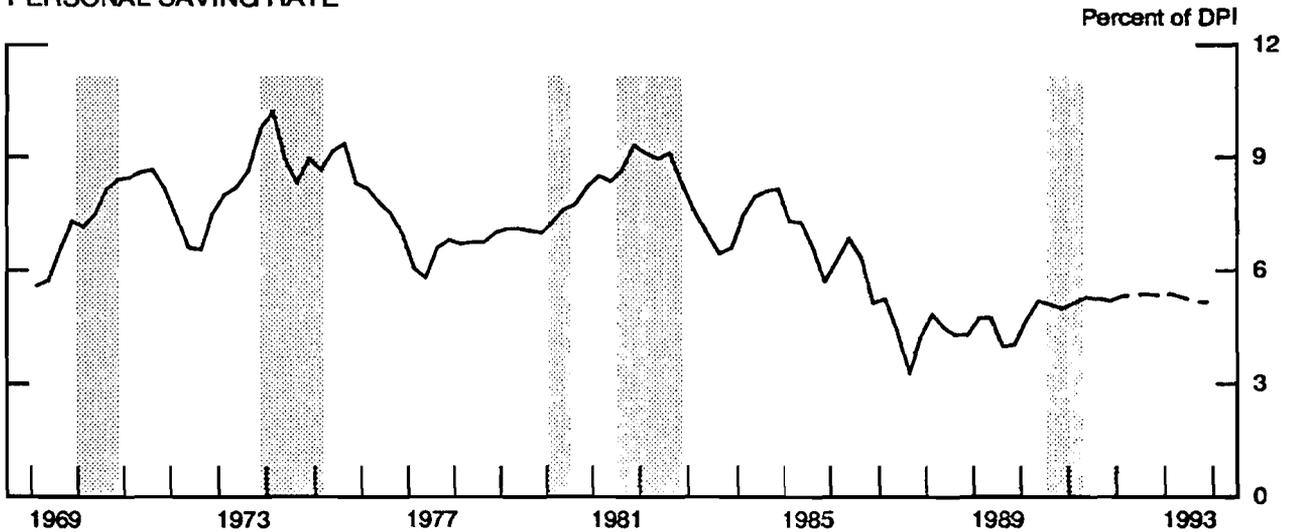
PCE GROWTH

Percent change, SAAR	
1992:Q1	1.1
1992:Q2	2.2
1992:Q3	2.9
1992:Q4	3.3
1993:H1	3.7
1993:H2	3.4

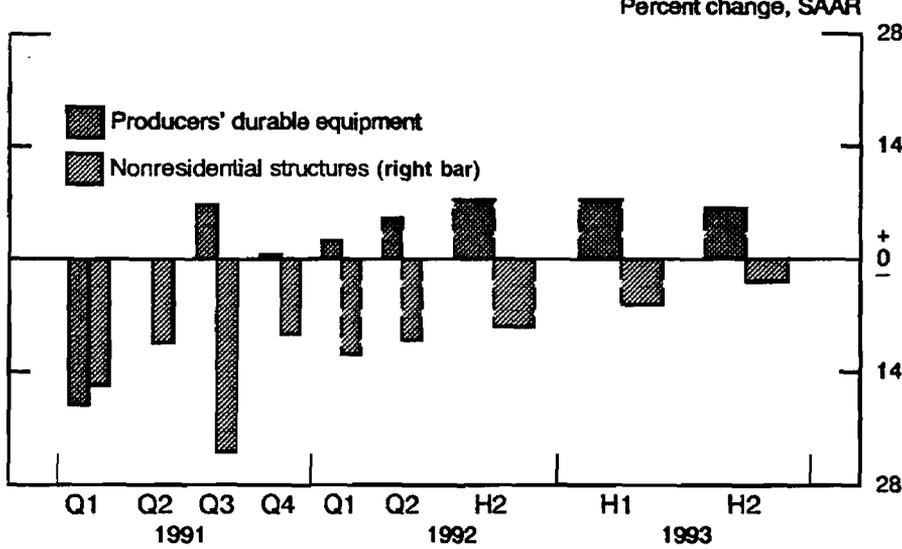
REAL DPI AND PCE



PERSONAL SAVING RATE



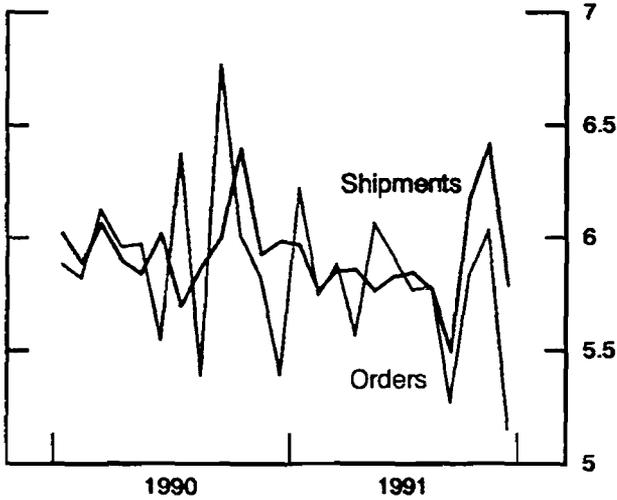
REAL BUSINESS FIXED INVESTMENT



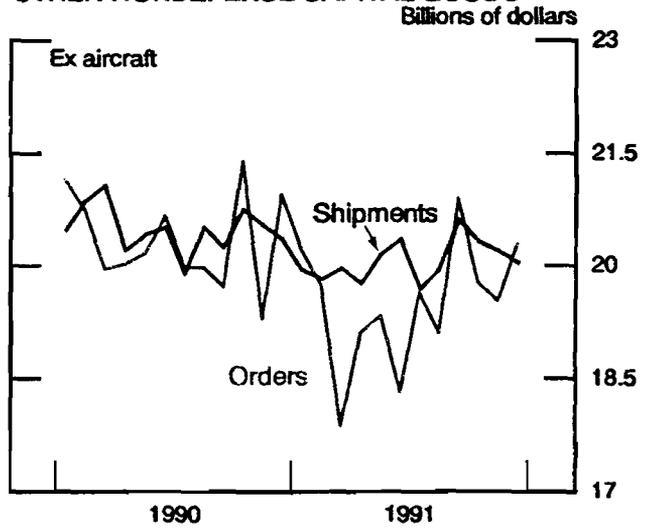
TOTAL BFI GROWTH

Percent, SAAR	
1992:Q1	-1.9
1992:Q2	.7
1992:Q3	2.6
1992:Q4	3.3
1993:H1	3.9
1993:H2	4.0

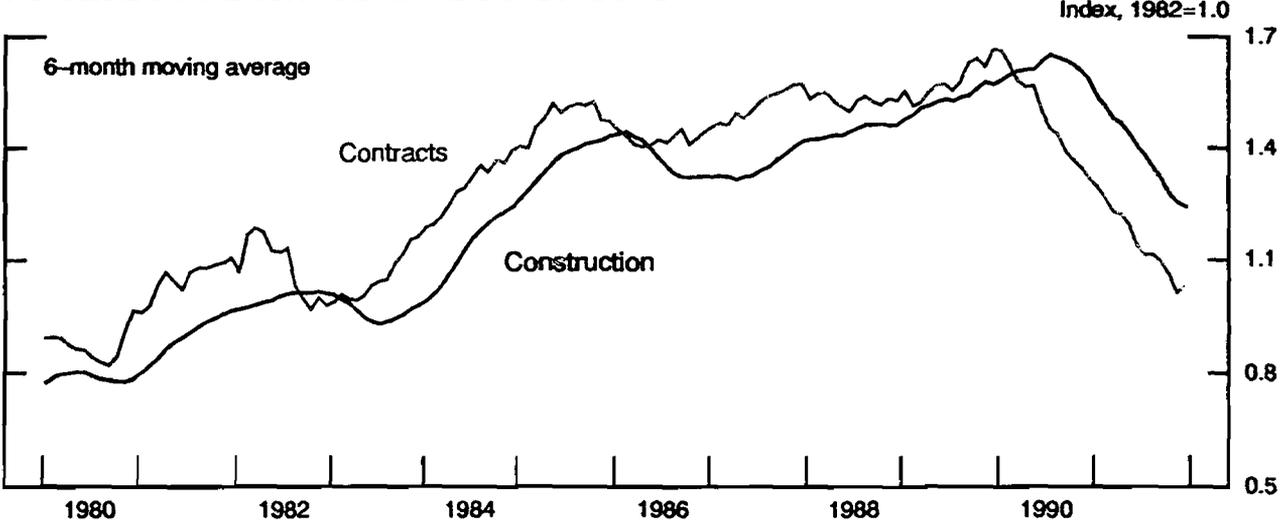
SHIPMENTS AND ORDERS FOR COMPUTERS



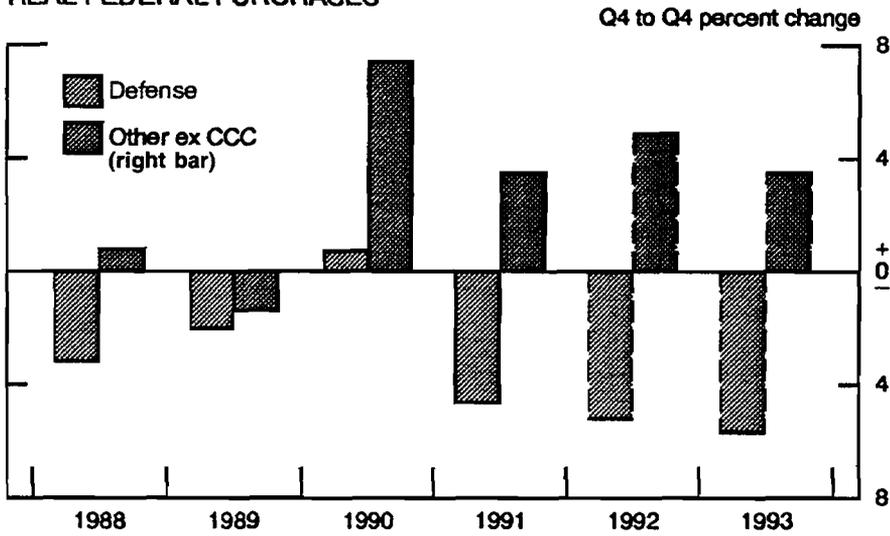
SHIPMENTS AND ORDERS FOR OTHER NONDEFENSE CAPITAL GOODS



NONRESIDENTIAL CONTRACTS AND CONSTRUCTION



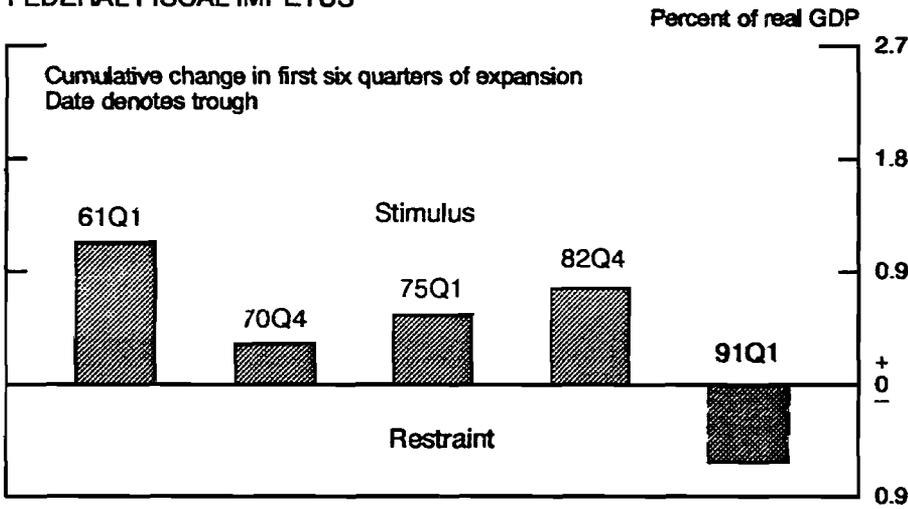
**REAL FEDERAL PURCHASES**



**TOTAL PURCHASES**

Q4 to Q4 percent change	
1988	-3.4
1989	-1.2
1990	2.3
1991	-3.2
1992	-1.3
1993	-2.9

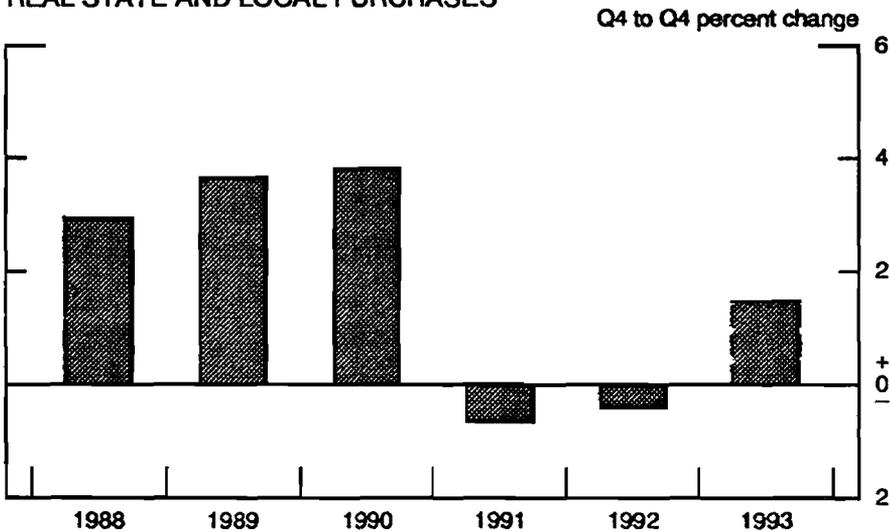
**FEDERAL FISCAL IMPETUS**



**NIPA DEFICITS**

\$Billions	
FY88	141
FY89	122
FY90	153
FY91	189
FY92	253
FY93	256

**REAL STATE AND LOCAL PURCHASES**

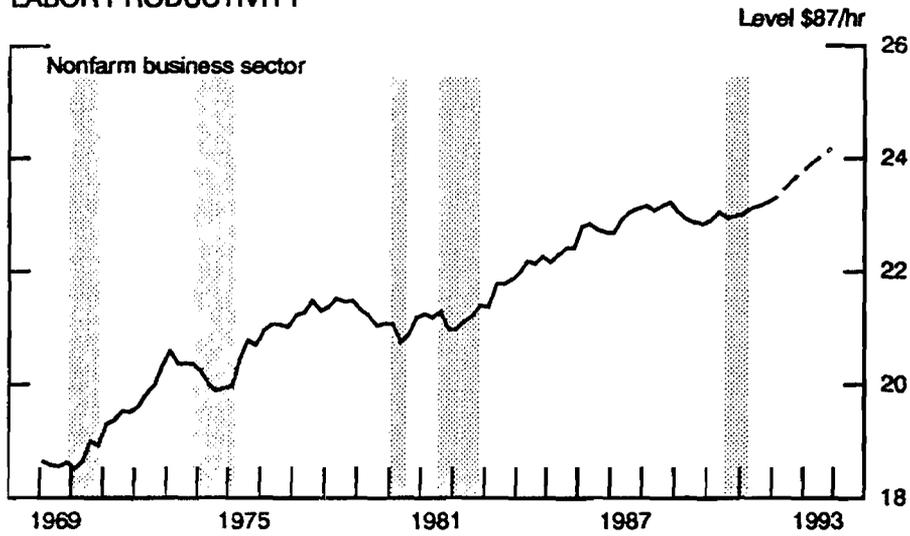


**OPERATING DEFICIT**

\$Billions, SAAR	
1991:H1	-41
1991:H2	-30
1992:H1	-25
1992:H2	-14
1993:H1	-6
1993:H2	0

Chart 14

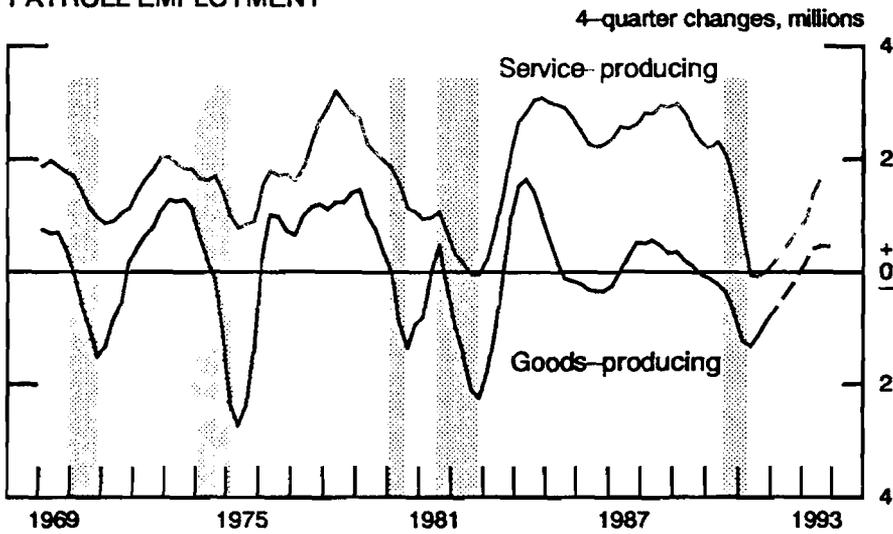
LABOR PRODUCTIVITY



PRODUCTIVITY GROWTH

Percent per year	
1988	.5
1989	-1.6
1990	.0
1991	.6
1992	2.2
1993	1.9

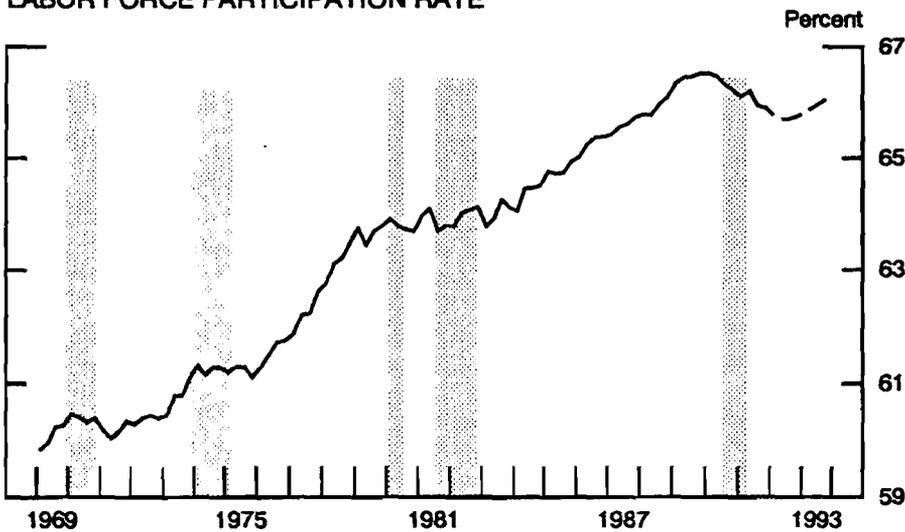
PAYROLL EMPLOYMENT



TOTAL EMPLOYMENT GROWTH

Percent per year	
1988	3.1
1989	2.1
1990	.7
1991	-.8
1992	.3
1993	2.1

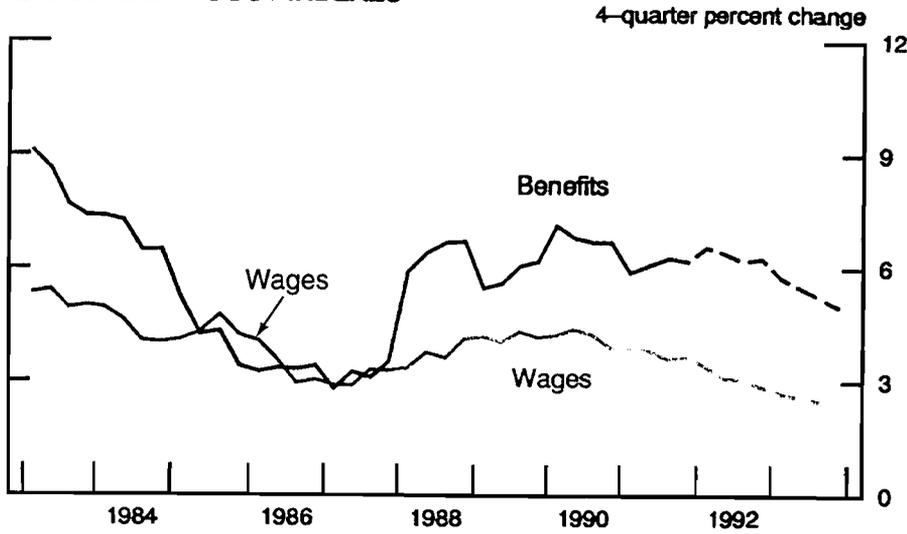
LABOR FORCE PARTICIPATION RATE



LABOR FORCE GROWTH

Percent per year	
1988	1.5
1989	1.6
1990	.4
1991	.5
1992	.7
1993	1.4

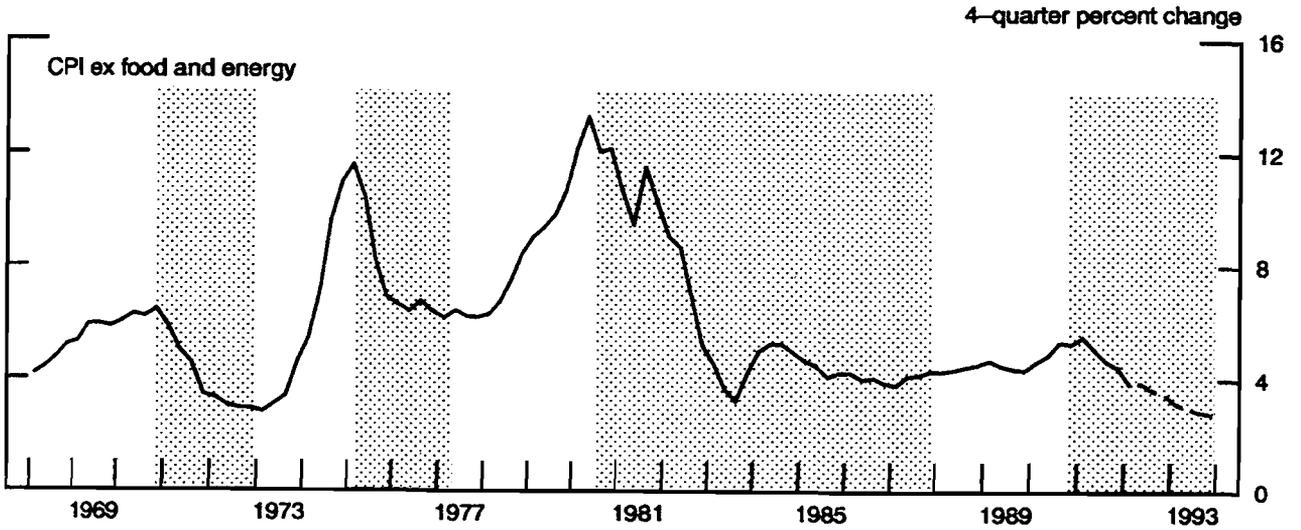
EMPLOYMENT COST INDEXES



TOTAL COMPENSATION

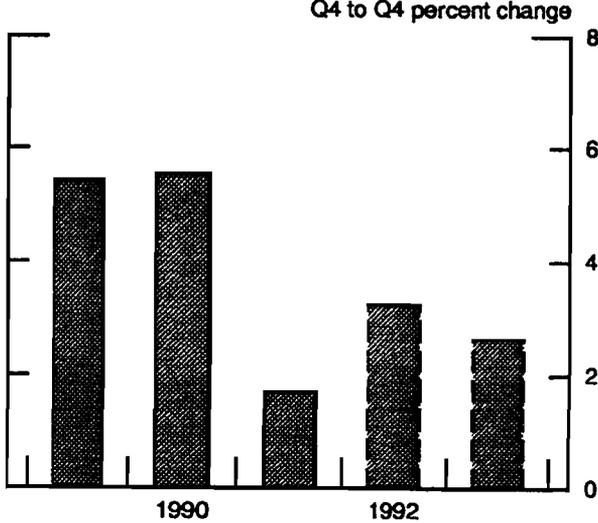
Percent change	
1989	4.8
1990	4.6
1991	4.4
1992	3.7
1993	3.3

PRICE INFLATION

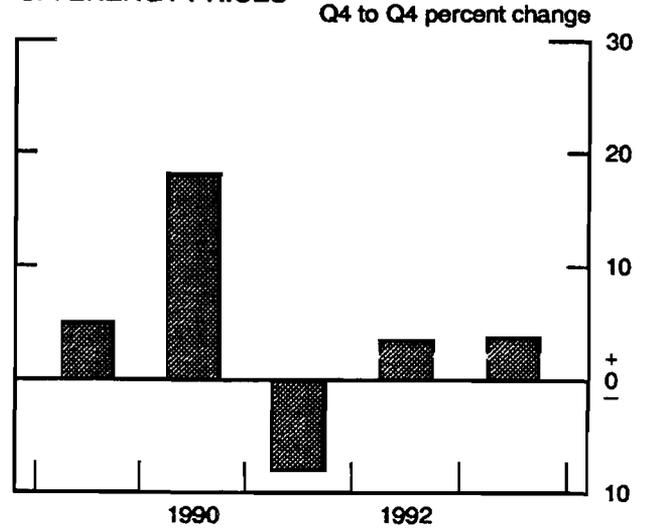


Note: Shading indicates periods when unemployment rate exceeds NAIRU.

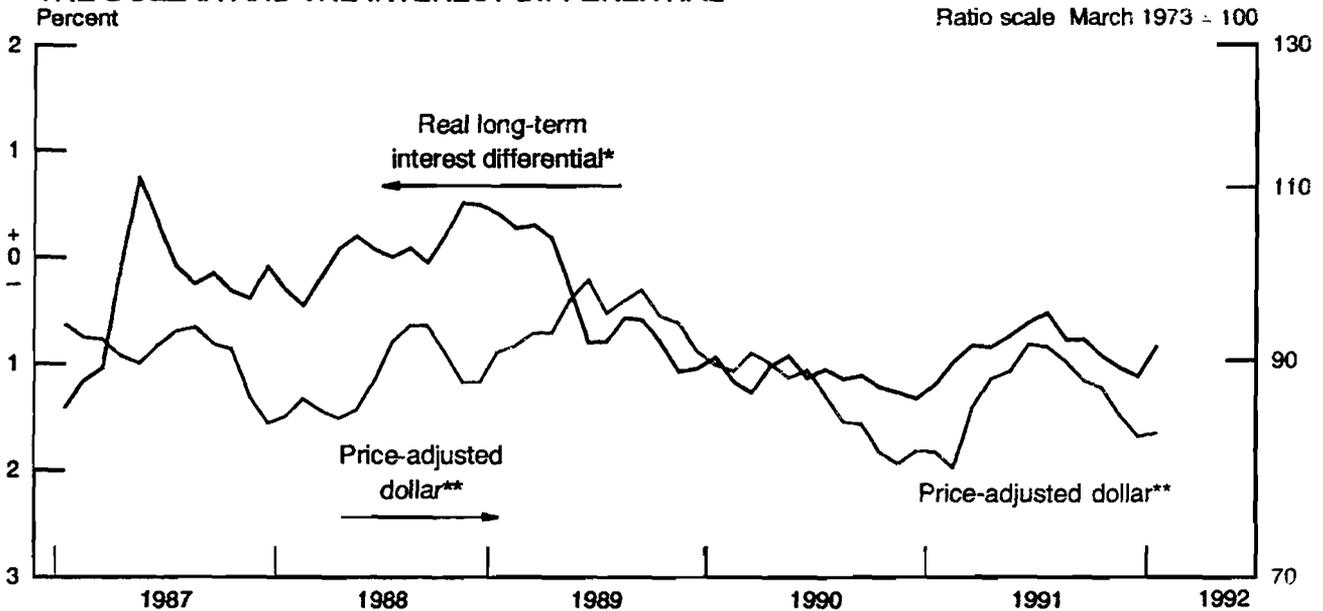
CPI FOOD PRICES



CPI ENERGY PRICES



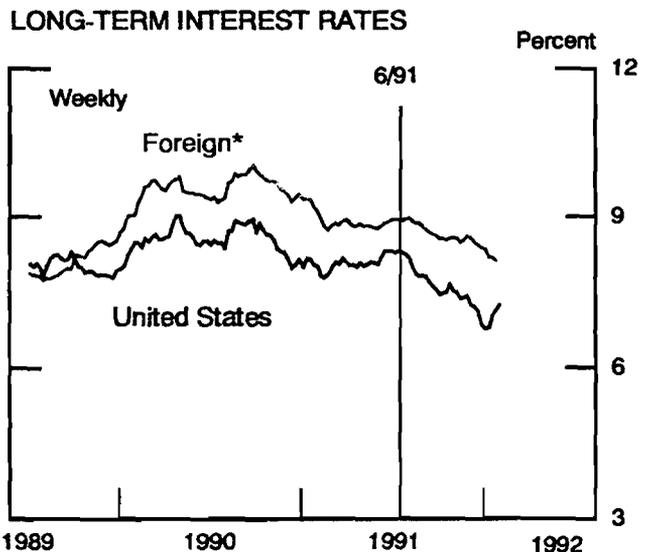
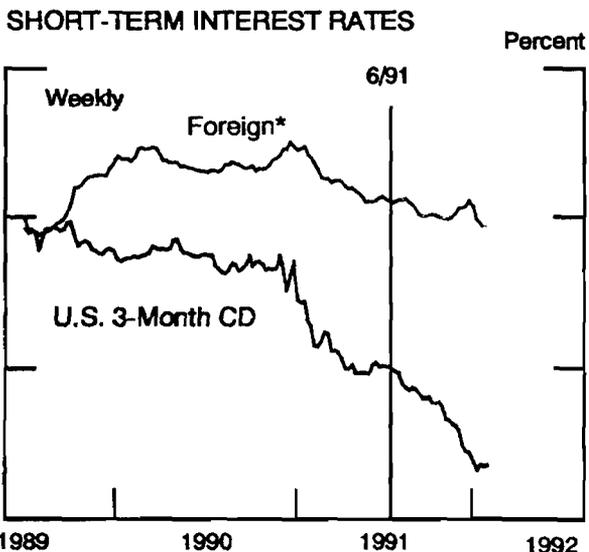
**THE DOLLAR AND THE INTEREST DIFFERENTIAL**



\* Difference between rates on long-term U.S. government bonds and a weighted average of foreign G-10 long-term government or public authority bond rates, adjusted for expected inflation.  
 \*\* Weighted average against foreign G-10 countries, adjusted by relative consumer prices.

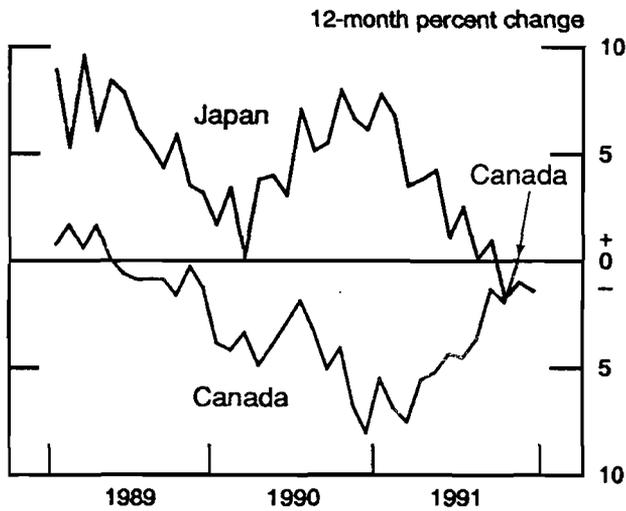
Nominal Dollar Exchange Rates	
	Percent change 6/91 to 2/3/92
Deutschemark	-10
Pound Sterling	-8
Yen	-10
Canadian Dollar	3
S. Korean Won	5
Taiwan Dollar	-8

Nominal Interest Rates Percent		
	Level 2/3/92	Change 6/91 to 2/3/92
Three-month		
Germany	9.45	0.50
Japan	5.15	-2.64
United States	4.05	-2.02
Long-term		
Germany	7.90	-0.45
Japan	5.50	-1.24
United States	7.36	-0.92

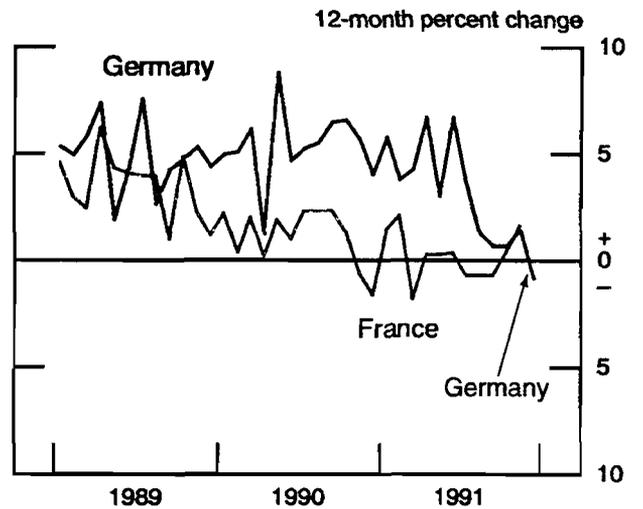


\* Multilateral trade-weighted average for foreign G-10 countries

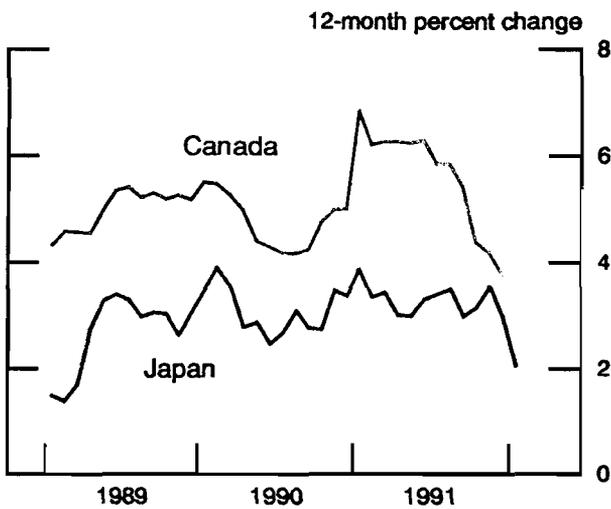
**INDUSTRIAL PRODUCTION**



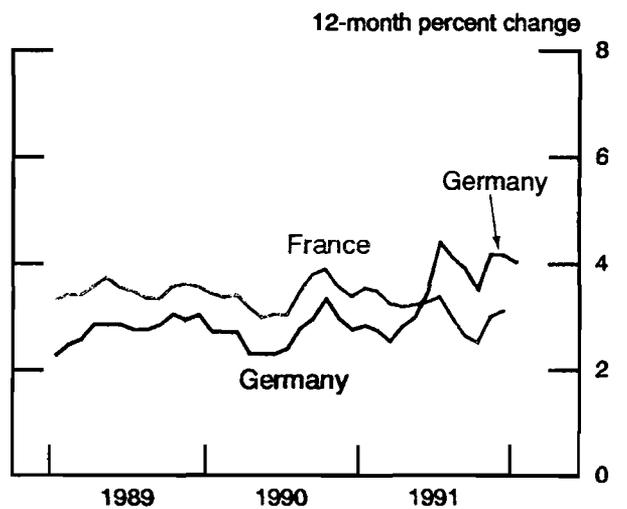
**INDUSTRIAL PRODUCTION**



**CONSUMER PRICES**



**CONSUMER PRICES**

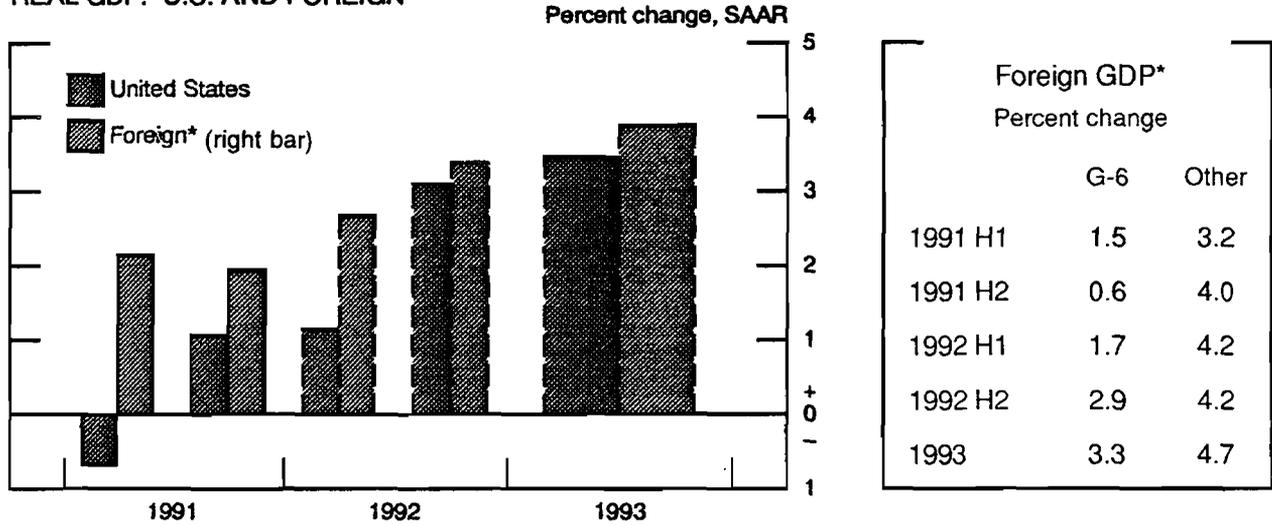


**OUTPUT GAPS AND POTENTIAL GROWTH**

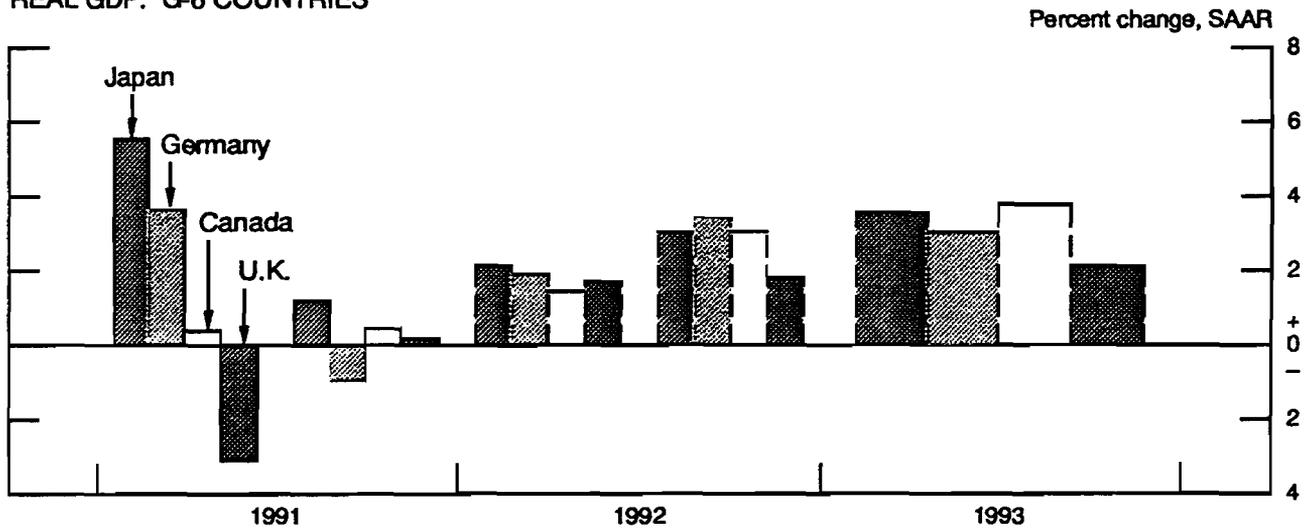
	Output Gap 1991 Q4	GDP Growth	
		Potential 1991-1993	Projected 1992 (Q4/Q4)
Japan	1	4 1/4	2 1/2
Western Germany	1/4	2 3/4	2 3/4
France	-1 1/2	3	2
Italy	-3	2 3/4	2
United Kingdom	-5	2 1/2	1 3/4
Canada	-6	2 3/4	2 1/4

Percent

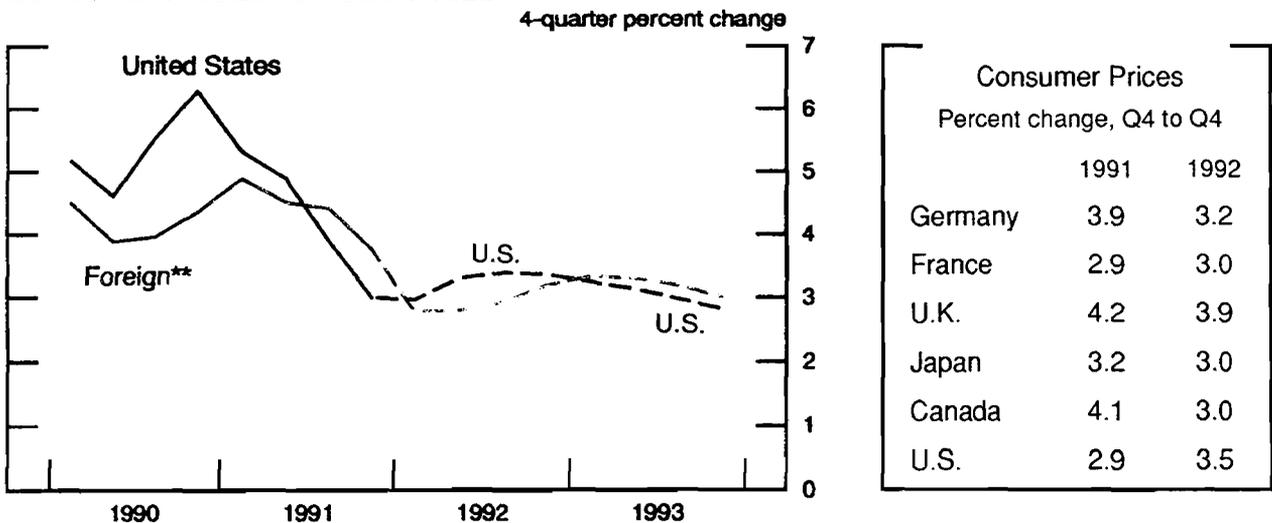
REAL GDP: U.S. AND FOREIGN\*



REAL GDP: G-6 COUNTRIES



CONSUMER PRICES: G-7 COUNTRIES

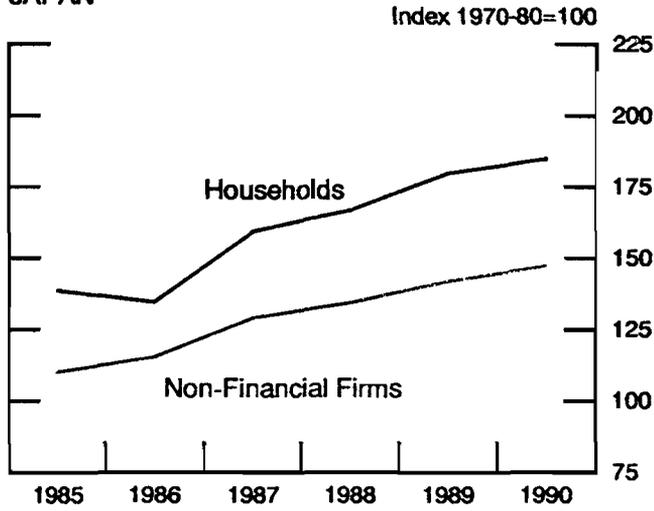


\* 22 industrial and 8 developing countries, U.S. nonagricultural export weights

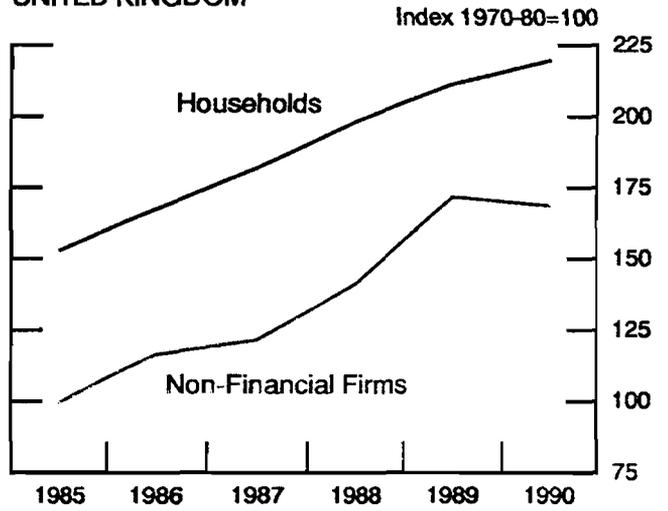
\*\* G-6 countries, U.S. non-oil import weights

DEBT RELATIVE TO GDP

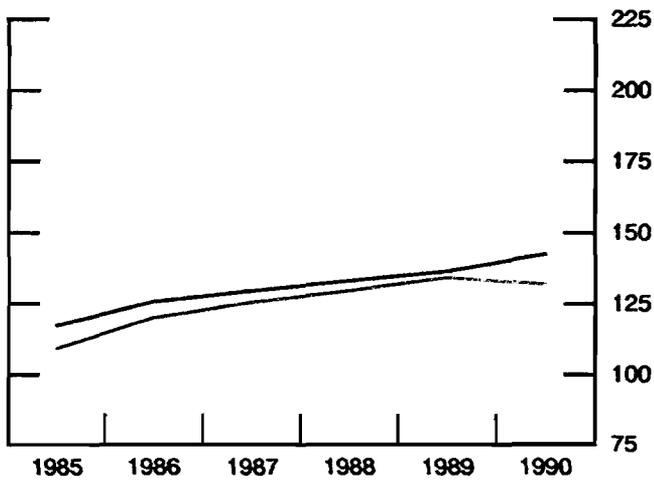
JAPAN



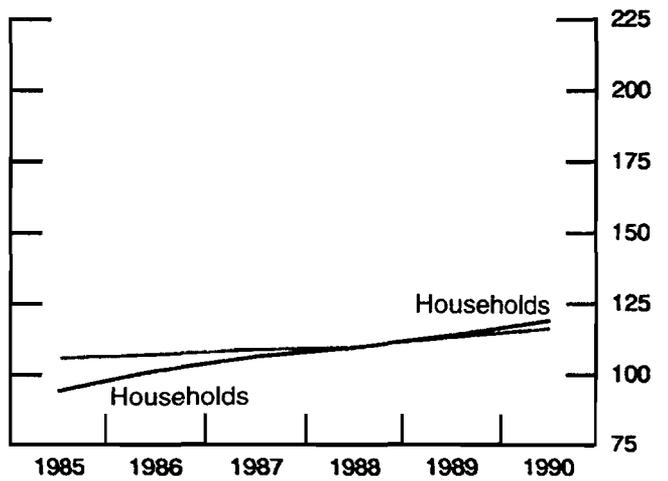
UNITED KINGDOM



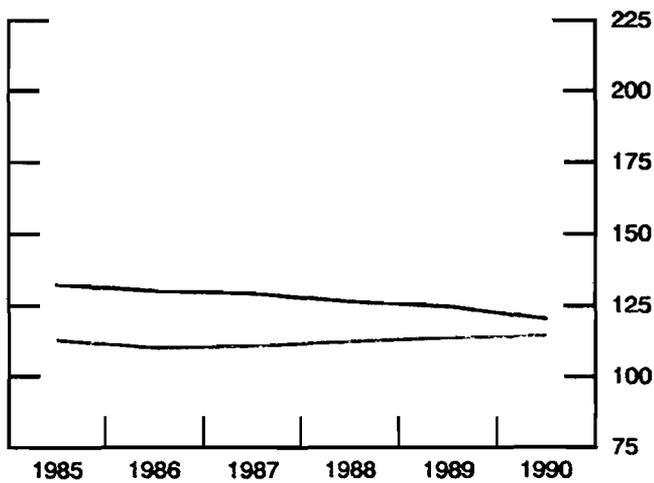
UNITED STATES



CANADA



GERMANY



FRANCE

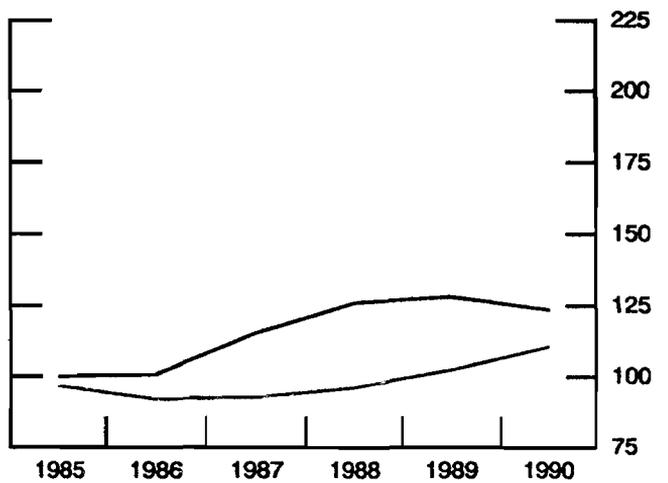
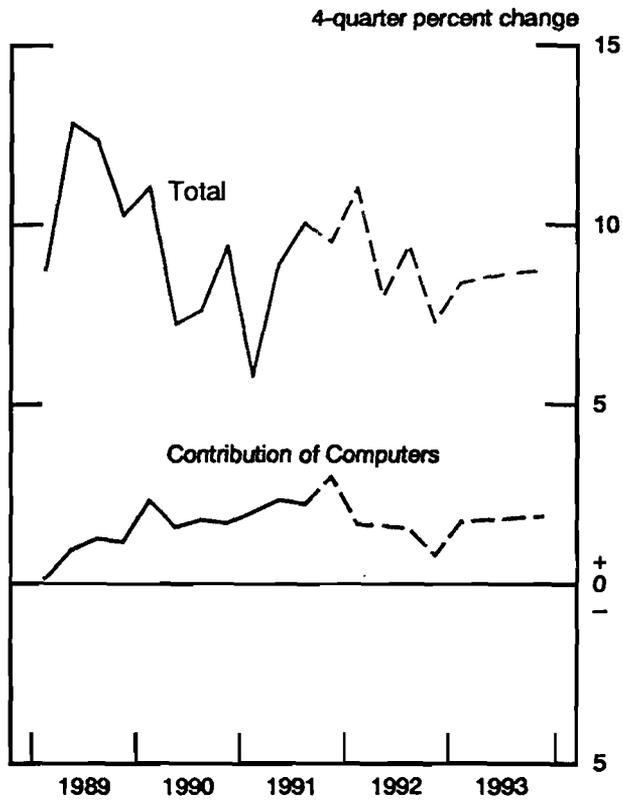
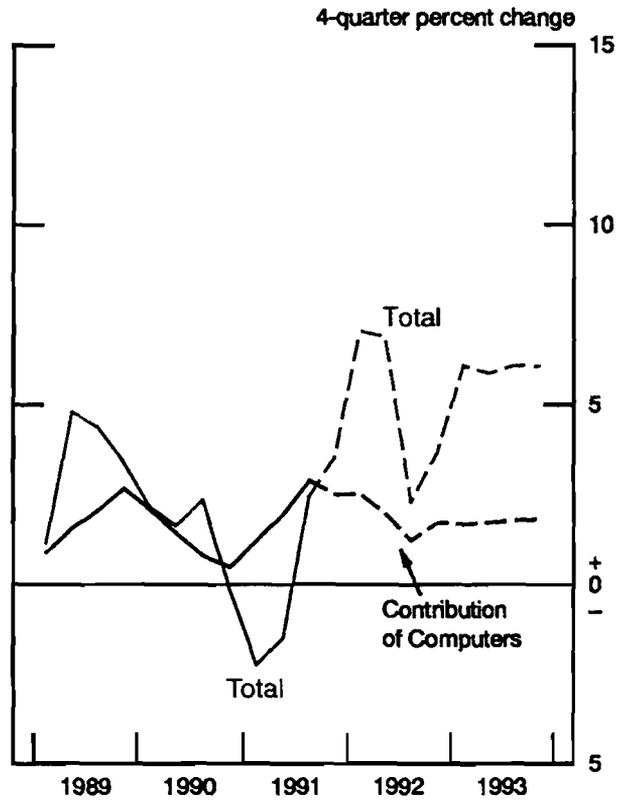


Chart 20

**REAL NONAGRICULTURAL EXPORTS**



**REAL NON-OIL IMPORTS**

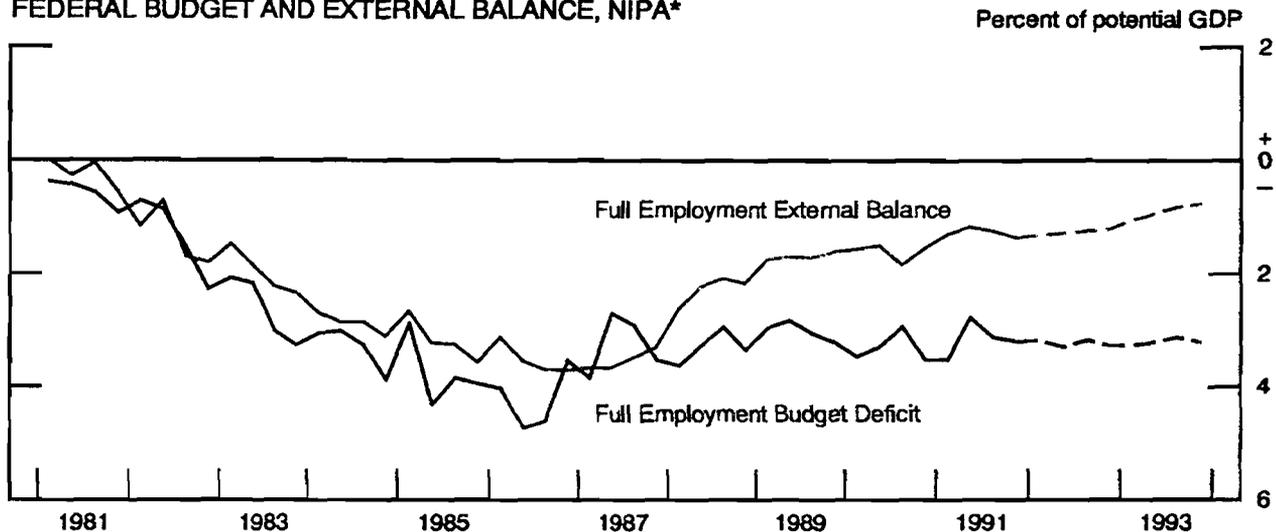


**EXTERNAL ACCOUNTS**

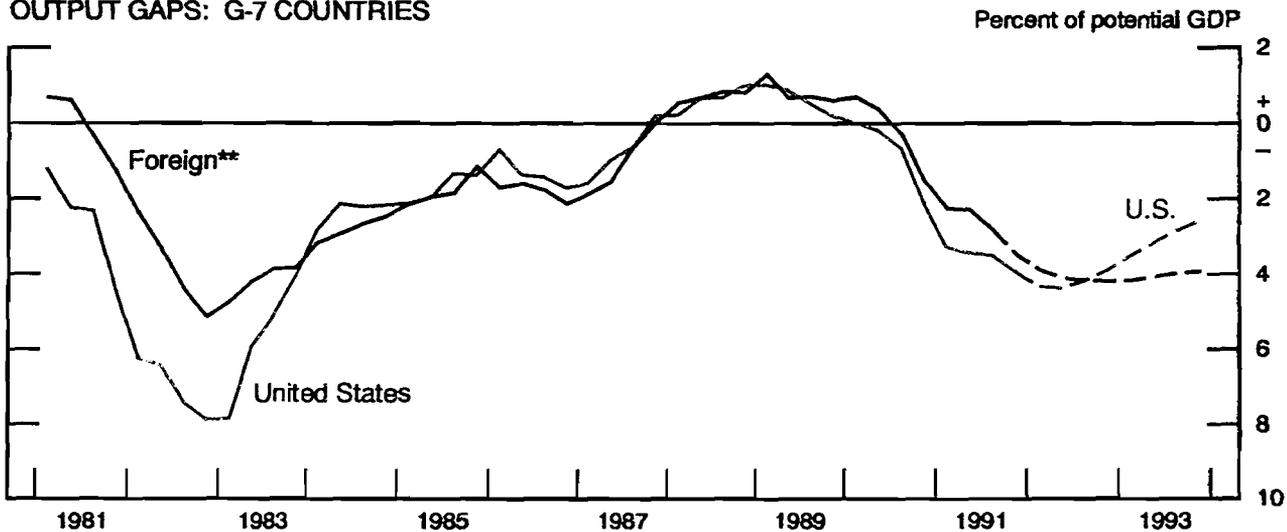
	Annual, current dollars (except as noted)			
	1990	1991	1992	1993
1. Current Account Balance*	- 89	- 42	- 26	- 20
2. Goods	- 108	- 70	- 64	- 67
3. Services	26	36	43	49
4. Investment Income	12	12	15	18
5. GDP Real Goods and Services, net (Q4, 1987 dollars)	- 31	- 8	- 9	- 3

\* Excluding special grants largely related to Desert Shield/Storm

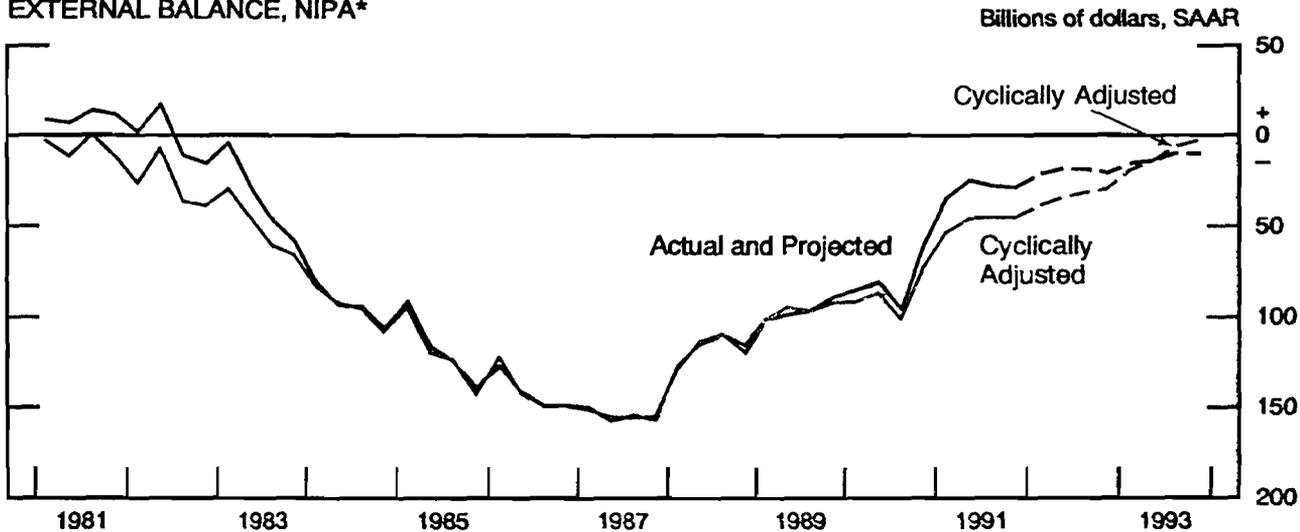
FEDERAL BUDGET AND EXTERNAL BALANCE, NIPA\*



OUTPUT GAPS: G-7 COUNTRIES



EXTERNAL BALANCE, NIPA\*



\* Excluding special grants related to Desert Shield/Storm

\*\* G-6 countries, U.S. nonagricultural export weights

**ECONOMIC PROJECTIONS FOR 1992**

	FOMC			Board Staff
	Range	Central Tendency	Administration	
----- Percent change, Q4 to Q4-----				
Nominal GDP	4 to 6	4 <sup>1</sup> / <sub>2</sub> to 5 <sup>3</sup> / <sub>4</sub>	5.4	5.1
<i>previous estimate</i>	4 to 6 <sup>3</sup> / <sub>4</sub>	5 <sup>1</sup> / <sub>2</sub> to 6 <sup>1</sup> / <sub>2</sub>	7.5	6.1
Real GDP	1 <sup>1</sup> / <sub>2</sub> to 2 <sup>3</sup> / <sub>4</sub>	2 to 2 <sup>1</sup> / <sub>2</sub>	2.2	2.1
<i>previous estimate</i>	2 to 3 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub> to 3	3.6	2.8
CPI	2 <sup>1</sup> / <sub>2</sub> to 3 <sup>3</sup> / <sub>4</sub>	3 to 3 <sup>1</sup> / <sub>2</sub>	3.1	3.5
<i>previous estimate</i>	2 <sup>1</sup> / <sub>2</sub> to 4 <sup>1</sup> / <sub>4</sub>	3 to 4	3.9	3.7
-----Average level, Q4, percent-----				
Unemployment rate	6 <sup>1</sup> / <sub>2</sub> to 7 <sup>1</sup> / <sub>4</sub>	6 <sup>3</sup> / <sub>4</sub> to 7	6.8	7.2
<i>previous estimate</i>	6 to 6 <sup>3</sup> / <sub>4</sub>	6 <sup>1</sup> / <sub>4</sub> to 6 <sup>1</sup> / <sub>2</sub>	6.6	6.3

February 5, 1992

Long-run ranges  
Donald L. Kohn

The choice of money and credit ranges for this year, with associated implications for intermediate-term strategy for policy, is complicated by a number of factors, including the shortfall from expectations in 1991 in both money and income, and uncertainties about the relationship between various measures of money and credit and the final objectives of the Committee for inflation rates or nominal income growth.

With regard to the latter, the table on page 13 of the bluebook gives the staff forecast for growth in money and credit thought consistent with the greenbook forecast. The 5 percent greenbook nominal GDP projection is given in the table, but obviously, we believe those money and credit growth rates also will set the stage for the faster GDP growth rates forecast for 1993. A notable feature of the projections, then, is the sizable increases they embody for velocities of the broad money aggregates. For M2, this would contrast to the outcome for 1991, when M2 and nominal GDP grew about the same rates, and weak money proved to be an early indicator that the economy was falling short of expectations.

In 1991, there were two roughly offsetting forces affecting M2 velocity. On the one hand, a downward shift in the demand for money relative to income and market interest rates resulted from a host of unusual forces working on the financial system that induced potential money holders to shift into other assets, or to use savings to pay down or avoid going into debt rather than accumulating money balances. On the other hand, market interest rates and opportunity costs measured in the standard way against alternative short-term

investments fell sharply, and this helped to buoy demands for M2 assets, even if not by as much as might have been expected.

In 1992, we anticipate that only one of these forces will be affecting M2 velocity--a further downward shift in money demand relative to market interest rates and income. Short-term interest rates themselves are not expected to change under the greenbook forecast. In normal times, we would anticipate that a period of flat market interest rates following a sharp decline would see some widening of opportunity costs as depositories reduced offering rates to catch up with the lower level of market rates. With loan demand at depositories expected to continue weak this year, the drop in deposit rates could be especially steep, resulting in a marked rise in opportunity costs--relative to returns in capital markets and the cost of debt, as well as to short-term money substitutes. This increase in opportunity cost then, would give a boost to M2 velocity. Velocity also would be boosted by the disruption resulting from the RTC, which we project to be at least as active in 1992 as in 1991, and from continuing portfolio restructuring as higher yielding small time deposits mature and as households generally hold down debt. In effect, the staff outlook for money and GDP embodies a fairly conventional pattern, in which reductions in interest rates have their initial effect on money, and only with a greater lag on spending. Thus the drop in interest rates last year boosted M2 primarily in 1991 and the economy in 1992. The story is complicated, however, by layering on top of it the restructuring of financial flows away from depositories, which depresses money relative to income both years.

One difference between last year and this is that last year, the downward shift in money demand seemed to presage a downward shift in the demand for goods and services, hence the need for lower interest rates to rekindle growth. In part, the connection ran through the

credit markets, with restraint on both supply and demand affecting money before it affected spending. The forecast for 1992 sees similar disruptions in the demand for money, but without comparable implications for the demand for goods and services. Most recent reports from banks suggest that credit supply conditions have stabilized, at a high level of stringency to be sure. And, lower interest rates and balance sheet restructuring already undertaken by households and businesses should relieve some of the pressure on them to draw back further by reducing spending relative to income and wealth. The halt to the tightening of credit availability and the improvement in balance sheets, combined with the lower level of interest and exchange rates prevailing now than at mid-1991, are expected to be sufficient to produce a stronger economic performance than we saw last year. At the same time, it seems unlikely that the restructuring of financial balance sheets has come to an end. The steep yield curve, relatively high cost of debt, activities of the RTC, and tendency for the recovery to be financed outside the banking system all should exert continuing downward pressure on money demand, even if not on spending.

These forces are expected to be affecting M3 and credit as well. Total depository credit is projected to be about unchanged in 1992 after declining sharply in 1991, and M3 should increase a bit faster than last year, but still only 2 percent, implying an even larger increase in its velocity this year than last. Although debt velocity is expected to be little changed in 1992, virtually all of the pickup in debt growth from 1991 is in the federal component. Equity issuance, strengthening cash flow at businesses, and general avoidance of debt finance all contribute to holding down the expansion of private sector debt to about the pace of 1991. M1, by contrast, is expected to accelerate from its robust rate of growth last year and its velocity to drop substantially further. This behavior reflects

the very marked interest sensitivity of this aggregate. Despite reductions in NOW account rates, M1 is boosted this year primarily by the lagged effects of the huge declines in interest rates on market instruments and on small time deposits late in 1991 and early 1992.

I should emphasize--though you probably know it already--the high degree of uncertainty associated with our M2 projection. Previously reliable relationships have broken down, leaving us without benchmarks for our projections. My sense is that the risks to the staff forecast of velocity are probably tilted a bit toward the downside; that is, velocity might not increase as much, so that the GDP and interest rates of the greenbook might well be associated with more money growth than we have built in.

But, the staff outlook has growth in targeted money and credit variables well down in their provisional ranges selected last July. Thus, those ranges, listed as alternative I on page 13, would allow for considerably greater growth in money should money demand relative to income not shift down further as much as the staff anticipates, or should the Committee wish to accommodate stronger GDP than in the staff forecast. The Committee's expectations for nominal GDP growth, which are stronger than those of the staff, likely would be associated with money growth around the middle of the provisional range. A combination of a smaller shift in M2 demand and higher GDP therefore would imply money growth in the upper portion of the provisional range. If the Committee wished to retain this range, it might indicate that growth in the upper half would be acceptable if there were evidence of a return to more normal velocity relationships.

Given the staff economic and monetary forecast, the provisional ranges could be thought of as biased toward ease. That is, with growth expected in the lower half of the range, chances for it falling to the lower end and triggering easing actions are greater

than the odds that money would expand near the top of the range and suggest tightening reserve conditions. This bias might be considered appropriate in light of the results of last year and emphasis at this juncture on ensuring a solid economic upturn. However, if the Committee wished a more balanced approach to its medium-term strategy, it could consider reducing the ranges by half a point, as in alternative II. This alternative would emphasize the desire to consolidate and extend gains in reducing inflation; even alternative II implies mid-point M2 growth, at 4 percent, appreciably above the trend likely consistent with price stability, which probably would be closer to 3 percent. A strong surge in money growth, after all, could suggest a considerably stronger economy than anticipated, rather than a rebound in the money demand function. In that circumstance, tightening triggered by the reduced upper bound of alternative II might be needed to avoid creating monetary conditions that in time could lead to short circuiting the downward tilt to inflation rates now in prospect.

If, on the other hand, the concern were more on the side of emphasizing a willingness to take further actions to foster a reasonably robust recovery, the Committee could increase the ranges, say by the half point suggested in alternative III. Such a range would signal that the Federal Reserve found the monetary growth, and by implication the economic performance, of 1991 unacceptable, and would take strong action to counter monetary growth at 3 percent or below if it persisted. The higher upper end of this alternative might even be needed if the money demand shift began to reverse in 1992, especially if the Committee wished to foster something stronger than the 5 and 6 percent nominal GDP growth forecast by the staff for 1992 and 1993. If there were no velocity shift coming in 1992, M2 growth around 5 percent might be needed to achieve GDP of 5 or 5-1/2 percent this year and 6 percent in the early part of 1993.

Growth of this sort in 1992 would still leave nominal GDP below the level projected by the Committee at its meeting last July. If the Committee wished more explicitly to make up for lost money and GDP growth, an alternative targeting procedure, such as the "tunnel option" discussed in the bluebook might be considered. This technique ties a particular year's ranges to the ranges of the previous year, implying that some portion of a major shortfall or overshoot relative to the midpoint of such ranges one year would be recouped in the next year. As noted in the bluebook, this suggestion is usually linked to a multiyear approach to targeting money. Such an approach ties down the level of the money supply over time, and if there is a reliable relationship between that level and the price level, it will tie down the price level as well. It does require confidence in that relationship, not only over periods of several years but to a degree on a year-to-year basis as well, since shortfalls and overshoots would not be allowed to cumulate. The current procedure implies making fresh judgments each year about why money came out where it did, where the Committee would like to see nominal GDP or inflation over coming years, and what money is needed to achieve these objectives. This process is most appropriate when lasting swings in market rates have altered the level of velocity, or when money demand shifts may be more than transient. In the current situation, unless money demand is in the process of snapping back to a more normal relationship to spending and opportunity costs, use of the tunnels is likely to imply a need for easing actions early this year. Governor Lindsey will have additional comments on this option.

February 5, 1992

Short-run Briefing  
Donald L. Kohn

There has been a great deal of discussion about how much ease might be "in the pipeline", with a critical bearing on your decision about the stance of policy in the period immediately ahead. Some of what is meant by this is difficult to quantify, since it refers to progress that has been made in redressing financial imbalances and building up capital by both borrowers and lenders. Other measures--especially those involving rates or prices in financial markets are easier to quantify--though perhaps not to interpret. The latter are given in the financial indicators package, along with measures of money growth. It is instructive to look at these indicators to see what they suggest about how much easing of monetary policy the Committee has done in recent months. Two base periods suggest themselves for comparison as times when, in retrospect, policy was probably tighter than was consistent with the kind of economic performance the Committee seems to be looking for in 1992 and 1993. One is the first half of 1990, before the Gulf War, when it appears that the economy could well have been in the process of weakening in any case. The other is the spring or summer of 1991, when policy last thought it was positioned to support an expansion.

The results of this comparison are somewhat mixed. One important channel for monetary policy is the exchange rate. The weighted average value of the dollar is appreciably lower than it was in the first half of 1990 or last spring and early summer. It

has fallen relative to those base periods in both nominal and real terms--the latter by about 10 percent.

The other policy variable giving unambiguous signals for a boost to economic activity is short-term real interest rates. It is clear that the Federal Reserve's easings have significantly outpaced the drop in inflation expectations. Short-term real rates may be 3 to 4 percentage points below their levels in the first half of 1990, and a significant portion of that has occurred in the last few months.

Participants in capital markets apparently see these developments as favoring a strong rebound. Stock prices and price-earnings ratios are at all-time highs. Although bond rates are down from a few months ago, the yield curve is remarkably steep. Concerns about potential fiscal stimulus as well as about looming supply, from the federal government and private borrowers, probably are contributing to this configuration, but it seems unlikely that such a steep yield curve could persist in the face of real pessimism about the economic outlook, or optimism about the prospects for price stability.

However, the still-high long-term rates that contribute to the pitch of the yield curve also are one indicator that, perhaps in contradiction to market expectations, less may be in the pipeline than is suggested by short-term rates or the exchange rate. Measurement of long-term real rates is probably even more tenuous than for short-term real rates. What measures we have, however, show some reduction since the first half of 1990 or summer of 1991, but still a moderately high level when compared to averages over a

longer span. Both theory and empirical work indicate that real long-term rates are a better measure of what influences spending than are real short-term rates. Perhaps reflecting the modest drop in real long-term rates, commodity price indexes remain relatively flat, below their levels in the two base periods.

The other indicator raising questions about the degree of ease is the growth of M2. Both in the first half of 1990 and in spring 1991 this aggregate was growing faster than it seems to be now. M2 has picked up in the second half of January, and we see 4-3/4 percent growth for February, elevated partly by the absence of year-end distortions that held down the January monthly average. But this would leave M2 only 3-3/4 percent above its fourth quarter 1991 base, and staff is projecting a slowing in M2 growth in March. Part of that slowing reflects our view that aggressive lowering of offering rates will cause a further redirection of savings away from assets in this aggregate. In addition, the pace of RTC activity is expected to pick up substantially in February and even were so in March, as that agency attempts to utilize funding authorized only through March. To be sure, as was discussed in connection with the long-run ranges, we would view this weakness as primarily a shift in demand, fully consistent with the pickup in spending forecast in the greenbook. But sluggish expansion of M2, especially if it were to drop appreciably below a 3-1/2 percent growth track from the fourth quarter, might also raise questions about whether policy was positioned to promote solid economic expansion, should it come to pass, also could not be seen as very bullish for the economy, even with the special explanations.

Thus, as I noted, the picture of how much might be "in the pipeline" is mixed: real short-term rates and exchange rates are down, but real long-term rates and M2 as well as other measures of financial flows are somewhat ambiguous. Given the state of the economy and associated downward pressure on inflation, this configuration might be seen from one perspective as arguing for additional ease to better assure recovery. Nominal bond yields likely would fall in response, since any increase in inflation expectations in the current circumstances probably would be muted, and easier monetary policy should have an unambiguous, albeit small, effect on real long-term rates. Money growth should also respond, though perhaps not by much, since the yield curve would steepen and depositors might accelerate shifts into capital market instruments.

On the other hand, the possibility that earlier monetary actions could exert considerable expansionary force on the economy, with a lag, might argue for more "watchful waiting", at least for a short time. Additional ease might be indicated if money begins to drop below its 3 percent December-to-March path, or if incoming data suggest a weaker underlying situation in the economy than previously expected, or a lack of even early glimmerings of a response to previous easing actions. If the risks were seen as skewed to the downside, or the costs of a shortfall greater than those of a bit stronger growth than anticipated, the directive could be made asymmetrical on the easing side, implying a fairly prompt response to indicators that further reduction in money market rate was appropriate.

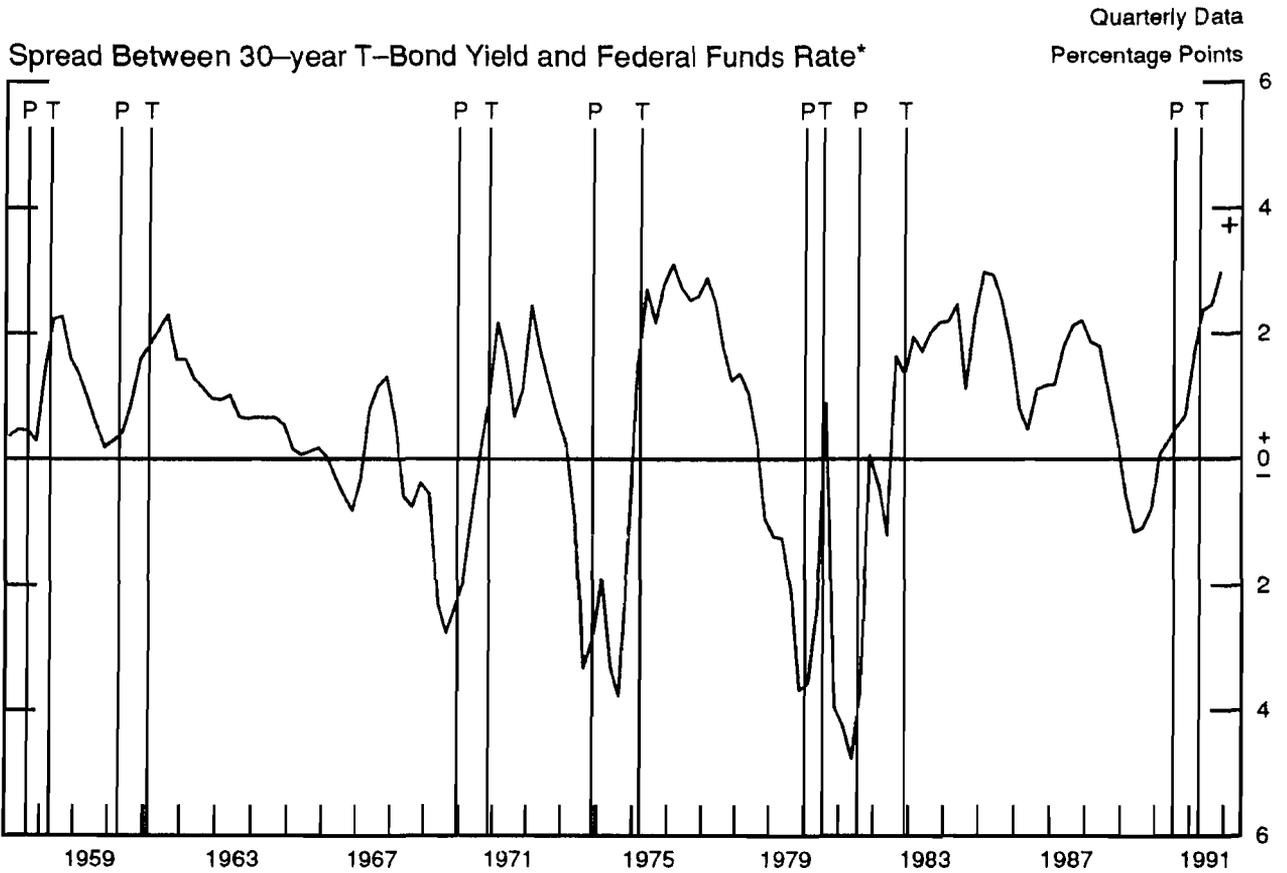
**STRICTLY CONFIDENTIAL (FR) CLASS II-FOMC**

## ***Financial Indicators***

*February 5, 1992*

Chart 1

# The Yield Curve



\* Prior to 1977:Q2, the 20-year constant maturity rate is used.

+ Denotes most recent weekly value.

### Selected Treasury Yield Curves

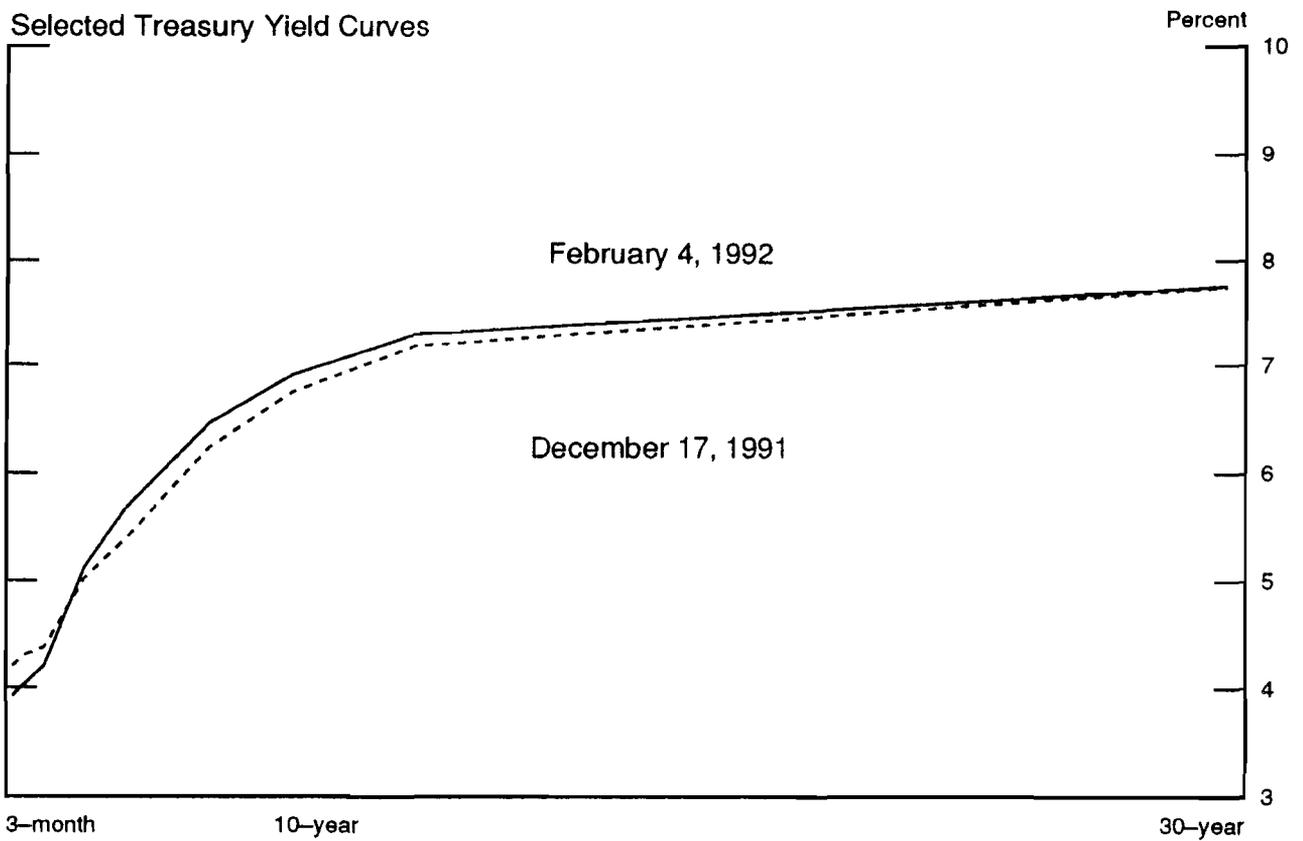
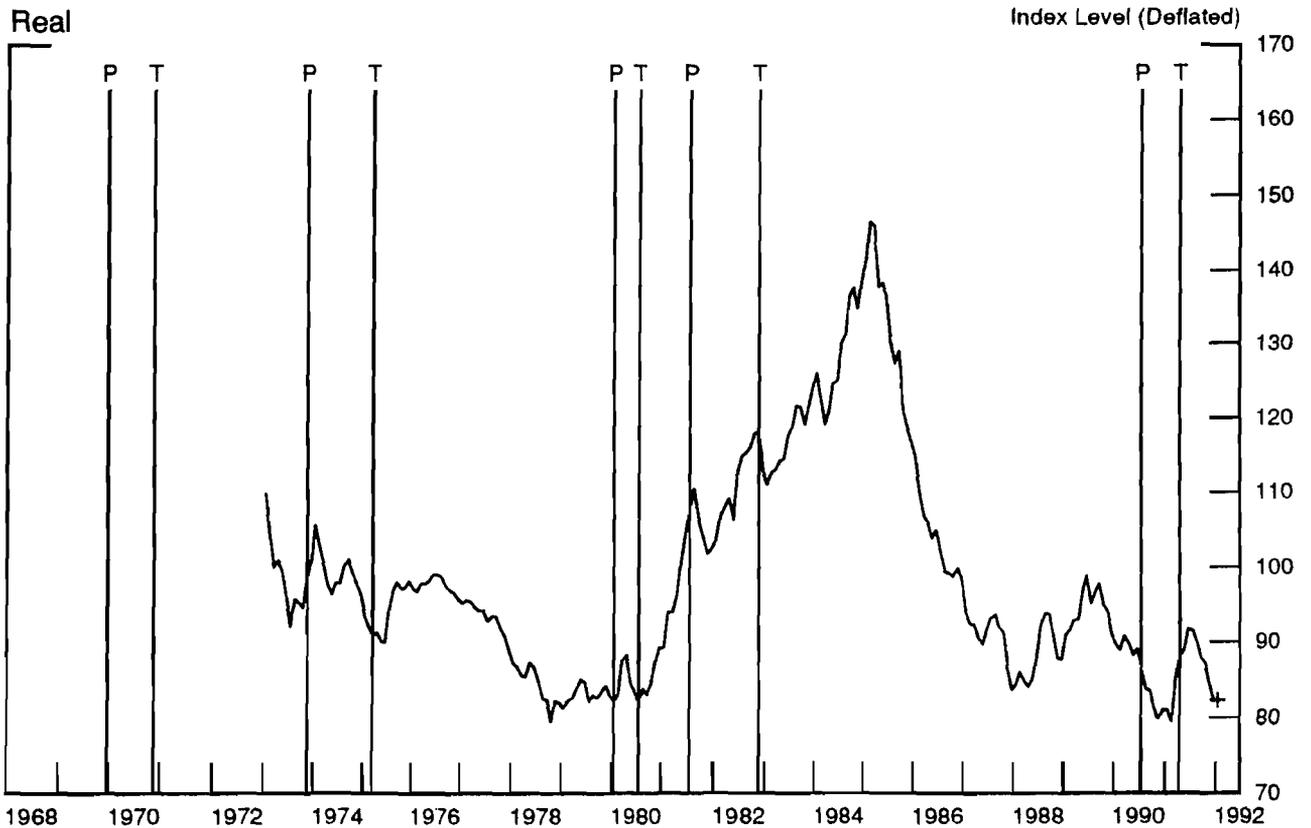
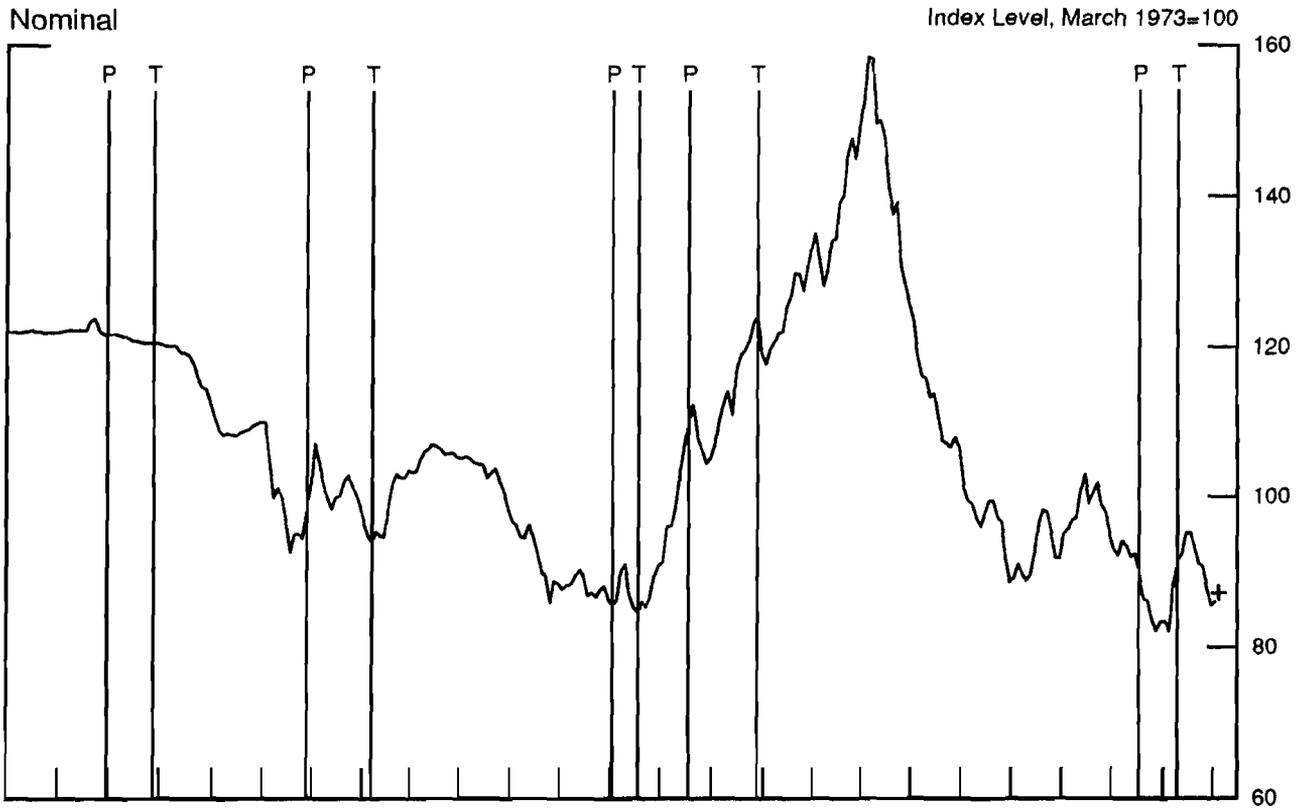


Chart 2

# The Exchange Value of the Dollar

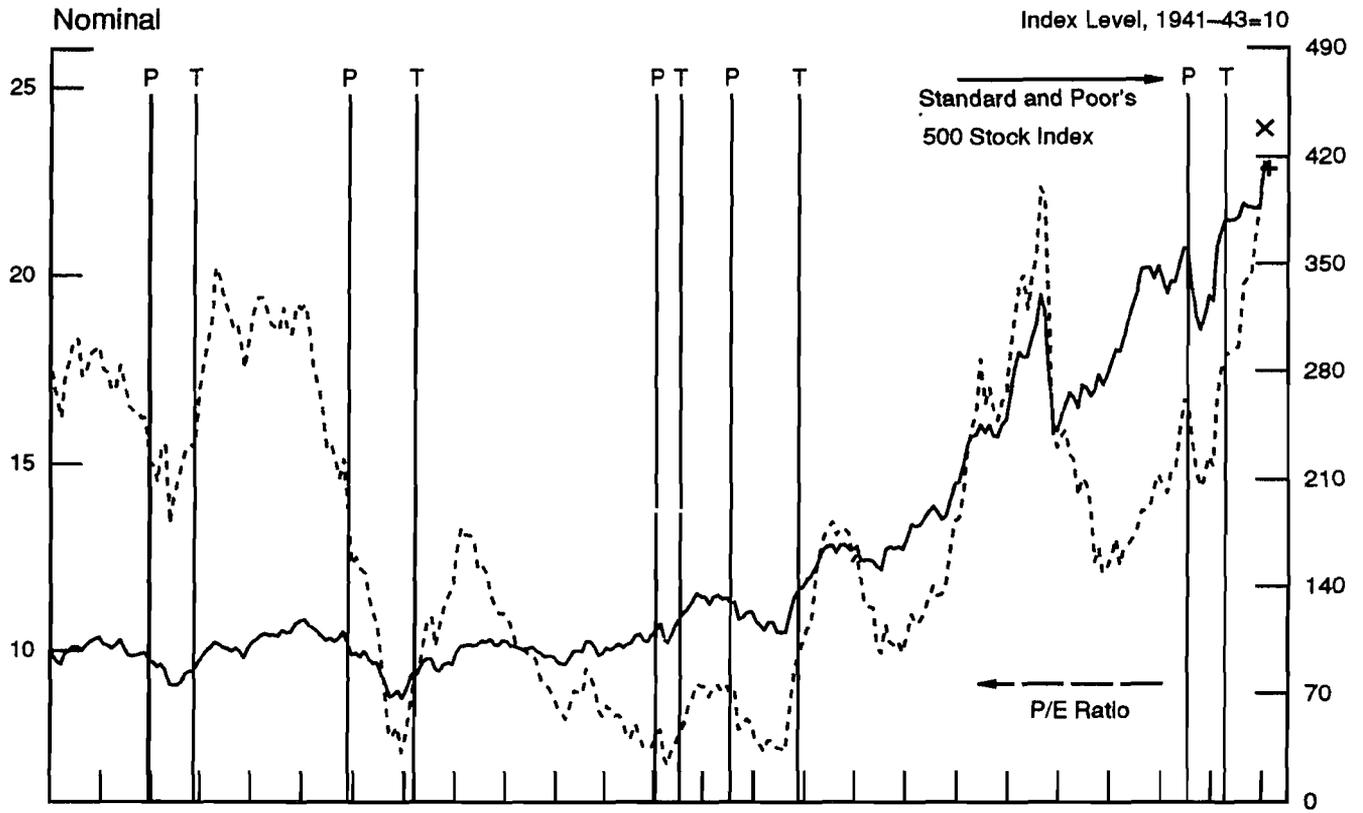
(Monthly G-10 Index)



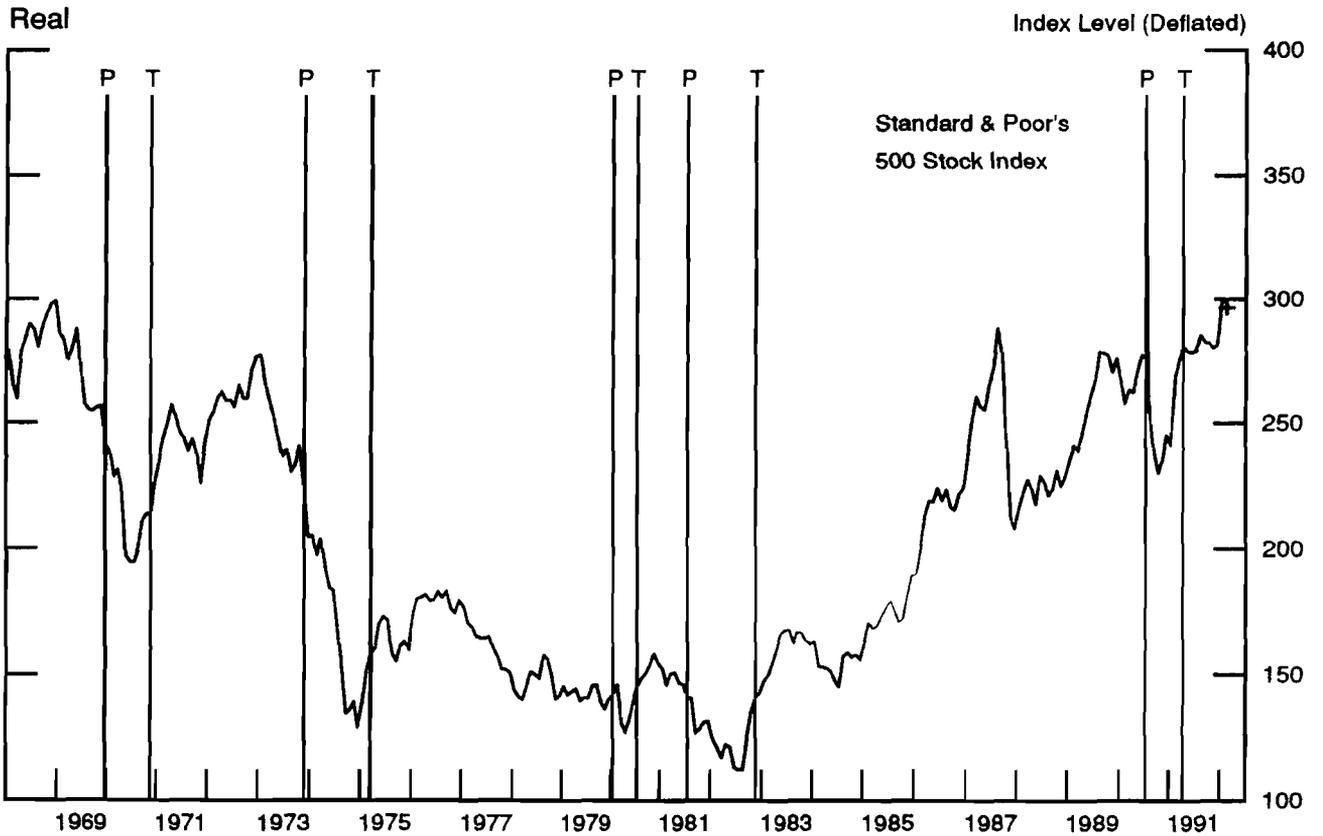
+ Denotes most recent weekly value.

Chart 3

# Stock Indices (Monthly)



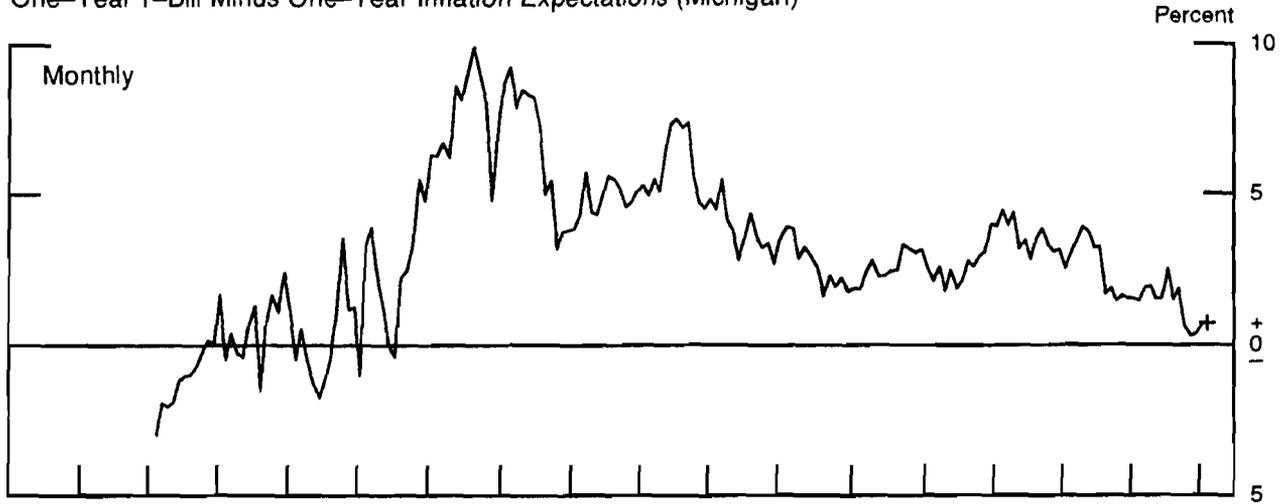
+ Denotes most recent weekly S&P 500  
X denotes most recent weekly P/E ratio



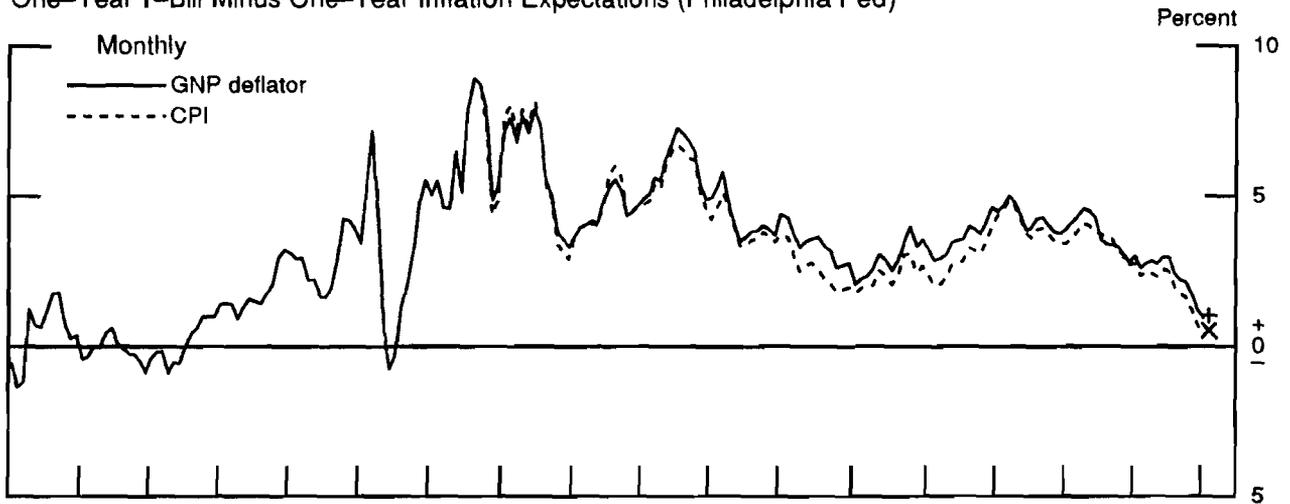
+ Denotes most recent weekly value.

# One-Year Real Interest Rates

One-Year T-Bill Minus One-Year Inflation Expectations (Michigan)

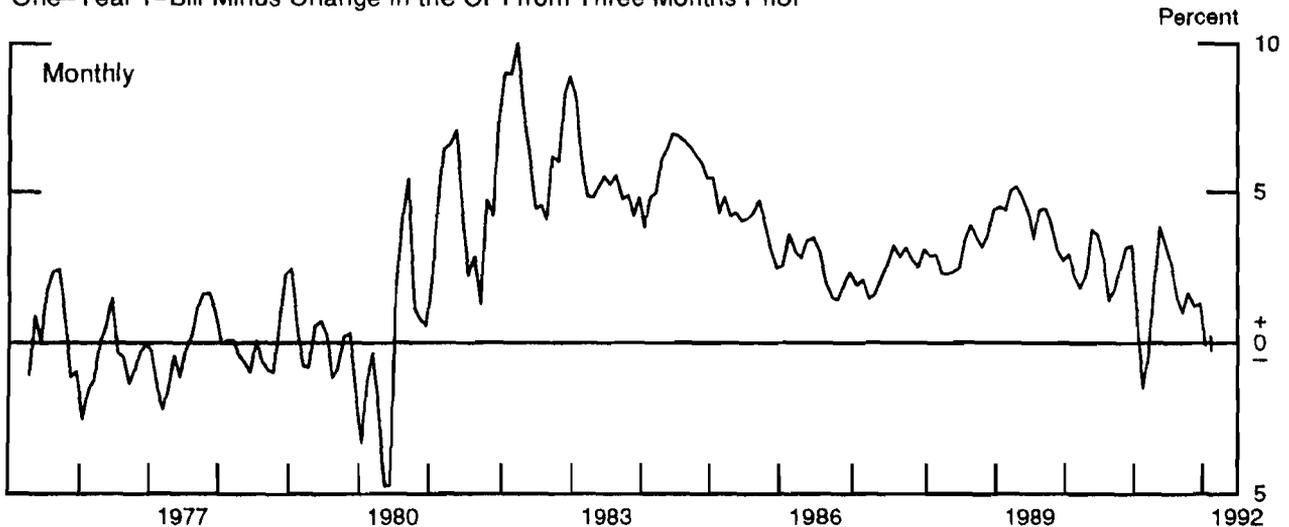


One-Year T-Bill Minus One-Year Inflation Expectations (Philadelphia Fed)\*



\* ASA/NBER quarterly survey until 1990 Q1; Philadelphia Federal Reserve Bank survey thereafter. Monthly T-bill rate less most recent quarterly inflation expectations.

One-Year T-Bill Minus Change in the CPI from Three Months Prior\*\*



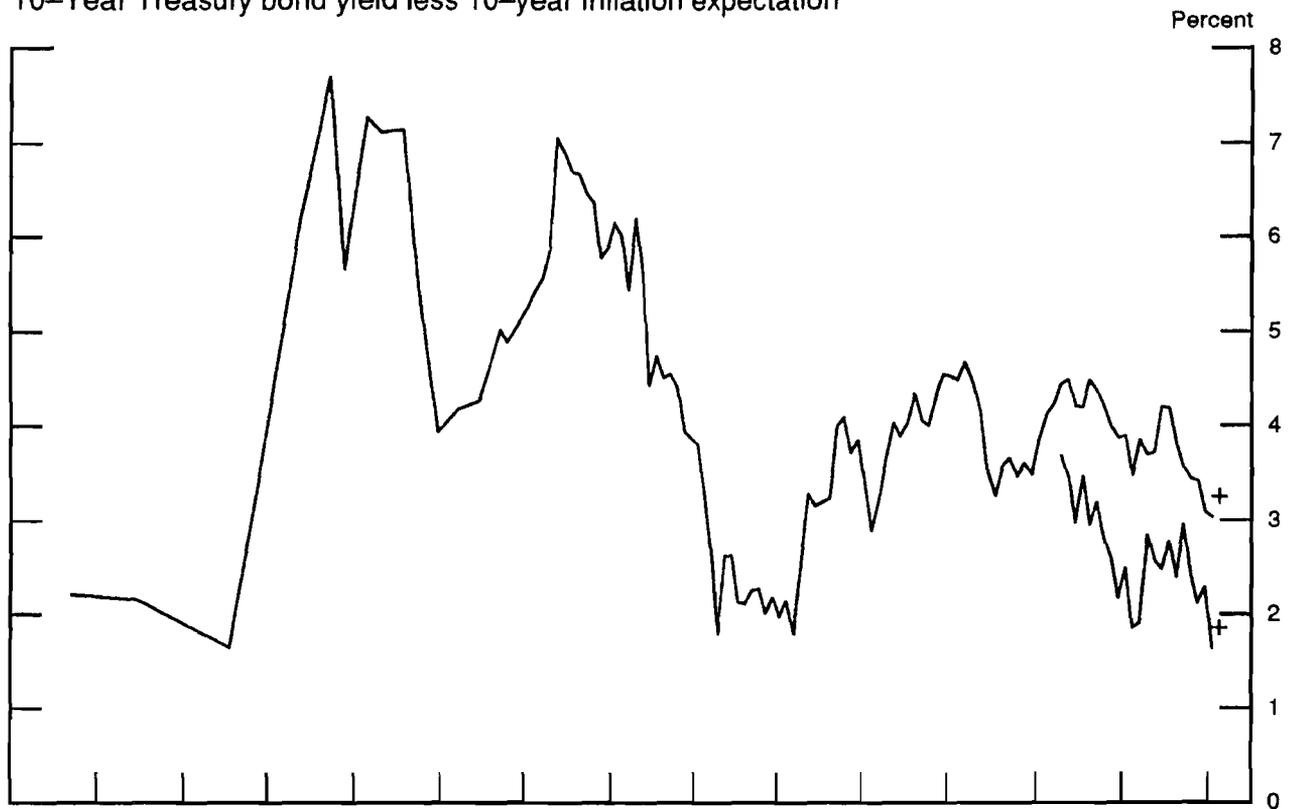
\*\* CPI defined to exclude food and energy

Note: T-Bill is on a coupon equivalent basis

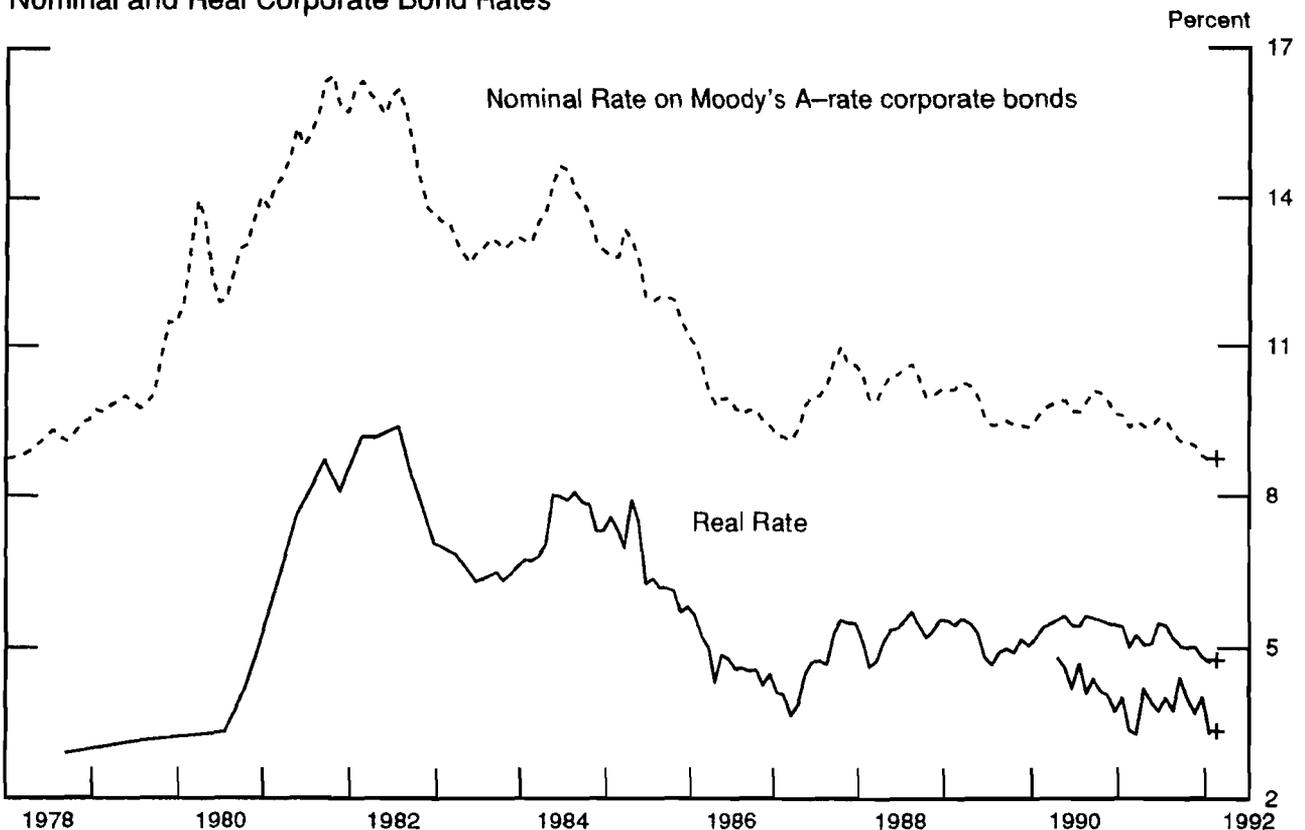
+ Denotes most recent weekly T-bill less most recent inflation expectation

# Long-Term Real Interest Rates<sup>1</sup>

10-Year Treasury bond yield less 10-year inflation expectation



Nominal and Real Corporate Bond Rates

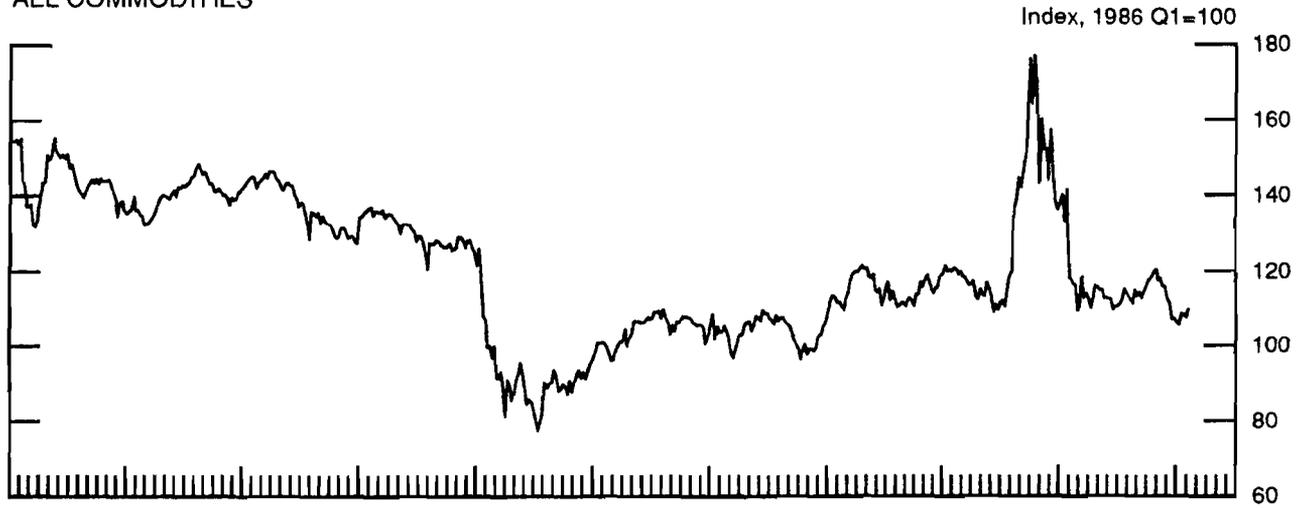


1. For upper line, 10-year inflation expectations is measured by the Hoey survey until April, 1991; the Livingston survey for June 1991; and the ASA/NBER survey for November 1991. Lower line uses Michigan 5 to 10 year inflation expectations. + Denotes most recent weekly value.

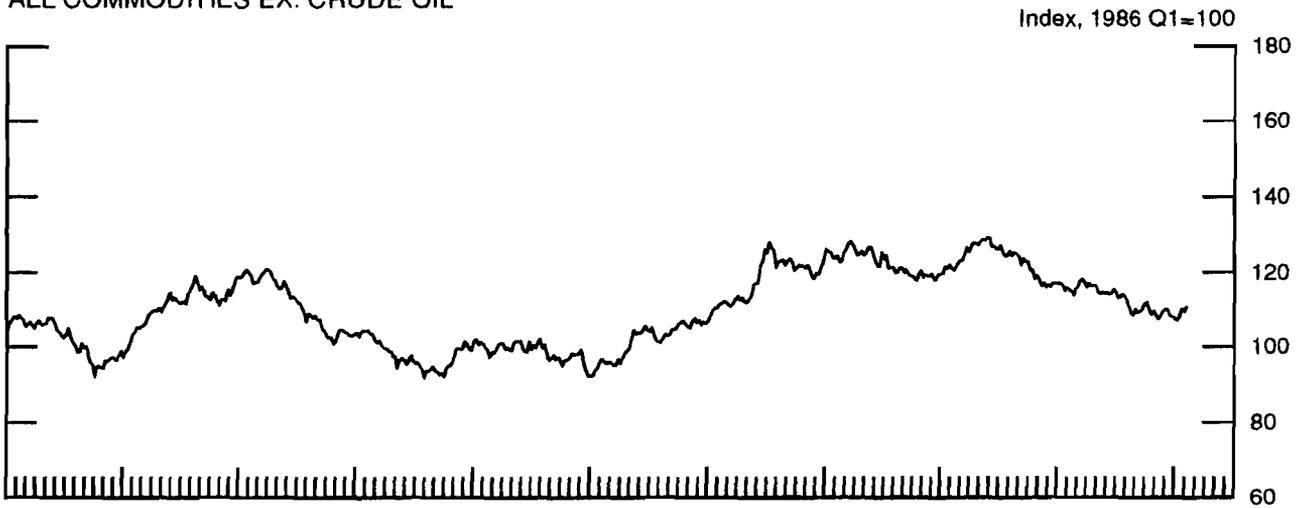
Chart 6

### Experimental Price Index for 21 Commodities (Weekly)

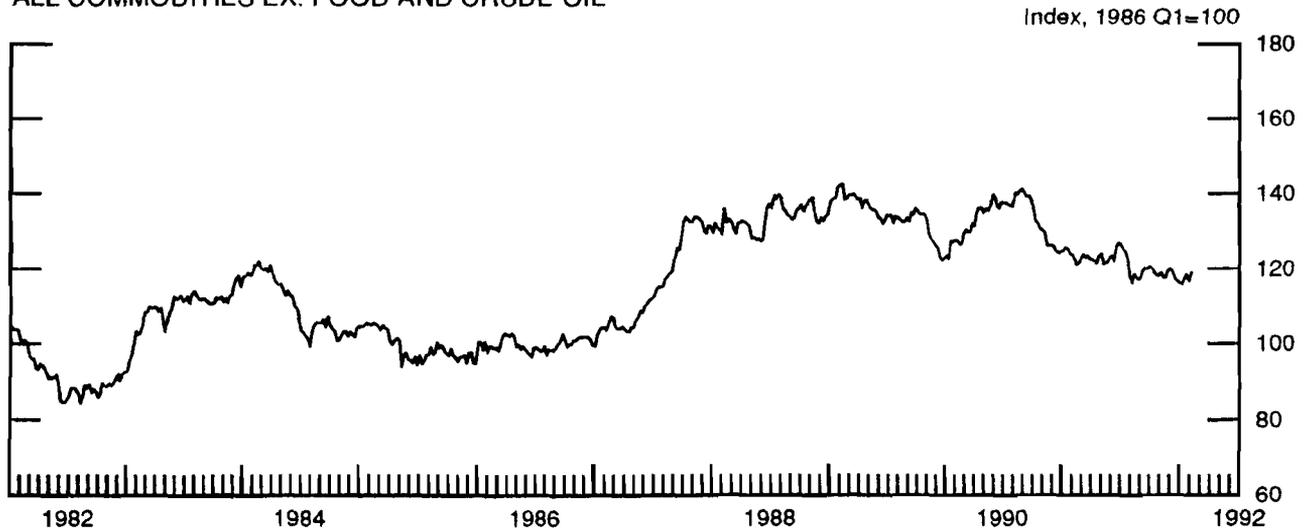
ALL COMMODITIES



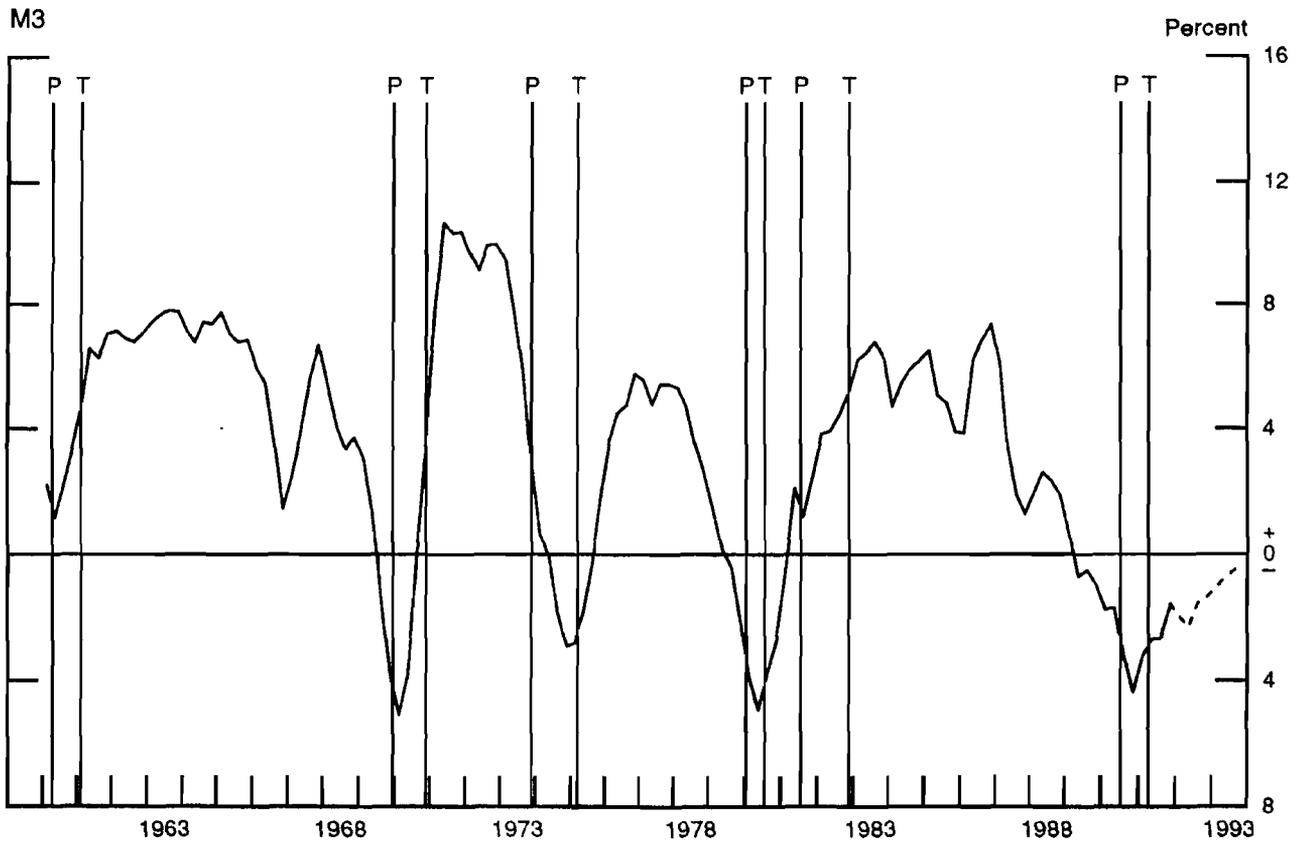
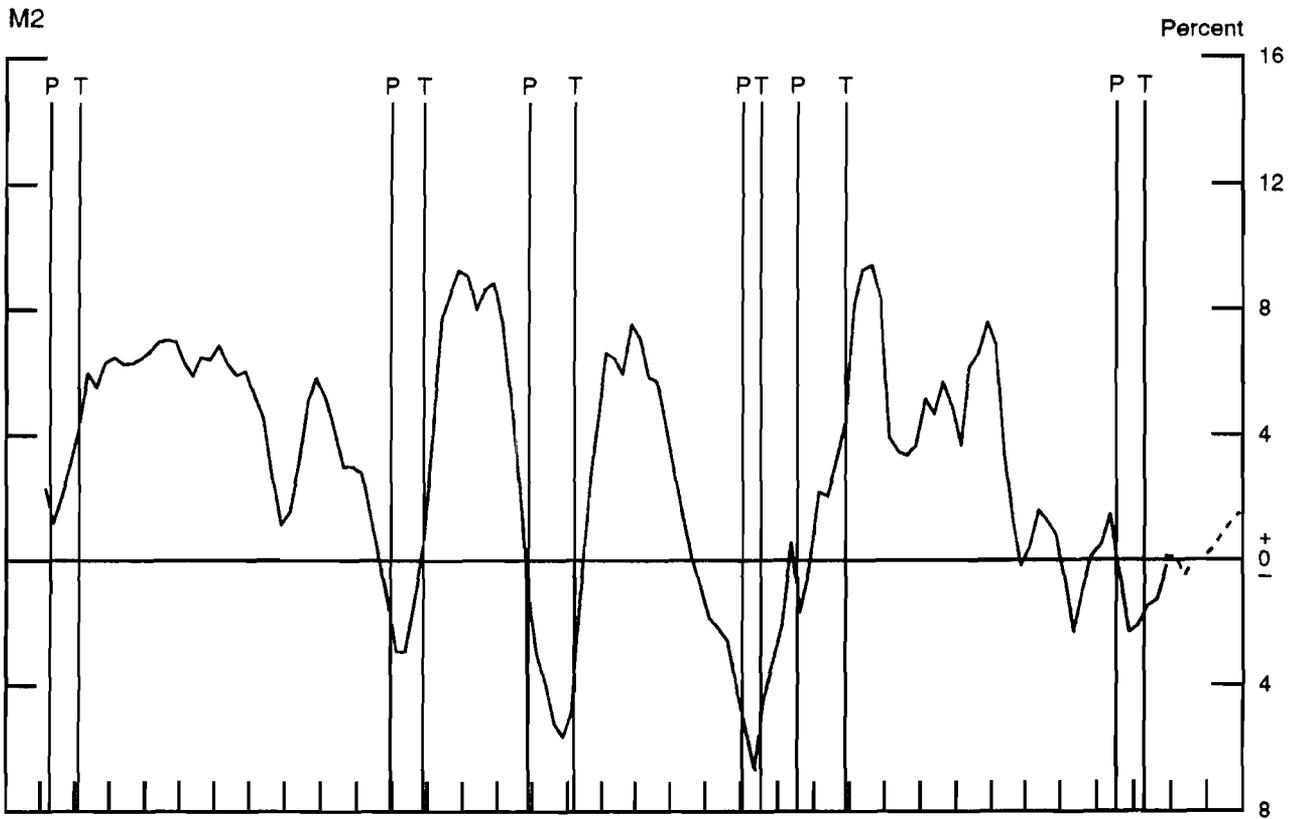
ALL COMMODITIES EX. CRUDE OIL



ALL COMMODITIES EX. FOOD AND CRUDE OIL



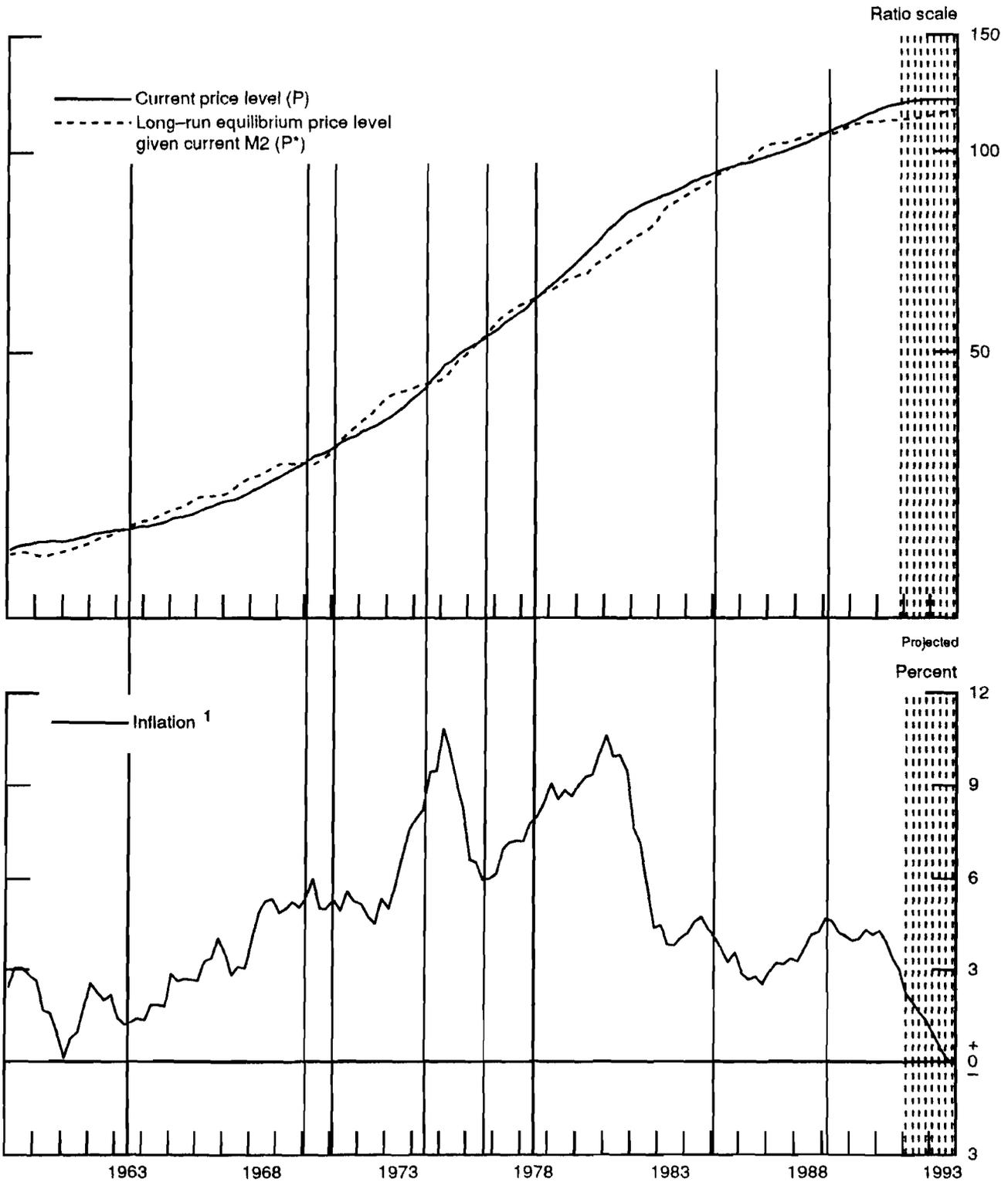
### Growth of Real M2 and M3



Note: Four-quarter moving average deflated by the CPI.

Chart 8

### Inflation Indicator Based on M2



1. Change in GNP implicit deflator over the previous four quarters.

Note: Vertical lines mark crossing of P and P\*.

For 1990:Q4 to 1992:Q4 P\* is based on the staff M2 forecast and P is simulated using a short-run dynamic model relating P to P\*. From 1955:Q1 to 1958:Q4, P\* is based on preliminary estimates of potential GNP.

## The Virginia Plan

Thank you Mr. Chairman. Before you is a chart of what Bob Black and I have come to call the Virginia Plan. Now Bob has lived forty some years in Virginia, and as Terry Sanford will tell you I've only lived there six. So the plan is thirty parts Bob's, only about six parts mine. Further, all of the experience and wisdom behind the plan are his. All I contributed was the picture. Still, he asked me to go first.

In my confirmation hearings I said that we face two challenges in setting monetary policy today. In the short run, we must assure that the system has enough liquidity to assure a resumption of sustained economic growth. In the long run, we must move toward eventually achieving price stability. What I find particularly attractive about the Virginia Plan is that it meets both policy objectives simultaneously.

But this plan not only meets the pragmatic demands of policy, it also makes good intellectual sense. We all differ on the extent to which money matters. But if it does matter, the way in which it matters is best described by the Virginia Plan. Let us try an old Socratic test. Suppose we agreed that money matters and that the right amount of money growth was 4 percent per year. Now, I ask the question: How much more money should we have two years from now than we have today?

There are two possible answers. Answer A is 8 percent, or as close to that as is practicable. Answer B is a bit more complicated: it is between 2 and 6 percent more than however much

money we end up with 12 months from now.

Now, you could say that I'm being unfair. It's more complicated than that, and it is. But the way it is more complicated has to do with the practical necessities of policy implementation, and not with theoretical elegance. While the Virginia Plan is not Milton Friedman's famed computer, the one which would put us all on the unemployment line, it does at least capture the essence of Friedman's idea: that in the long run, a stable rate of growth of the money supply is the best policy.

Specifically, we suggest that the FOMC set a 4 percent money growth target for 1992. The target range for 1992 would start at the upper and lower ends of the 1991 target range. The central tendency within the target range presumes that monetary policy eventually is successful in meeting the stated objective of this Committee in late 1991: to move money growth back toward the midpoint of the 1991 target range. We do not necessarily believe that we must move back to that midpoint in a single year. But it does recognize, as the Bluebook makes clear, that last year's undershoot was not deliberate but inadvertent.

From a policy perspective, this meets both our short-run objective of assuring adequate liquidity to sustain an economic expansion and our long-run objective of slowing money growth so as to achieve price stability. Meeting these twin objectives is probably impossible under the "cone" approach.

But, the most important reason for adopting the Virginia plan is not a short-run need for adequate money growth or our ability to send a long-term signal. It goes to the root of

macroeconomic policy. Last night, after listening to the comments from the different districts, I concluded that we were uncertain about the forecast because so much of our economic policy is now becoming pro-cyclical. The normal correction mechanisms of the market which cause the business cycle to move from contraction to expansion are being exacerbated by pro-cyclical policies.

In the fiscal arena, according to the staff estimates, we are witnessing a fiscal contraction in the first year of a recovery for the first time in memory. Our recently enacted banking laws cause a contraction of loans in the midst of asset price declines, and will, on the up side, cause an equal expansion of loan capacity in the midst of asset price increases.

The best reason to adopt the Virginia Plan is that it is deliberately stabilizing, not destabilizing. Furthermore, it makes the stabilizing intent of this Board plain for all to see. In an era in which the public is concerned about the wisdom of those who control our fiscal policy, a stated intention by this Board that we will impose the discipline on ourselves to be countercyclical can only help to improve confidence.

So, aside from the theoretical niceties of the system, I think there are sound practical reasons to adopt the Virginia Plan. We can set short-term money growth targets this year which are consistent with sustained growth. We can send a signal to the markets that we care about our long-term goal of price stability by cutting our money growth target. And, we can announce that this Board intends to be a force for stable policy.

At least in Virginia, killing three birds with one stone ain't bad. I now turn to my fellow Virginian to articulate far better than I have here, why we should adopt this approach.

# The Virginia Plan

