

APPENDIX

**REPORT ON FOREIGN EXCHANGE**

**PRESENTED TO THE FOMC**

**February 2-3, 1993**

**by**

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Mr. Chairman.

Since your last meeting, the dollar has fluctuated rather widely around DM1.60 against the German mark; it has followed a similar, albeit more subdued, pattern around Y125 against the yen.

**THE DOLLAR'S PERFORMANCE DURING PERIOD**

You may remember that on the day of your last meeting the dollar started to move up quite smartly against the German mark. That move was enough to push the dollar through the DM1.60 level and to its highest levels since early May 1992, touching DM1.6490 on January 8, 1993. But then the dollar lost its buoyancy. Though sentiment toward the dollar remained generally positive, the dollar/mark drifted gradually lower during most of January, retreating below DM1.60 and back toward levels prevailing around the opening of the intermeeting period. Just in the past couple of days, on surprisingly strong U.S. economic data, the dollar has bounced back somewhat so that, on balance, dollar/mark is up slightly more than 3 percent for the intermeeting period as a whole. Dollar/yen has similarly moved back and forth around the Y125 level. The U. S. authorities did not intervene.

## **FACTORS AFFECTING THE DOLLAR DURING THE PERIOD**

The mostly offsetting movements in dollar exchange rates reflected a variety of factors.

First was the shifting sentiment about the strength of the U.S. recovery and growing optimism about the prospects for fiscal action in the United States. Taken together, these considerations opened up the possibility of a wider range of monetary-fiscal policy options than market participants had been assuming before, leading them to evaluate the effects these different options might have on U.S. market interest rates during the coming year.

Second was a renewed assessment of the outlook for interest rates in Germany. A 15 basis point reduction in short-term market rates the Bundesbank engineered early in January was a smaller move than many had been hoping for at the end of the year. As time passed and the German government encountered open resistance to its wage and fiscal policy proposals for sharing the burden of the costs of German unification, market participants came to the view that the central bank remains reluctant to signal a change in overall policy stance. Yet an easing of policy is still anticipated for both domestic and external reasons and now, because of the delay, the market is expecting a greater cumulative decline in German interest rates over the coming year.

Third is the interplay of expectations concerning interest rates and trade flows surrounding the yen. Continuing expectations of a cut in the Bank of Japan's official discount rate kept alive the idea that interest rate differentials will move in favor of the United States during the early part of this year. But market participants were also wary that

political sensitivities may be aroused by that country's burgeoning trade surplus. They also worry that Japan is not as well placed as before, because of its financial problems, to sustain large scale capital flows that would offset that surplus. Consequently, the market has been cautious about pushing the dollar up much against the yen .

Finally, the market simply got ahead of itself, technically. With so many market participants believing that the economic fundamentals favored the dollar relative to other currencies during the coming year, sizable long dollar positions were built up during December. When the dollar's rise petered out, many moved to pare back those positions on the grounds that, at least for the immediate future, the profit potential of these positions did not warrant the funding costs.

#### **DEVELOPMENTS IN EUROPEAN EXCHANGE MARKETS**

Elsewhere, intermittent strains within Europe's Exchange Rate Mechanism (ERM) remained a feature of the intermeeting period, as manifest by the latest pressures on the Irish punt and this weekend's 10 percent devaluation of that currency. At the heart of these strains were continuing uncertainties that the core link between the French franc and the Deutsche Mark could be sustained prior to French elections in March, unless there would be an early and significant easing of monetary policy in Germany. On the fringe were concerns that pressures on some of the remaining smaller currencies could become intolerable and lead to further currency adjustments or defections from the ERM, thereby aggravating competitive relationships.

The latest tensions, while not as immediately intense as those of last September and October, were more sustained. The French franc came under enough pressure off and on

so that, for the entire period between Thanksgiving and the opening days of 1993, the cumulative size of French intervention and loss of reserves was almost as large as last fall. And, again, to put the market pressures at bay it took visible expressions of high-level political support from both the French and German governments as well as openly coordinated foreign exchange market intervention, a further increase in short-term French interest rates, and some adjustment in monetary policy in Germany.

Nor is there any sign that the policy conflicts within Europe have been addressed. At the same time that France has decided to reject depreciation as a policy alternative and to follow the leadership of German monetary policy, the British government has taken the opposite tact. It has taken advantage of its departure from the ERM to gain the policy flexibility to aim monetary policy at supporting the domestic economy to the fullest extent necessary. Responding to a round of disappointing economic statistics, the British government cut interest rates a full percentage point last week. This latest interest rate move, which surprised the market both for its magnitude and timing, prompted a renewed decline in sterling inasmuch as it signaled a greater willingness to let the exchange rate weaken than many market participants had supposed.

Under these circumstances, market participants are unsure how much of the exchange rate realignment that will ultimately take place within Europe has already occurred. Though the dogged defense of the French franc/DM parity impressed many market participants during much of January, the pressure that last week's drop in sterling put on the Irish punt and other EMS currencies reveals the vulnerability of the present situation--especially in a recessionary environment. Also, market participants are uncertain how the different policy

approaches will work out. Will those countries that have relaxed the exchange-rate constraint on policy obtain a quicker return to a more balanced economic performance, one sufficient to restore confidence? Will the need to rebuild their exchange positions add further constraints to their policy options? For now the jury is still out.

OPEN MARKET DOMESTIC DESK OPERATIONS

FOMC MEETING

February 2-3, 1993

William J. McDonough

Monetary policy was unchanged throughout the intermeeting period and the Desk sought to maintain the degree of pressure on reserves consistent with Federal funds trading in the area around 3 percent. In the event, the effective funds rate was 3.00%. The borrowing allowance was maintained at \$50 million and the assumed path for excess reserves was held at \$1 billion.

Although interest rates in the last week of the year bounced around a bit, the year-end was one of the quietest in some years. Market forces no doubt had most to do with that, but the Desk sought to help bring about that result in two somewhat different ways.

In late October, the market began tightening for turn-of-the-year financing because of the beginning of pressure from foreign banks, especially the Japanese banks. At about the same time, the Bank of Japan renewed periodic discussions with us about their banks' funding situations, giving us the opportunity to point out that an aggressive presence of Japanese banks in what might be a tight year-end market could only cause concern about their names and would best be avoided. Our advice was taken to heart and we

heard of a number of cases in which the Bank of Japan so advised the banks. We had a stepped-up parade of visitors from Japanese banks apparently encouraged by the BOJ to make courtesy calls on us so that they would hear the same speech. The Japanese banks were invisible the last week of the year and most of the month of December, apparently having long-funded themselves through that period.

Our other positive effort to keep the final week of the year as stable as possible consisted of satisfying a large part of the reserve need for the maintenance period covering the turn by doing a large 7-day system repo on Monday, December 28. This action was intended--and was so interpreted--as showing that we wanted adequate reserve availability for the week and would not leave the market uncomfortably short of reserves on December 31, both a statement date and the day before a three-day weekend.

Reserve management so far in the new year has been complicated by the unusually heavy flow of taxes to the Treasury, in the form of taxes withheld in the early days of the month and individual nonwithheld payments after the middle of January. These flows, about \$10.5 billion above the average of the previous three years, apparently resulted from relatively heavy stock-option exercises and moving bonus payments into 1992 to avoid possibly higher taxes on the more affluent in 1993. They increased the Treasury balances with the Federal Reserve banks well above expectations and made estimating necessary reserve actions particularly difficult. The only day it caused a noteworthy practical problem was January 20, when the Treasury balance was much higher than anybody thought it



would be, causing a reserve shortage. Two money center banks turned to the discount window for combined borrowings of \$2.1 billion when funds were not available late in the day. These borrowings and one by a "nonbank bank" owned by a securities dealer of almost \$600 million on December 31 pushed adjustment borrowing for the intermeeting interval to \$174 million; it would have been \$58 million in the absence of these three uses of the window.

You are familiar with the price activity in the Treasury market, with bills down about 25 to 30 basis points and coupons 15 to 55 basis points lower, with a slight additional steepening of the yield curve. Behind these changes were some interesting developments affecting demand.

In October and November, a large number of investors sold off-the-run Treasury securities to the dealer firms, which had difficulty moving them out and the dealers became somewhat choked on illiquid paper. As market attitudes improved, this inventory moved out during late November and December and the dealers were flat to slightly short by the end of the year. That was very helpful in preparing the way for the extremely heavy corporate and municipal issues of January. Until last week's Time-Warner deal, which went quite poorly because of aggressive pricing and too much supply of the name, these deals were distributed so easily that there was not much need for hedging through the Treasury market.

Even though corporate and municipal supply is likely to continue to be heavy and the Treasury quarterly refunding is only a week away, dealers tell us that there is strong customer demand

for debt securities. Against this background of investor willingness to purchase more securities, the market is willing to accept and discount data pointing towards a stronger real economy, such as last Friday's durable goods numbers, and concentrate on the likely path of the new administration's fiscal policy and the composition of Treasury financing, particularly the size of the 30-year issues. Behind this rather confusing market could be something quite important: an investor questioning of whether the inflation premium built into the present yield curve is not too high. Clearly, a disappointing answer could produce a backup in rates. But a sufficiently convincing affirmative answer could well find an investment community ready to demand enough longer-term securities to move the longer end of the curve down substantially.

Market participants, except for a very few who think that further Fed easing is at least possible, are of the view that Federal Reserve policy is likely to be unchanged for at least the first six months of this year against a background of moderate economic growth and an absence of price pressures. Most of those whose horizons go beyond the end of June assume a continuation of a steady policy throughout this year.

Michael J. Prell  
February 2, 1993

FOMC CHART SHOW PRESENTATION--INTRODUCTION

Chart 1 spells out the policy assumptions upon which we based the Greenbook economic forecast. As usual, monetary policy has been specified in terms of a federal funds rate path. We've assumed that the funds rate will remain close to 3 percent, but that it may start to move upward before the end of 1994. In suggesting that probability of an upward tilt, we have two considerations in mind. First, the real funds rate probably is around zero now--a level unlikely to be appropriate over the longer haul. And reinforcing that point, our second observation is that the anticipated easing of the unusual loan supply constraints now extant will be stimulative to spending and will place upward pressure on market interest rates, all else equal.

On the fiscal side, we've assumed that policy is modestly restrictive through 1994, in line with the implications of the 1990 budget agreement. Thus, we've assumed neither a near-term stimulus package nor a major longer-term deficit-reduction plan. What is implicit in the Greenbook is that there would be continuing efforts beyond 1994 to chip away at the structural deficit--but not the kind of dramatic action that might result in a sharp downshift in expectations about the long-range growth of the national debt, relative to what is currently anticipated in the bond markets.

Nonetheless, we still are projecting that long-term interest rates will drift downward over the projection period, as the continued low levels of short-term rates and inflation encourage investors to reach for the higher yields at the longer end of the market. We've anticipated that the 30-year Treasury bond yield will be in the range of 6-1/2 to 6-3/4 percent a year or so from now. And with foreign

interest rates falling relative to ours, especially at the short end, we are expecting that the dollar will tend to edge upward over the next two years.

Chart 2 presents the staff forecast, and, for comparison, the Blue Chip consensus projection from early January. In a nutshell, we're projecting real GDP growth at almost 3 percent on average over the next two years, with unemployment dropping to about 6-1/2 percent at the end of 1994, and CPI inflation slowing to less than 2-1/2 percent by that time. The Blue Chip forecasters are expecting a stronger economy, with GDP growth averaging a shade over 3 percent in 1993-94. One might speculate that a difference in fiscal assumptions has played a role in this divergence, but how much is unclear. Reflecting the stronger growth they've projected, the Blue Chip jobless rate is a little lower than ours in late 1994, but not by enough, in our view, to explain the appreciably higher inflation forecast--one that is more than a percentage point higher in 1994. This clearly is an important issue, to which we shall return later in our presentation.

The comparisons in chart 2 suffer to some degree from differences in forecast timing. And there has been some news received even in the brief period since the Greenbook went to press. Most notable is the advance report on December durable goods orders, which were surprisingly strong. We would judge those data to imply some upside risk to the forecast for output growth. The extent of that risk is mitigated somewhat by the fact that the December surge in capital goods bookings included jumps in several especially volatile components. In addition, it is possible that the effects will be greater on the composition of GDP in the near term than on its level.

as some of the increase in shipments requires additional imported components or comes out of inventories.

As may be seen in Chart 3, our Greenbook forecast included a significant step-up in the pace of inventory accumulation in the current quarter. This shows up in the upper panel as a movement of GDP further above final sales, and can be seen more easily in the lower left panel, where inventory investment itself is graphed. The rise in inventory investment appears rather striking, but the projected level this year and next really is not very high; indeed, as indicated at the right, it permits the downward trend of the aggregate stock-to-sales ratio to continue.

Although the latest purchasing managers' report indicated that delivery lags have begun to lengthen, we don't believe we're on the verge of a major shift in stocking strategy. Thus, inventories play only a small role in the dynamics of this forecast. So, we probably should turn without further ado to the outlook for the major components of final sales. Ted will start by examining the determinants of net exports.

E.M. Truman  
February 2, 1993

FOMC Chart Show Presentation -- International Developments

The staff outlook for the external sector of the U.S. economy is essentially unchanged from that prepared for the December FOMC meeting. A key element of that story is the projection for the dollar. The red line in the top panel of the first international chart shows the substantial rise in the price-adjusted foreign exchange value of the U.S. dollar in terms of other G-10 currencies since last June, as well as since the low point at the end of the summer. The left box in the middle panel illustrates that the rise since last June has been predominantly against those currencies that withdrew from, or from association with, the exchange rate mechanism of the European Monetary System -- the Swedish krona, the pound sterling, and the lira -- and to a lesser extent against the Canadian dollar. As can be seen from the black line in the top panel, the dollar's appreciation since late last summer has been associated in part with a relative rise in U.S. real long-term interest rates.

We are projecting that the dollar will drift up over the forecast period by another 3 percent or so from its level of a week ago, but substantially less from its level today. This forecast is based on our assumption that real long-term interest rates abroad will decline somewhat more than U.S. rates and that short-term rates abroad will also decline significantly. Over the same period, the dollar is projected to drift lower in real

terms on average against the currencies of our major trading partners among the developing countries.

Chart 5 presents information on recent trends in industrial production and consumer prices in the major foreign economies. As you can see, IP has been declining in Japan since late 1990, and in the four European countries, the trend also is generally negative. Only in Canada (lower right) is there any recent upturn in this indicator of economic activity.

Consumer price inflation, excluding in most cases here food and energy, has been on a downtrend in five of the six countries; western Germany (upper right) is the important exception. However, it is interesting to note that excluding food and energy the absolute and relative performance of France (middle left) is less outstanding than is suggested by official commentaries; on a comparable basis recent increases in the overall CPI have been about a percentage point lower.

The next chart summarizes the outlook for foreign economic activity and prices. As is illustrated in the upper left panel, the increase in U.S. real GDP (black bars) outstripped growth abroad on average last year (red bars), and we expect that pattern to continue during the first half of this year. Only next year is foreign growth expected to exceed the U.S. pace, but by a noticeably smaller margin than during the second half of the 1980s.

The proximate cause of this soggy near-term outlook is the projected economic performance of the G-6 countries, summarized in the box at the right. Their growth is expected to

average only 1-1/2 percent over the first half of this year. We are projecting a pickup in growth in these countries, but in most cases the extent of the recovery is predicated on further policy actions.

For Japan, we are assuming that short-term interest rates will decline by an additional 50 basis points in the first half of this year. At present, the market is waiting for confirmation from the Bank of Japan of the lower rates that recently have been recorded. Fiscal policy in Japan is quite stimulative now, and we expect another stimulus package later in the spring or summer.

For Canada, where economic activity does appear to be picking up, helped along by the United States, we are assuming that short-term interest rates will decline by at least an additional 100 basis points over the course of this year.

The outlook for Europe, of course, hinges importantly on what happens to German interest rates. We are assuming that short-term German interest rates will average 150 basis points less than today during the second quarter of this year and the average will be another 100 basis points lower by the fourth quarter. In general, we assume that interest rates in Europe will follow German rates down, with the qualification that some countries, such as the United Kingdom, have moved ahead of Germany.

Of course, these policy actions, along with those that have already occurred, may not be sufficient to produce a recovery in the foreign industrial countries of the dimensions



that we are projecting. However, we feel the risks on foreign growth are reasonably balanced.

Meanwhile, we are projecting a modest pickup in growth in the developing countries this year -- the blue bars in the middle left panel -- led by the four newly industrializing economies in Asia. We are expecting that growth in the developing countries on average will level off in 1994 because of a projected modest deceleration of growth in China, which is becoming an increasingly important destination for our exports.

With respect to consumer prices, the lower left panel presents our forecast for the foreign G-7 countries (the red line) compared with the United States. While a number of transitory factors are expected to boost overall CPI inflation abroad this year, the downtrend should resume next year, and inflation on average should be less than in the United States. The principal reason for the slowing of inflation abroad is the substantial, indeed generally widening, gap between potential and actual output this year, which will remain essentially unchanged in 1994.

The upper panels of chart 7 present the outlook for U.S. nonagricultural exports, excluding computers. As is shown in the red bars on the left, we are projecting a significant acceleration this year in the quantity of these exports, in line with the rise in foreign real GDP, the black bars. However, in 1994, growth is expected to slow because the strong dollar -- shown inverted by the blue bars -- makes our goods less competitive abroad.

The lower panels present analogous information about our projection for non-oil imports. The growth of such imports -- the red bars on the left -- runs ahead of the growth in U.S. real GDP -- the black bars -- because the income elasticity is greater than one and U.S. capacity utilization is rising. This year we expect non-oil imports will be boosted by the strengthening dollar -- the blue bars -- which we believe acts with a shorter lag on imports than on exports.

The next chart presents some information on the three other categories of our merchandise trade. The top panels examine our trade in computers and computer parts. Our traditional surplus disappeared in 1991 and turned into a deficit in 1992. The left panel illustrates trends in subcategories of this trade. In 1989, trade in parts (the solid bars) was not quite as dominant as it was last year, and was reasonably balanced. As a consequence, our trade surplus in whole computers (the hatched bars) generated the overall surplus. In 1992, price wars and efforts to upgrade PCs and workstations favored lower-tech imported parts (the red bars), and foreign demand for U.S.-produced computers languished for the second straight year. Our outlook assumes that these broad trends will continue this year, though we expect on a somewhat reduced scale, in part, because the introduction of the next generation of microprocessors should begin to focus U.S. and foreign demand a bit more on U.S. production.

Agricultural exports, the middle panels, increased substantially during 1991 and 1992. Last year, wheat, corn and

soybeans again recorded increases, but there were also substantial increases in minor commodities such as meats, dairy products, and fruits. In our forecast, we expect exports of major crops to remain strong and exports of other subcategories to expand much more slowly than in 1992.

Finally, with respect to oil, our assumption about prices (left panel) is consistent with our overall assumption about new fiscal initiatives -- no energy taxes or import fees. We have pushed back to next year the date at which Iraq is allowed to resume substantial oil exports. We are assuming that the rest of OPEC will not be willing or able to apply sufficient production restraint, given the relatively slow growth in world demand for petroleum, to push the price of U.S. imports much above \$17 per barrel, or \$19.50 per barrel for West Texas Intermediate. Meanwhile, the quantity of U.S. oil imports (right panel) should rise with growing domestic demand and declining domestic production.

Chart 9 summarizes in the top panel the staff projection for the external sector. As is shown in the top line and right-hand column, over the forecast period our current account deficit is projected to widen by an additional \$28 billion at an annual rate. Trade in goods, the second line, more than accounts for this deterioration. Our surplus in services increases (line 3), though the rise this year in particular is held down by slow growth abroad. Net investment income is unchanged this year, as the effects of lower interest rates largely offset the influence

of a growing net liability position. However, in 1994, the interest rate effect wears off.

The decline in real exports of goods and services (last line) is 40 billion 1987 dollars over the forecast period. This is larger than the decline in nominal terms because the nominal balance benefits from the trend in our terms of trade -- import prices rising less than export prices -- that is largely attributable to the dollar's appreciation.

An even stronger dollar is an obvious risk to our forecast. To illustrate the dimensions of that risk, the lower panel of the chart presents an alternative scenario in which the dollar appreciates against other G-10 currencies by 10 percent over the first half of 1993 relative to our baseline forecast and remains at that higher level, relative to baseline, for the rest of the forecast period and into 1995. The hypothesized appreciation of the dollar should be thought of as a larger response to the same assumed changes in interest rates and other fundamental policies that I have described.

With the path of the federal funds rate unchanged from the baseline, our econometric models tell us that the stronger dollar would reduce the growth of real GDP this year by half a percentage point and by a full percentage point in 1994 and 1995. As can be seen in the last two lines on the chart, disinflation is accelerated under this scenario. However, only about half of it is the direct result of the dollar's appreciation; the rest is produced by the increased slack in the economy.

Larry Slifman now will describe in more detail the elements of our baseline forecast for domestic spending.

Lawrence Slifman  
February 2, 1993

FOMC CHART SHOW PRESENTATION -- ECONOMIC OUTLOOK

The forecast for domestic demand, calls for sizable gains in spending by both consumers and businesses.

As shown in the upper left panel of chart 10, consumption expenditures--after sharply outpacing income gains last year--are expected to grow only a bit faster than real income over the next two years. With the saving rate, as currently estimated by the Commerce Department, at a relatively low 4-1/2 percent, and expected to drift down a bit over the course of the projection period, one might ask: why aren't we projecting a slower consumption path? Our answer relies on both economic and statistical reasons.

Among the economic reasons, I would first point to a backlog of demand for consumer goods that likely developed during the period from 1989 to 1991. As illustrated in the upper right panel, real outlays for consumer durable and nondurable goods dropped below their longer run trend during this period. It is probably the case that the slowing of spending in 1989 occurred, at least in part, because households had become well stocked with cars, electronic goods, and home furnishings after their robust spending during the mid- to late-1980s. But by early 1992, the spending declines of 1990 and 1991 had led to a significant shortfall from trend. We think that the pickup in purchases of autos and other goods last year helped narrow the gap somewhat. Nonetheless, replacement needs that had been deferred during the recession and early recovery--especially for autos--as well as demand for net additions to the stock of consumer goods, are likely to continue to

provide an upward thrust to spending over the next two years, and outlays are expected to move toward their longer run trend.

Another economic factor that should permit increased consumer spending is the improvement in household financial positions. The claim of debt service on income flows (the lower left panel) has dropped sharply, reflecting a moderation of debt growth, lower interest rates on new loans, and refinancing of old debts at lower rates. In addition, household net worth has improved as a result of the further increases in the stock market. Moreover, a firming in house prices should make it easier for homeowners to liquify the equity in their homes. Other things equal, these balance sheet and liquidity effects should be associated with a lower measured saving rate, particularly if consumers become confident that renewed growth in jobs and income will be sustained.

In addition, there is a statistical reason to question whether a low measured saving rate should be a binding constraint on our consumption forecast. As shown in the lower right panel, during the 1970s and most of the 1980s the personal saving rate was revised up as the Commerce Department received more complete information. In fact, during the late 1970s and early 1980s, the revisions ultimately were on the order of 2 or 3 percentage points. It is true that since 1988 the revision process has gone the other way, and at this point we have no auxiliary information that points to an underestimate of income or an overestimate of consumption. But BEA has not completed its full revision and benchmarking cycle for those years, and the final outcome could be different. The point is that, given the measurement uncertainties, we don't think that the reported level of the saving rate, in and of itself, should preoccupy us unduly in projecting PCE growth.

Chart 11 displays our housing projection. As illustrated in the upper left panel, we expect new construction to expand steadily over the next two years--with total starts approaching the 1-1/2 million mark by the end of 1994. The bulk of the improvement is expected to be in the single-family sector, where demand should be driven by income growth and by further declines in mortgage rates. These two factors are likely to lead to further reductions in the cash-flow burden of home ownership (the middle left panel). The more favorable environment for homebuying already is reflected in the University of Michigan's buying conditions index, which is at its highest level since 1986. Demographic trends (the lower left panel) are likely to be slightly less favorable for overall housing construction than they were in the 1980s. But most of the impact should fall on the multifamily sector as the single-family segment of the market continues to be supported by the aging of the population. The bottom right panel shows that the bulge in the age distribution resulting from the baby boom cohort is moving through the age groups in which the transition from renting to owning is most common, even as the younger age groups lose population.

The outlook for business fixed investment is detailed in your next chart. As can be seen in the top panel, we anticipate robust gains in equipment outlays over the next two years. In part, the strength of equipment investment reflects the lagged effects of last years' acceleration in output. With profits strong recently, internal funds (the middle left panel) are abundant and should be sufficient to finance capital spending until next year. In addition, the liability side of corporate balance sheets has improved dramatically, one aspect of which is illustrated by the debt ratio in the middle right panel: this means that firms that do



need to go to the capital markets are in a better position to finance their spending.

Within the overall equipment total, we are projecting divergent movements for some of the key components. Real outlays for computers (line 2 of the table) are expected to continue rising at an extraordinary pace. A new product cycle will begin within the next few months as major computer manufacturers begin shipping PCs and workstations that are based on Intel's new Pentium chip. We think demand for PCs generally will be extremely strong through next year, and far outweigh the ongoing weakness in the market for mainframes. On the other hand, purchases of new aircraft by domestic carriers have stagnated recently, and are expected to fall sharply over the next two years. Production already is being cut back at Boeing and McDonnell Douglas as domestic carriers continue to cancel or defer delivery of previously ordered aircraft. Excluding computers and aircraft (line 4), we anticipate moderate spending gains. As expectations for strengthening sales become more firmly held, we think that businesses will become more willing to commit to purchasing longer-lived equipment. As shown in the lower left panel, the uptrend in orders for these goods, the bulk of which have average service lives of ten years or more, suggests that a pickup in demand already is under way. As Mike indicated earlier, the December readings on shipments and orders were far stronger than our assumptions and this certainly tilts the risks on our investment forecast to the up side.

The freefall in spending for nonresidential structures appears to have come to an end last year, but we aren't anticipating any significant upturn soon. As shown in the lower right panel, the

decline in new commitments--an amalgam of contracts and permits-- seems to have abated. In our forecast, further declines in the office sector are offset by a pickup in construction activity by public utilities and some improvement in other commercial buildings, such as retail stores, and in industrial structures.

Adding up the various spending components, we expect private domestic final demand to grow at a 4 percent annual rate over the next two years. As shown in your next chart, partly offsetting this strength will be the further contraction of real federal purchases, with the ongoing decline in defense spending outweighing a modest rise in nondefense purchases. Reflecting the contraction of defense spending, the budget deficit as measured in the national income accounts, which excludes financial transactions such as deposit insurance, is expected to fall over the next two years. The high employment budget deficit, which, in addition, excludes the expected cyclical pickup in receipts, shows less of a decline; but it, too, moves in the direction of restraint.

The bottom panels summarize our forecast for the state and local government sector. We expect real state and local purchases to rise 1 percent this year and 2 percent in 1994, with a good part of the increase coming from higher construction outlays. The box at the bottom right shows that, with the projected expenditure restraint and our anticipation of further tax increases, the operating balance for the sector is projected to continue narrowing over the next two years.

Michael J. Prell  
February 2, 1993

FOMC CHART SHOW PRESENTATION--CONCLUSION

One of the major question marks in the outlook is the behavior of productivity. As indicated in the top panels of chart 14, we are projecting that output per hour will rise less rapidly over the next two years than was the case in 1992. Nonetheless, these gains are still sizable. One element in the recent productivity improvement has been the kind of labor shedding that perhaps typically has been more evident during broad, cyclically-related profit squeezes; however, in the current period it also has been associated importantly with special sectoral stories or with the downsizing of big firms like IBM and Sears that are making long-delayed adjustments to their shrinking market shares. This process is by no means over, although its force should wane over the projection period. But, we are also seeing gains in efficiency resulting from such factors as the aging of the workforce and the more successful application of new information processing and other technologies. We're allowing for some persistence of this trend. A key implication of the strong productivity growth is that hiring is likely to pick up rather slowly and remain moderate. This is visible in the middle panel, where the comparatively subdued recovery projected for payroll growth is displayed.

How this will translate into the behavior of the unemployment rate is dependent on the movements in the size of the labor force. As may be seen at the bottom left, the labor force participation rate has bounced around over the past couple of years, in ways that we are not yet able to explain satisfactorily. Be that as it may, as of the last quarter, the rate was close to what our models would predict, and

we've projected that it will rise somewhat further this year and next, as normally would be associated with the increase in job opportunities. In combination with population trends, this points to overall labor force increases, tabulated at the right, similar to the 1-1/4 percent rise recorded last year.

The growth of the labor force is expected to soak up most of the gains in employment, and thus the unemployment rate remains relatively high through 1994. With considerable slack also remaining in industrial plant capacity, we believe it reasonable to expect that inflation will continue to diminish in coming quarters--in contrast to the Blue Chip consensus I noted earlier.

The top panel of chart 15 portrays our forecast of the Employment Cost Indexes. We are projecting that both wages and benefits will decelerate further, after a substantial slowing this past year. One noteworthy recent development is the smaller increase in cost of medical benefits last year; this reflects in part the slowing in medical care inflation seen in the consumer price index, but also the ongoing efforts of companies to hold down their outlays. Clearly, there is the possibility that new government mandates could affect the benefits picture. However, at least two points suggest that this may not be a big problem for labor costs in the next two years: first, there is likely to be a phasing-in of any new benefits requirements, and second, there would be some trimming of wage increases to offset added benefits costs.

In all likelihood, therefore, if productivity does continue to rise appreciably, unit labor cost increases should be quite modest. As the middle panel indicates, we are expecting that the rise in consumer prices ex food and energy will slow appreciably--from a 3.4 percent increase over the four quarters of 1992 to 2.4 percent in

1994. This looks wildly optimistic relative to many private forecasts, but it seems reasonable to us in light of the amount of slack in the economy. As simplistic as the short-run Phillips curve relation admittedly is, it has proven a rather serviceable forecasting tool, and the shading in the chart shows that, whenever the actual unemployment rate has exceeded the econometrically estimated natural rate, core inflation has slowed. Other, less optimistic forecasters may be giving more weight to the fact that the economy is growing and unemployment falling, rather than emphasizing the degree of slack; however, while rapid growth in itself may heighten the chances of bottlenecks or more aggressive wage- and price-setting patterns, it doesn't seem like 3 percent should be violating any speed limits.

Finally, in piecing together the overall price forecast we've taken note of the special circumstances in the food and energy sectors. As may be seen in the lower left panel, we're projecting that retail food prices will rise only about 2 percent per annum-- below the general inflation rate, largely because of the continuing benefits of last year's bumper crop. Energy prices, at the right, are also projected to rise less than the overall inflation rate this year, but to pick up to something over 3 percent in 1994: environmental regulations may raise electricity generation costs and the popularity of clean-burning natural gas may put some pressure on supplies.

The last chart provides a summary of your forecasts, as they currently stand. The central tendency for real GDP growth is 3 to 3-1/2 percent, while CPI forecasts were mainly between 2-1/2 to 2-3/4 percent. The unemployment rate forecasts were all in the 6-3/4 to 7 percent range.

The staff forecast for activity falls a bit below the bottom of the central tendency range. This isn't a significant difference as

forecasts go, but it underscores in our minds the question in particular of possible differences in fiscal assumptions. We don't know what you've done in this regard, but we recognize that our assumption of no change in fiscal policy is unrealistic. Though it is still unclear what will be proposed and what will be enacted, what I've heard to date suggests to me that a sensible adjustment to our baseline forecast would put GDP growth this year somewhere in your central tendency range, holding to the 3 percent funds rate path.

This is not to say that the analysis is entirely straightforward. To be sure, the simulations we reported in the Greenbook a few months ago would suggest that even a modest stimulus package of the \$15 to \$20 billion variety mentioned last week by some administration officials would be enough to boost growth this year by a few tenths of a percent. But the picture is complicated by the apparent fact that any so-called stimulus package will be coupled with subsequent tax increases and expenditure cuts aimed at reducing the budget deficit. Those deficit-cutting steps presumably would generally take effect in 1994 or later. However, in analyzing their effects, one must contend with a thicket of possible expectational stories.

For example, the prospect of future reductions in their disposable income could cause people to feel poorer and spend less now; on the other hand, many people have seen this coming for some time and it might not alter their behavior much; or, on the third hand, people may be so myopic that they really won't respond much until their tax payments or benefits checks actually change.

Similarly, there is the question of what anticipatory effects deficit-reduction would have in the financial markets. Presumably, the markets are already expecting the President to present a plan to

reduce the deficit by \$145 billion in 1997. but they've heard this kind of thing before and there's undoubtedly some skepticism still reflected in securities prices. So, if the plan ultimately enacted is larger or more credible than now anticipated, bond yields could well fall more than we've indicated in our baseline forecast, boosting other asset values and stimulating interest-sensitive expenditures-- all without any action on the part of the Fed.

This leaves us a pretty murky picture. As I suggested earlier, we would view the likely fiscal changes as tilting the odds toward a somewhat stronger 1993 growth outcome than in the Greenbook projection. The opposite may be true for 1994, but that is an even tougher call.

STRICTLY CONFIDENTIAL (FR) CLASS I-FOMC

*Material for*

*Staff Presentation to the  
Federal Open Market Committee*

*February 2, 1993*



## POLICY ASSUMPTIONS

**Federal funds rate** remains close to 3 percent, with upward tilt perhaps emerging sometime in 1994.

- Real funds rate relatively low at present.
- Anticipated gradual easing of unusual loan supply constraints is effectively a financial stimulus.

**Fiscal policy** is modestly restrictive through 1994, in line with 1990 budget agreement restraints.

- Have assumed neither near-term stimulus nor major longer-term deficit-reduction plan.
- Implicit Greenbook assumption is that there would be continuing efforts in out-years to chip away at structural deficit.

## FINANCIAL IMPLICATIONS

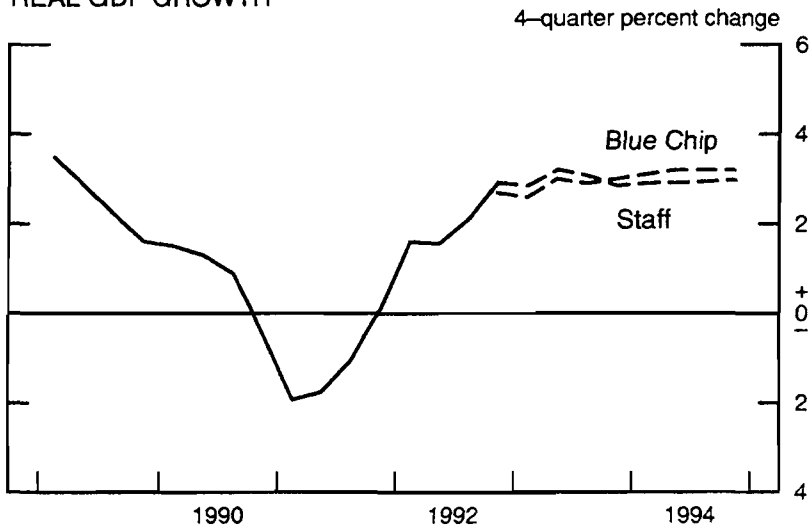
**Long-term interest rates** drift downward, as short-term interest rates and inflation remain low.

**Exchange-value of the dollar** tends to rise, as foreign interest rates fall relative to the U.S. rates.

Chart 2

### Forecast Summary

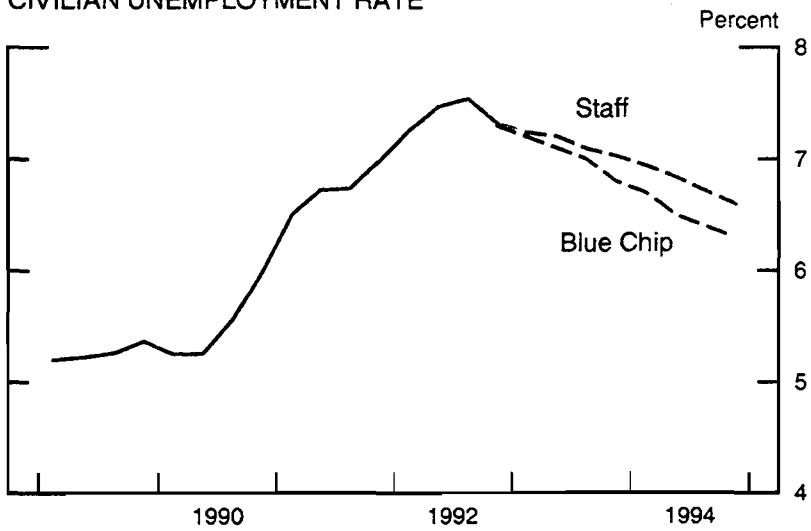
#### REAL GDP GROWTH



#### GDP GROWTH

Percent change, Q4 to Q4	
1989	1.5
1990	-0.5
1991	.1
1992	2.9
1993	2.8
1994	3.0

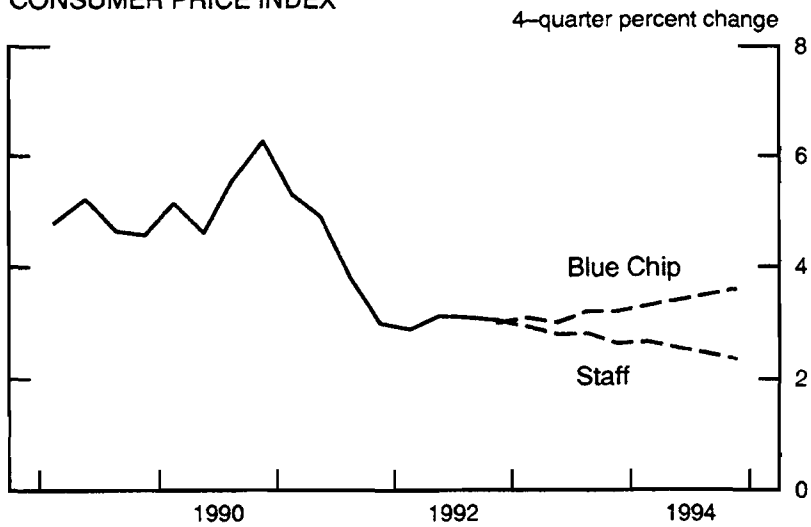
#### CIVILIAN UNEMPLOYMENT RATE



#### UNEMPLOYMENT RATE

Percent	
1989	5.4
1990	6.0
1991	7.0
1992	7.3
1993	7.0
1994	6.6

#### CONSUMER PRICE INDEX



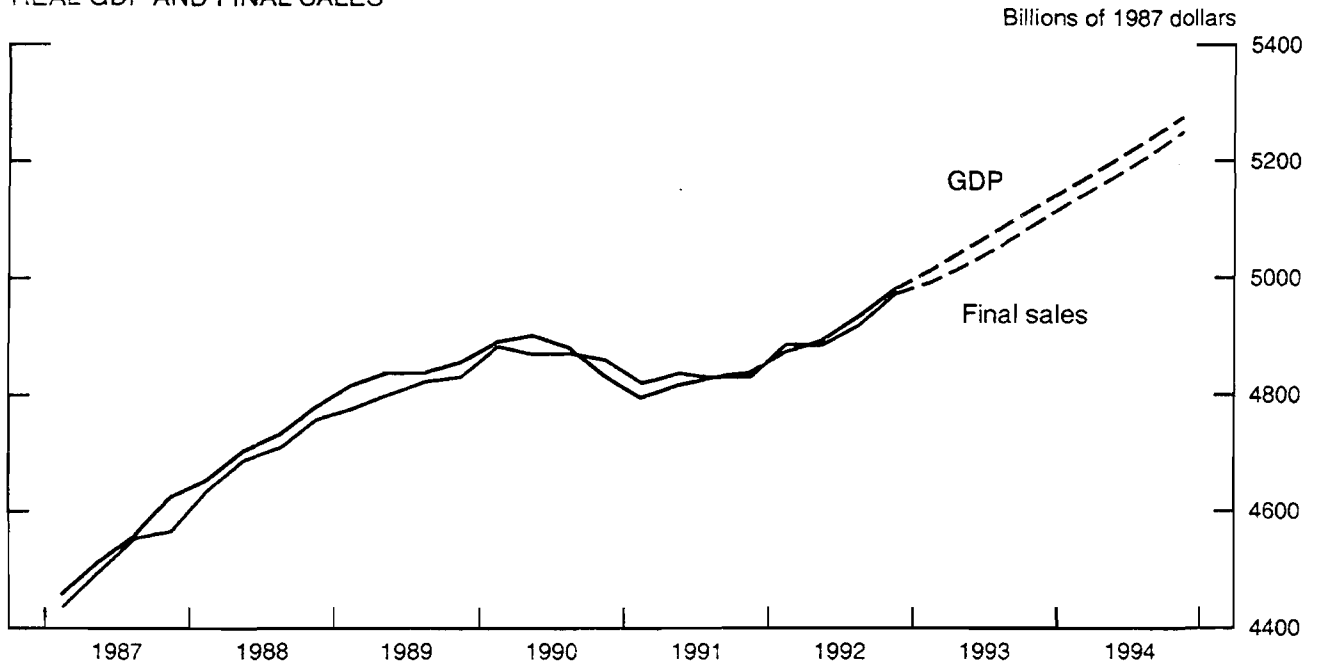
#### CPI INFLATION

Percent change, Q4 to Q4	
1989	4.6
1990	6.3
1991	3.0
1992	3.0
1993	2.6
1994	2.4

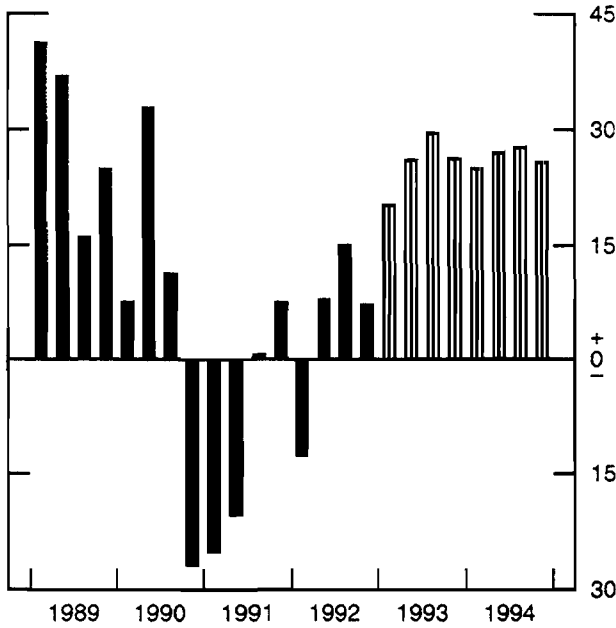
Note: "Consensus" forecast, Blue Chip Economic Indicators, January 10, 1993.

Chart 3  
Inventories

REAL GDP AND FINAL SALES



BUSINESS INVENTORY INVESTMENT  
Billions of 1987 dollars

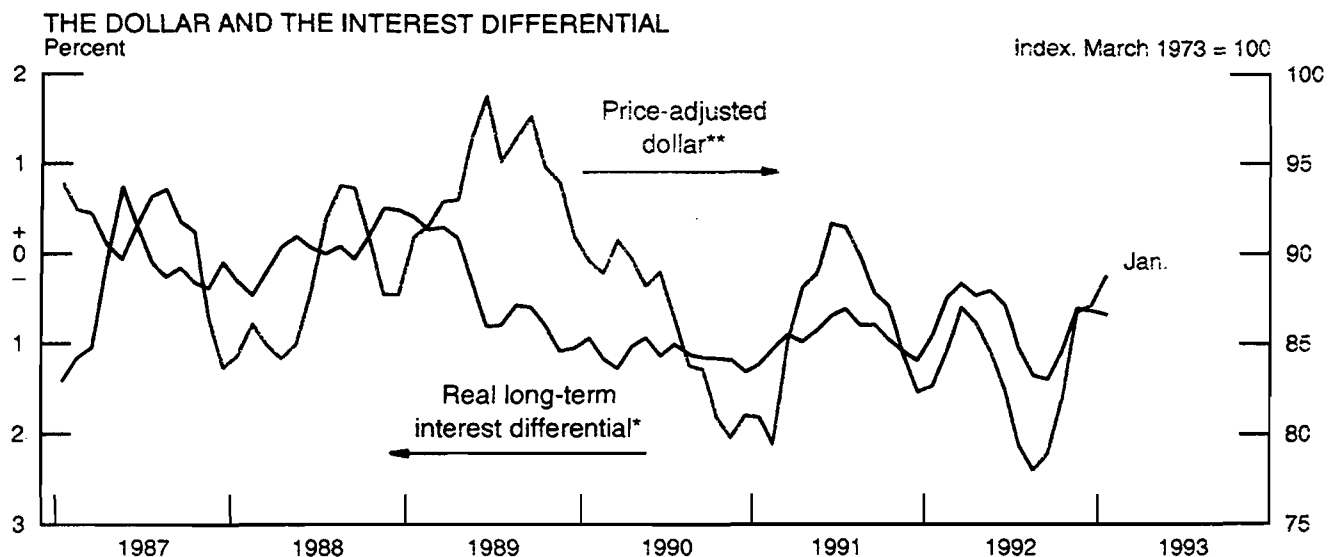


INVENTORY-SALES RATIO\*  
Billions of 1987 dollars



\*Ratio of inventories to business final sales.

### Exchange and Interest Rates



\* Difference between rates on long-term U.S. government bonds and a weighted average foreign G-10 long-term government or public authority bond rates, adjusted for expected inflation.

\*\* Weighted average against foreign-G10 countries, adjusted by relative prices.

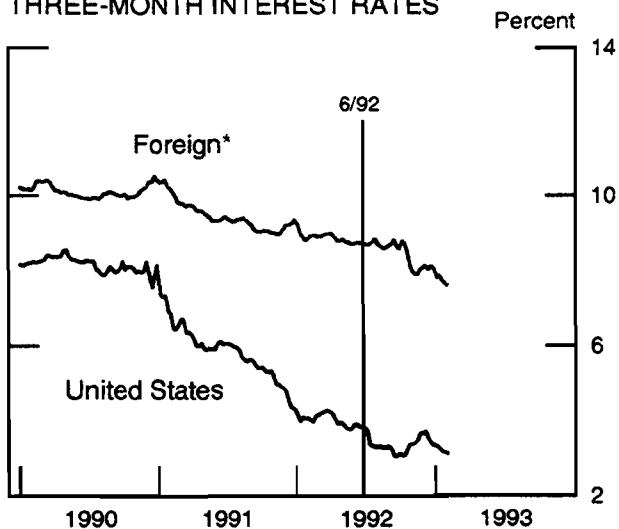
**NOMINAL DOLLAR EXCHANGE RATES**

	Percent change 6/92 to 2/1/93
Swedish Krona	32
Pound Sterling	28
Italian Lira	27
Canadian Dollar	6
Deutschemmark	4
Yen	-1
<b>G-10 Average</b>	<b>9</b>

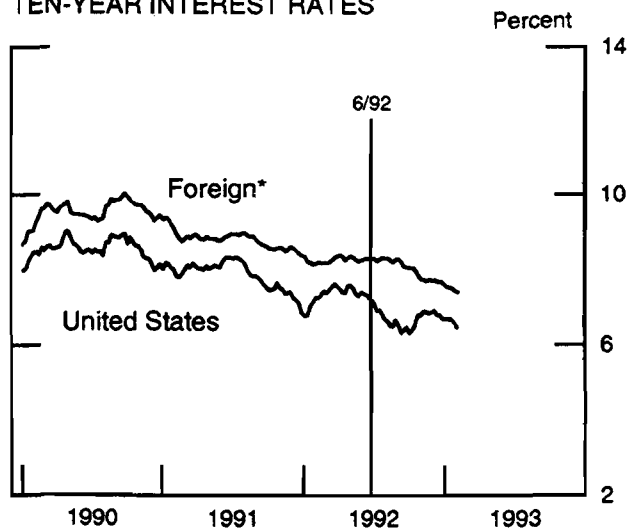
**NOMINAL INTEREST RATES**

	Percent	
	Level 2/1/93	Change 6/92 to 2/1/93
<b>Three-month</b>		
Germany	8.40	-1.26
Japan	3.43	-1.17
United States	3.14	-0.72
<b>Ten-year</b>		
Germany	7.05	-0.93
Japan	4.43	-1.11
United States	6.38	-0.88

**THREE-MONTH INTEREST RATES**



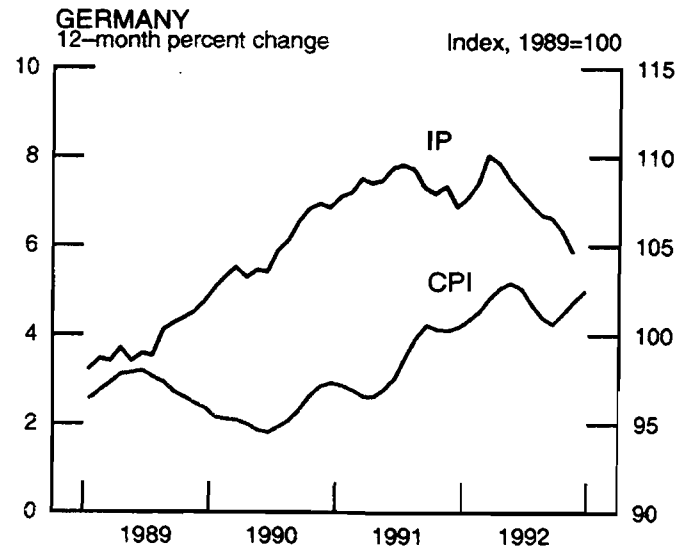
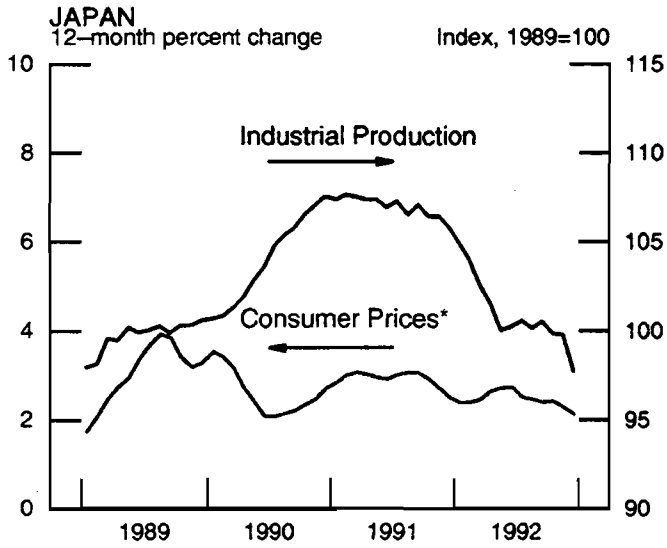
**TEN-YEAR INTEREST RATES**



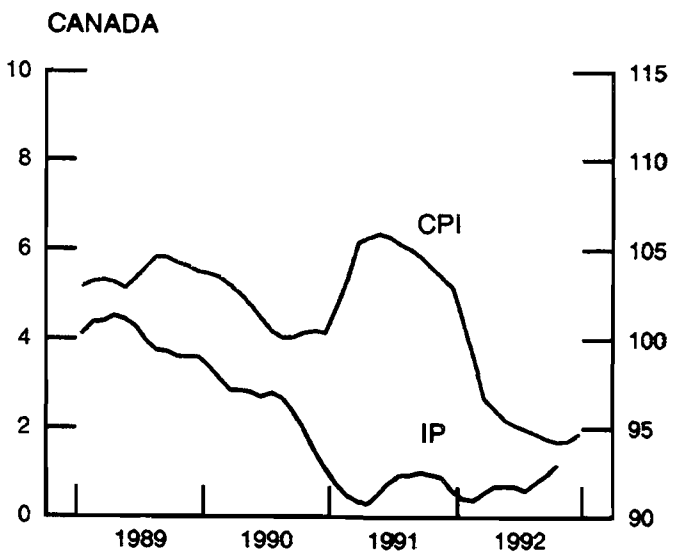
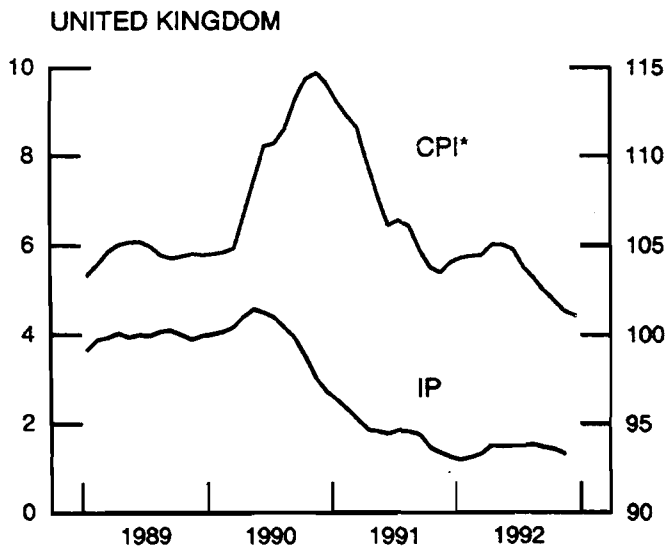
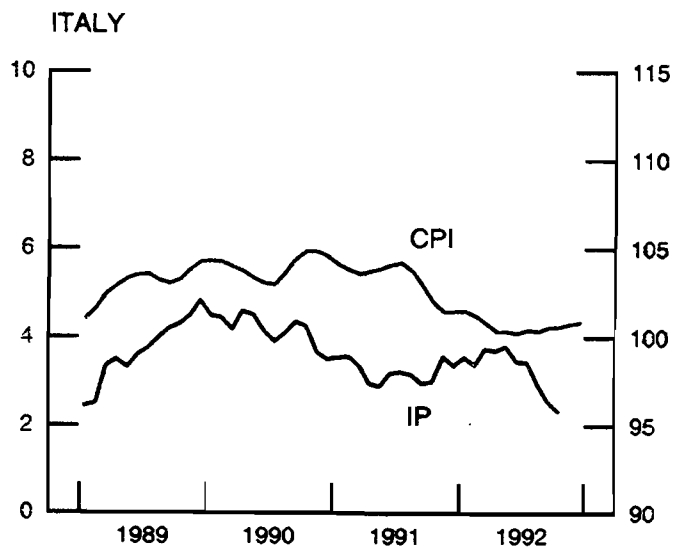
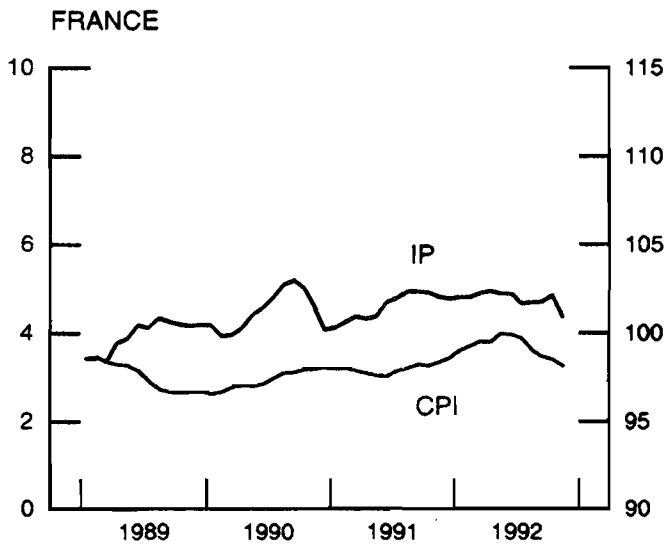
\* Multilateral trade-weighted average for foreign G-10 countries

Chart 5

### Industrial Production and Consumer Prices Excluding food and energy prices, 3-month moving averages



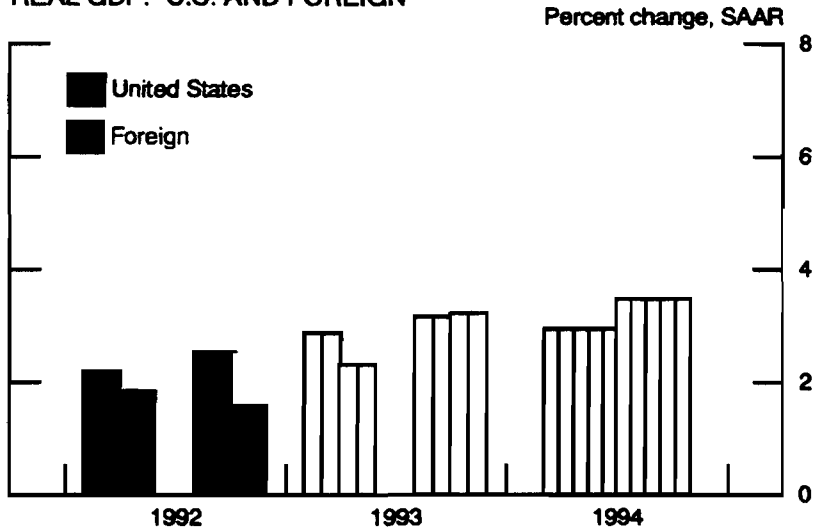
\*CPI includes energy.



\* CPI also excludes mortgage interest payments.

## Foreign Outlook

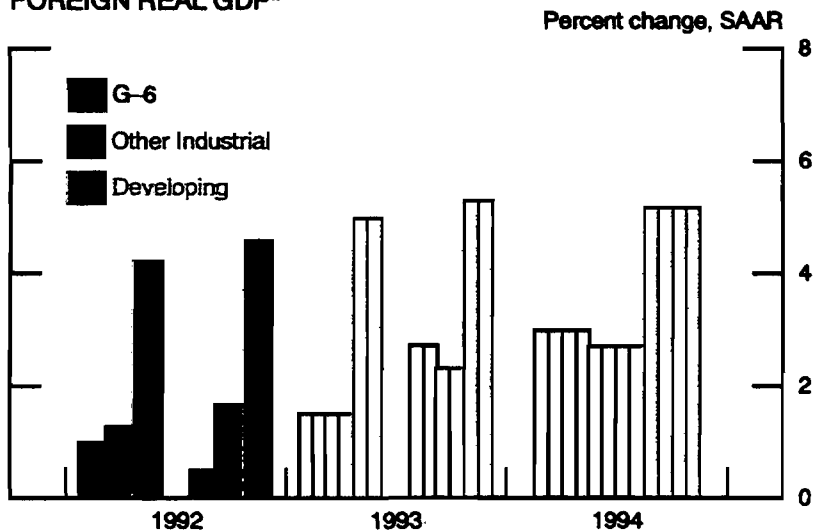
REAL GDP: U.S. AND FOREIGN\*



GDP: GROUP OF SIX

Percent change, SAAR			
	1993 H1	1993 H2	1994
Japan	1.4	2.3	3.2
Canada	2.2	3.2	3.2
Germany	0.5	2.3	2.4
<b>G-6</b>	<b>1.5</b>	<b>2.7</b>	<b>3.0</b>

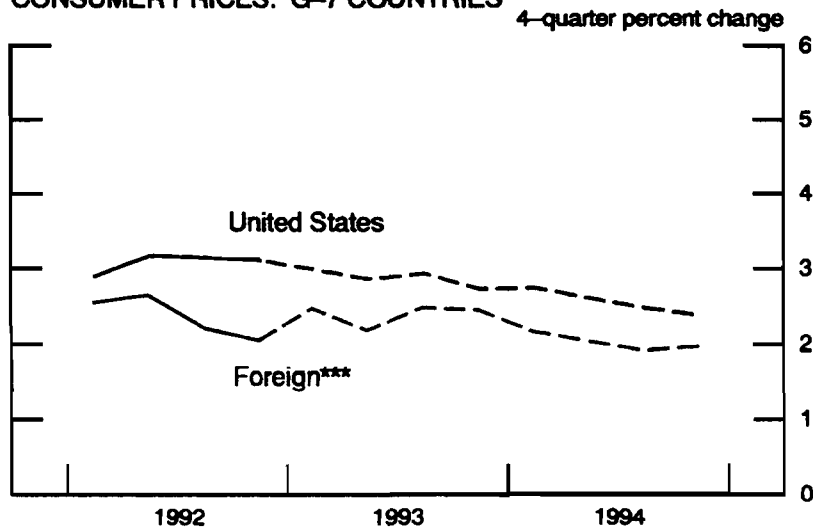
FOREIGN REAL GDP\*



GDP: DEVELOPING COUNTRIES

Percent change			
	1992	1993	1994
Mexico	2.8	3.0	3.5
NIEs**	5.5	6.1	6.8
China	11.5	9.8	8.7

CONSUMER PRICES: G-7 COUNTRIES



CONSUMER PRICES

Percent change, Q4 to Q4			
	1992	1993	1994
Germany	3.7	3.3	2.3
France	2.3	2.4	2.1
U.K.****	3.7	3.5	3.0
Japan	1.2	2.2	1.6
Canada	1.9	2.0	1.8
U.S.	3.0	2.6	2.4

\*G-6 countries, 16 other industrial and 9 developing countries, U.S. nonagricultural export weights.

\*\*Hong Kong, Singapore, South Korea, and Taiwan, U.S. nonagricultural export weights.

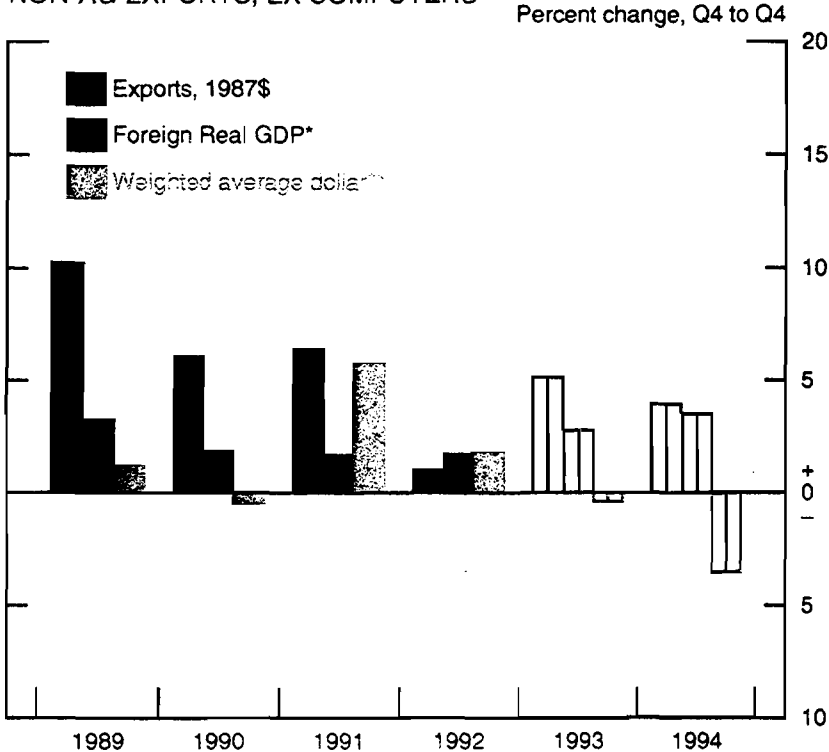
\*\*\*G-6 countries, U.S. non-oil import weights.

\*\*\*\*Excludes mortgage interest payments.

Chart 7

### Major Trade Categories

#### NON-AG EXPORTS, EX COMPUTERS

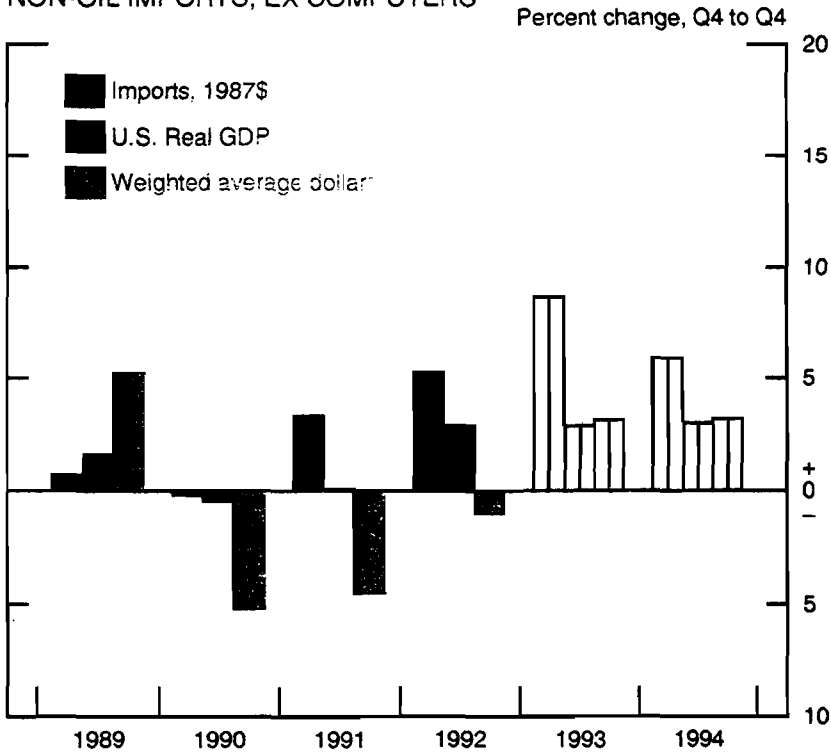


Billions of 1987 dollars, Q4, SAAR	
1989	288
1990	306
1991	325
1992	328
1993	345
1994	358

\* G-6 countries, 16 other industrial countries and 9 developing countries, U.S. nonagricultural export weights.

\*\* G-10 index (inverted), 6 quarter moving average.

#### NON-OIL IMPORTS, EX COMPUTERS

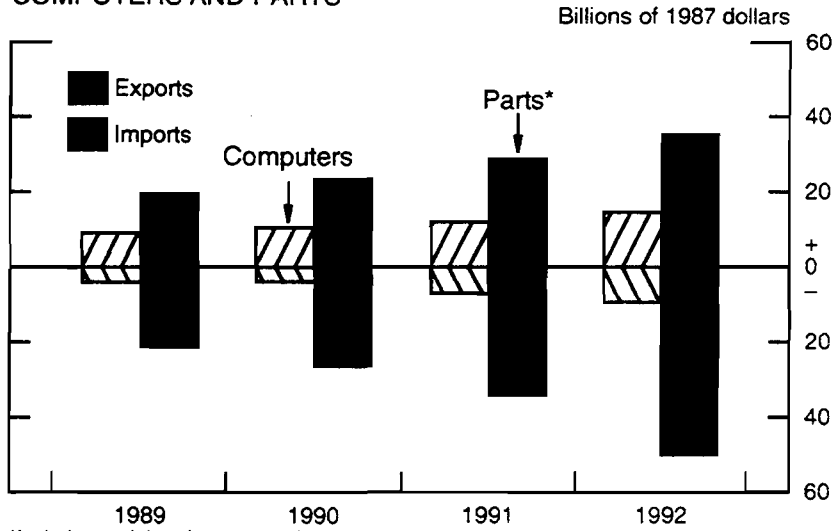


Billions of 1987 dollars, Q4, SAAR	
1989	378
1990	377
1991	390
1992	411
1993	446
1994	473

\* G-10 index, 2 quarter moving average.

Selected Trade Categories

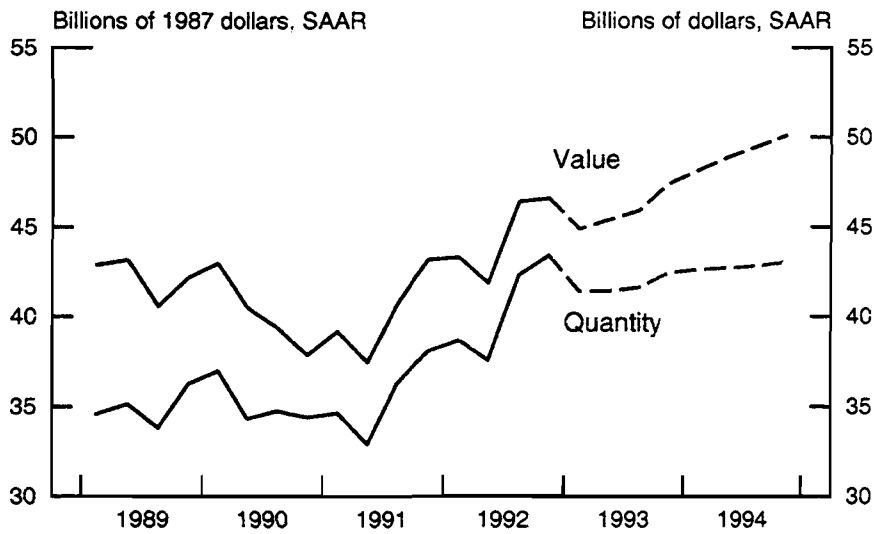
COMPUTERS AND PARTS



TOTAL BALANCE

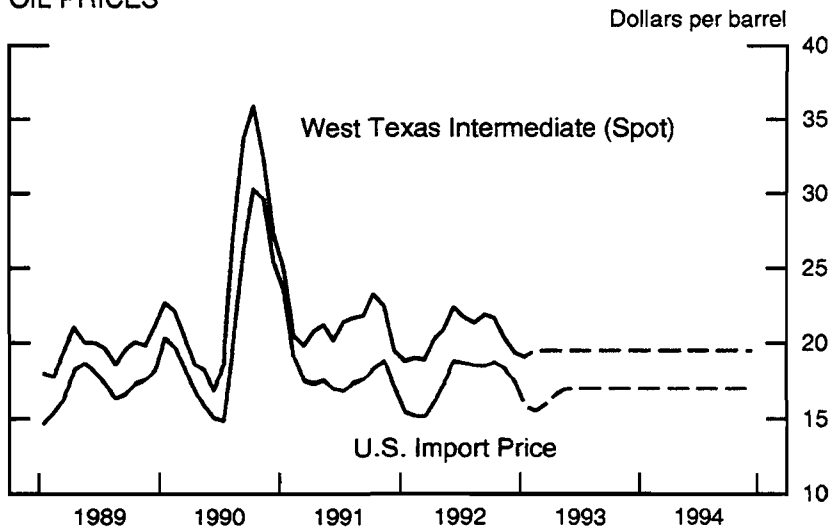
Computers and Parts Billions of 1987 dollars	
1989	3
1990	4
1991	0
1992	-10
1993	-18
1994	-19

AGRICULTURAL EXPORTS



Percent change		
	Value	1987\$
1992	11	14
1993	3	3
1994	7	3

OIL PRICES



OIL IMPORTS

	MBD	Value (bil.\$)
1989	8.2	51
1990	8.3	62
1991	7.7	51
1992	8.1	52
1993	8.9	54
1994	9.7	60



## Summary for the External Sector

## EXTERNAL BALANCES

	Billions of dollars, except as noted, SAAR			
	Fourth quarter			Change '92 to '94
	1992	1993	1994	
1. Current account balance	-79	-93	-108	-28
2. Goods	-106	-125	-143	-37
3. Services	54	59	66	12
4. Investment income	7	7	4	-3
5. Real net exports of goods and services, NIPA	-55	-81	-95	-40

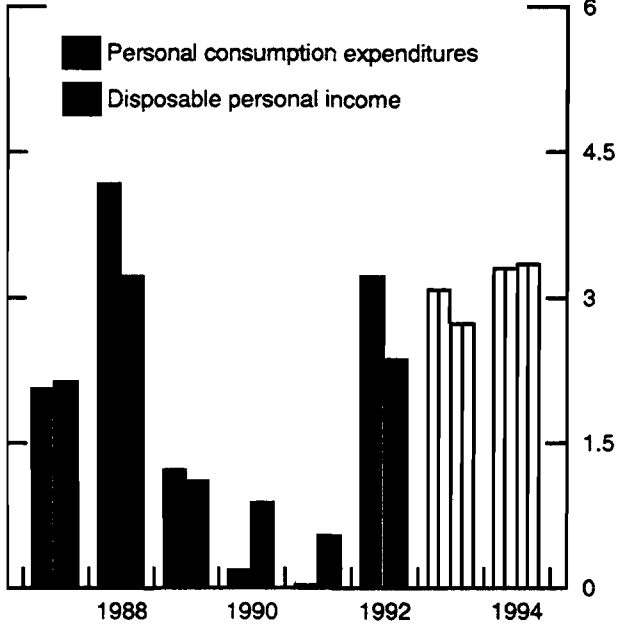
## ALTERNATIVE SCENARIO

Baseline:	Greenbook forecast extended through 1995.		
Stronger dollar:	Dollar appreciates against other G-10 currencies by 10 percent over the first half of 1993 relative to baseline and remains at higher level; federal funds rate unchanged from baseline.		
	<u>1993</u>	<u>1994</u>	<u>1995</u>
Percent change, Q4 to Q4			
Real GDP, U.S.			
Baseline	2.8	3.0	2.8
Stronger dollar	2.2	1.9	1.8
Consumer prices, U.S.			
Baseline	2.6	2.4	2.3
Stronger dollar	1.9	1.8	1.2

Consumer Sector

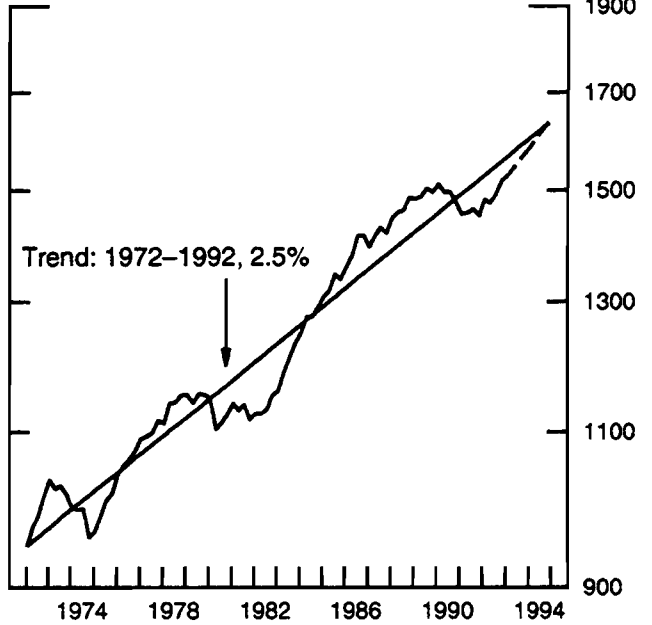
REAL PCE AND DPI

Percent change, Q4 to Q4



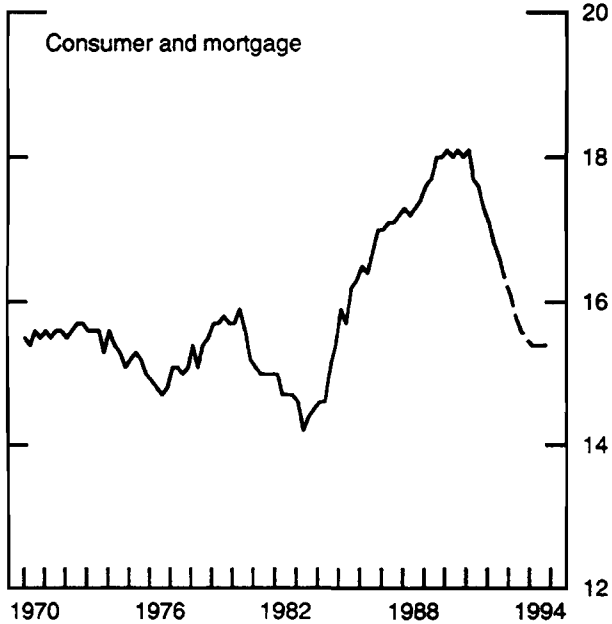
REAL PCE DURABLES AND NONDURABLES

Billions of 1987 dollars



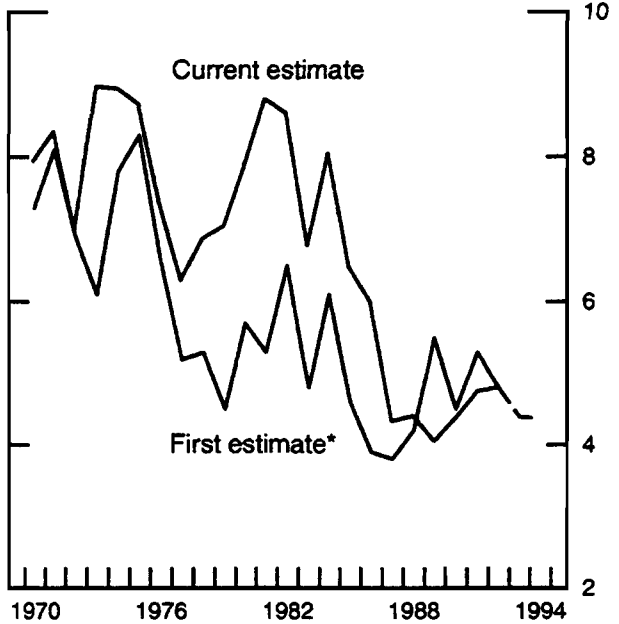
RATIO OF DEBT SERVICE TO DPI

Percent



PERSONAL SAVING RATE

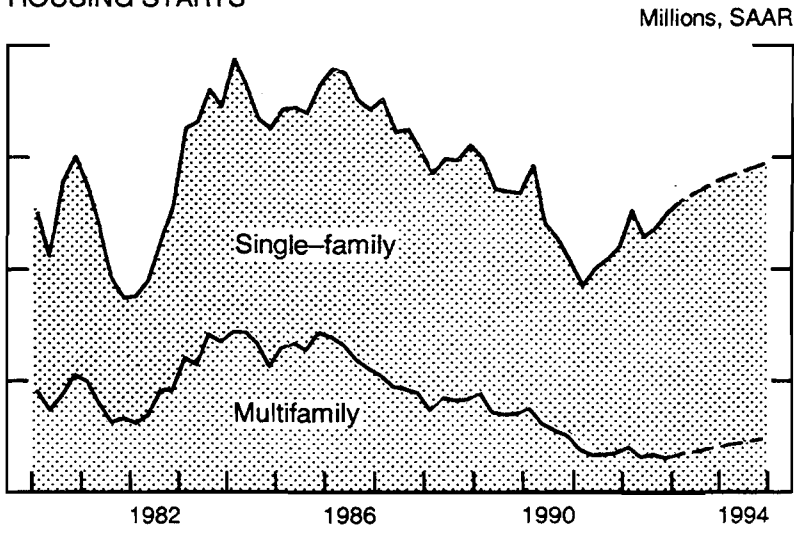
Percent, annual average



\*First published annual estimate; published in January of the next year.

Chart 11  
Housing

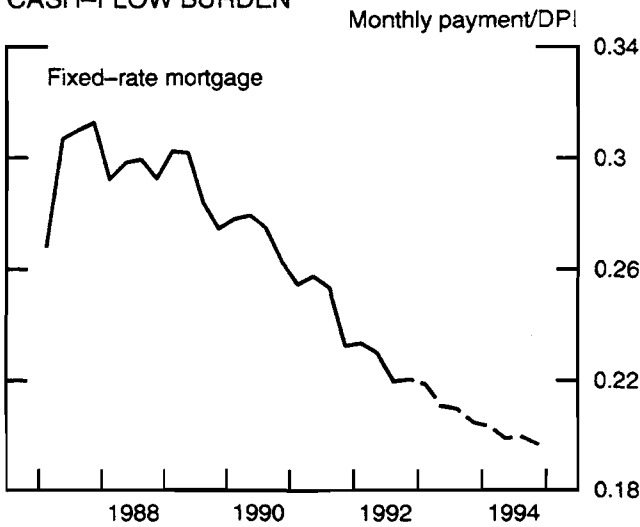
HOUSING STARTS



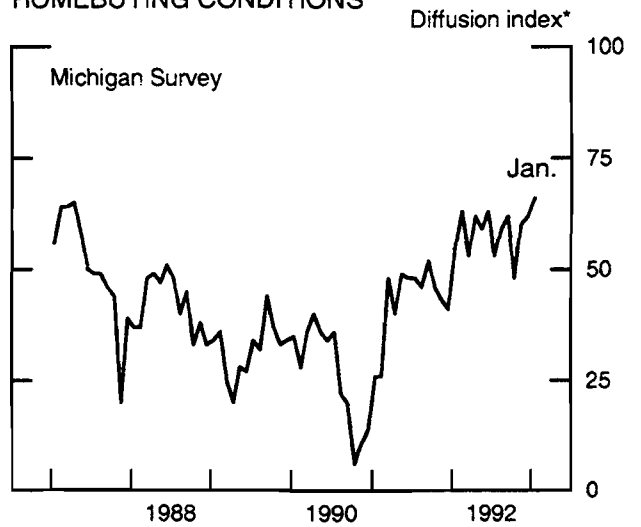
TOTAL STARTS

Millions	
1989	1.38
1990	1.21
1991	1.02
1992	1.21
1993	1.35
1994	1.44

CASH-FLOW BURDEN

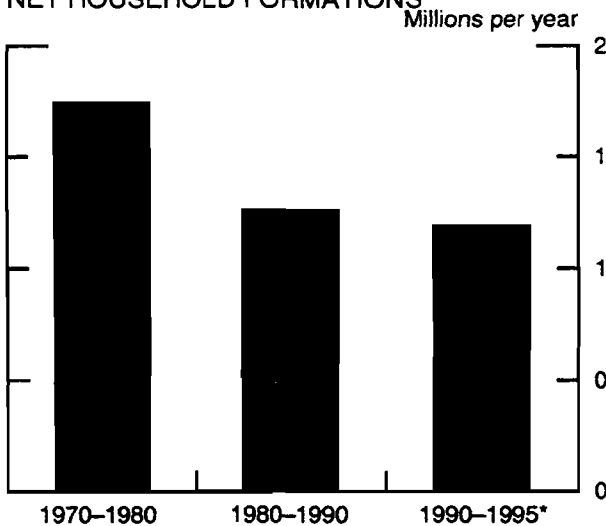


HOMEBUYING CONDITIONS



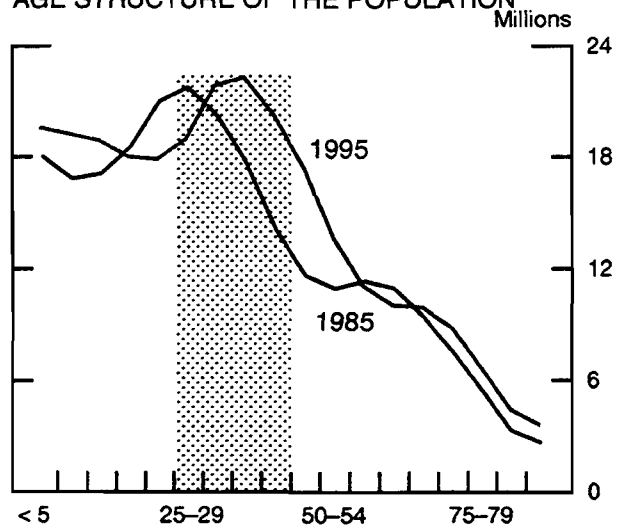
\*Percent responding "good" less percent "bad."

NET HOUSEHOLD FORMATIONS



\*Staff estimate, based on Census Bureau population projections.

AGE STRUCTURE OF THE POPULATION



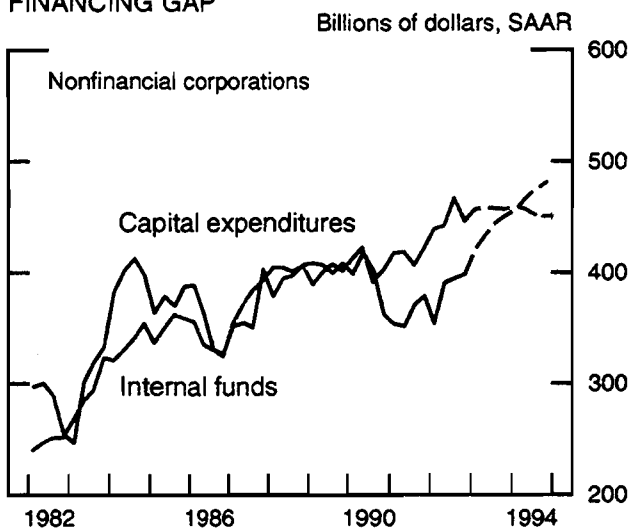
Note: Shaded area denotes the prime homebuying age group, 25 to 44 years.

Business Sector

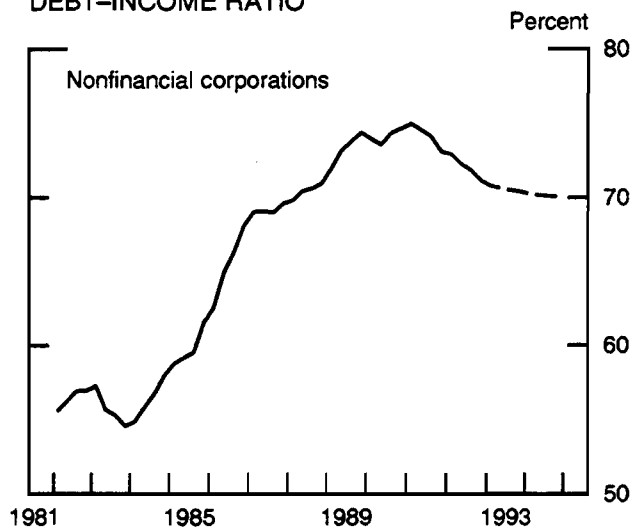
REAL BUSINESS FIXED INVESTMENT

	Percent change, Q4 to Q4			
	1991	1992	1993	1994
1. Producers' durable equipment	-3.5	11.9	11	9
2. Computers	22.2	35.8	28	17
3. Commercial aircraft	-21.8	12.4	-5	-17
4. Other	-7.3	6.3	6	8
5. Nonresidential structures	-14.3	-1.4	2	3

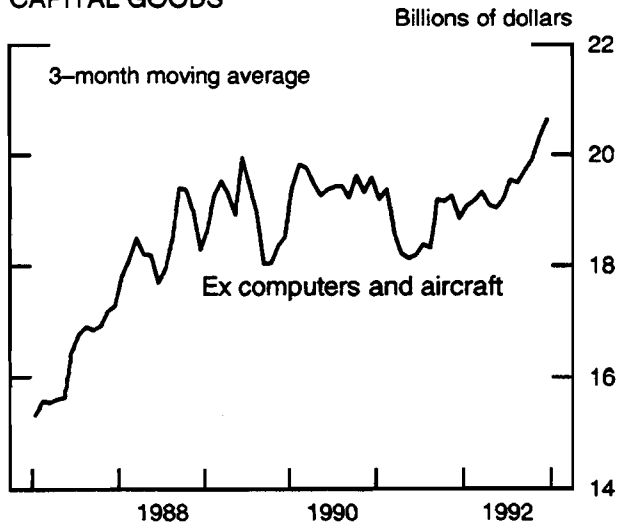
FINANCING GAP



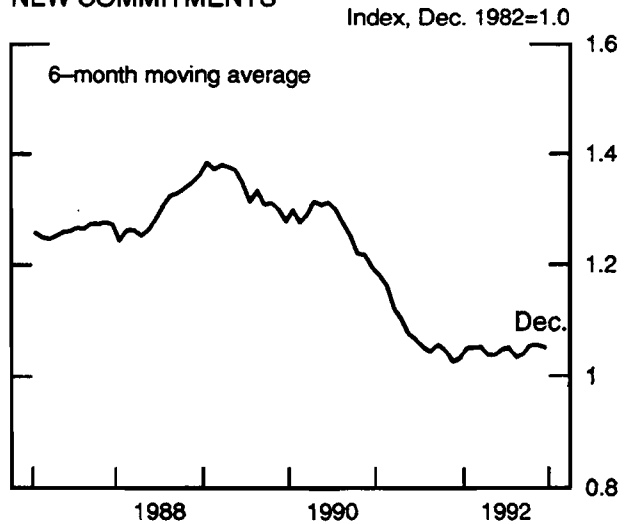
DEBT-INCOME RATIO



ORDERS FOR NONDEFENSE CAPITAL GOODS



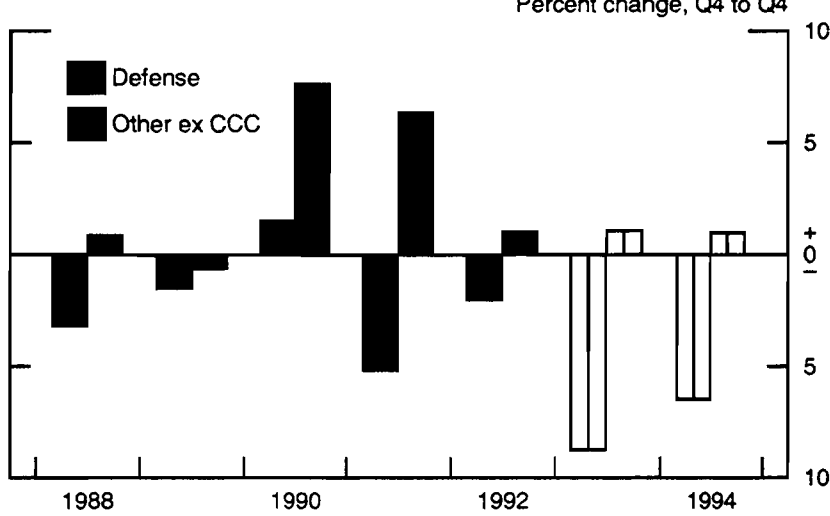
NONRESIDENTIAL CONSTRUCTION NEW COMMITMENTS\*



\*New commitments are the sum of permits and contracts.

Government Sector

REAL FEDERAL PURCHASES

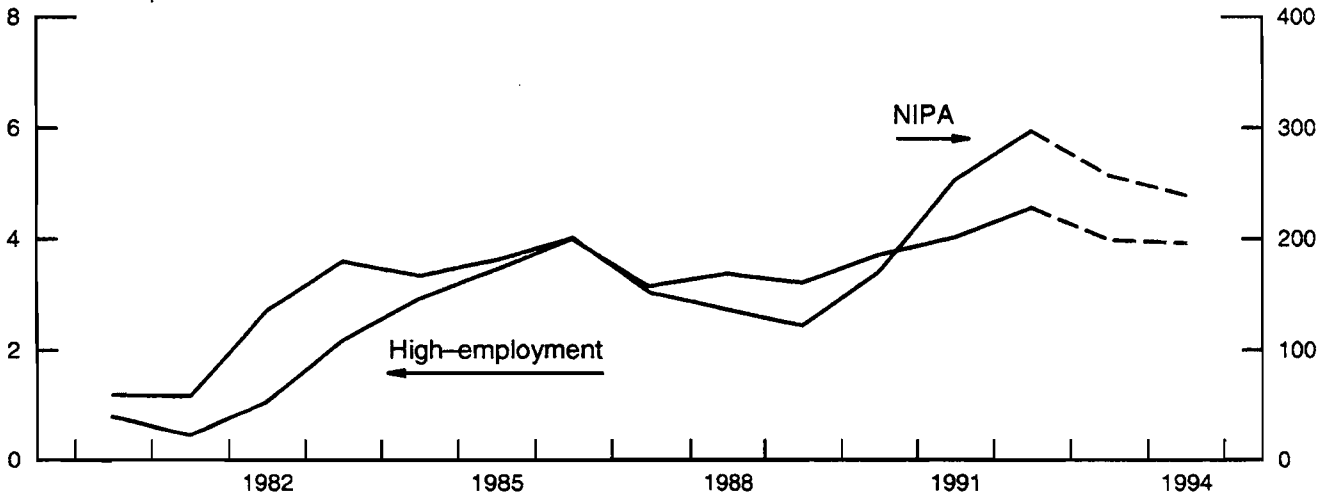


TOTAL PURCHASES

Percent change, Q4 to Q4

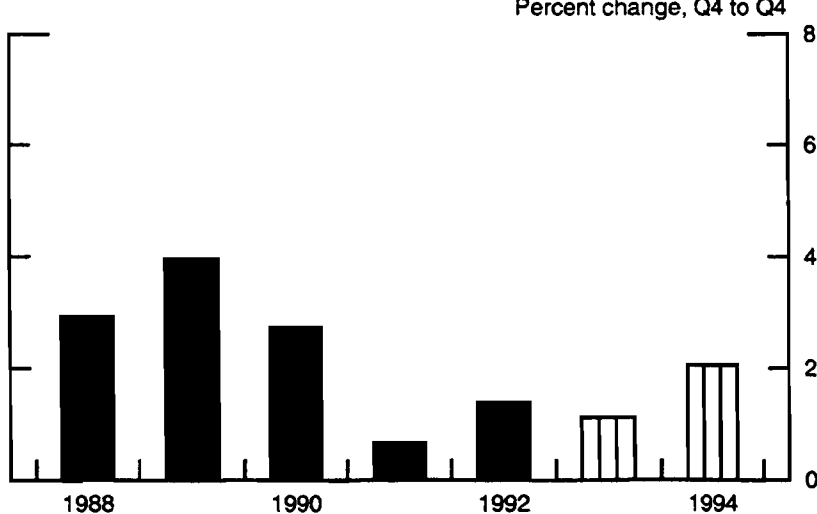
1989	-0.6
1990	3.0
1991	-2.3
1992	-0.5
1993	-5.8
1994	-4.1

FEDERAL BUDGET DEFICIT\*  
Percent of potential GDP



\*Excluding Desert Storm contributions.

REAL STATE AND LOCAL PURCHASES



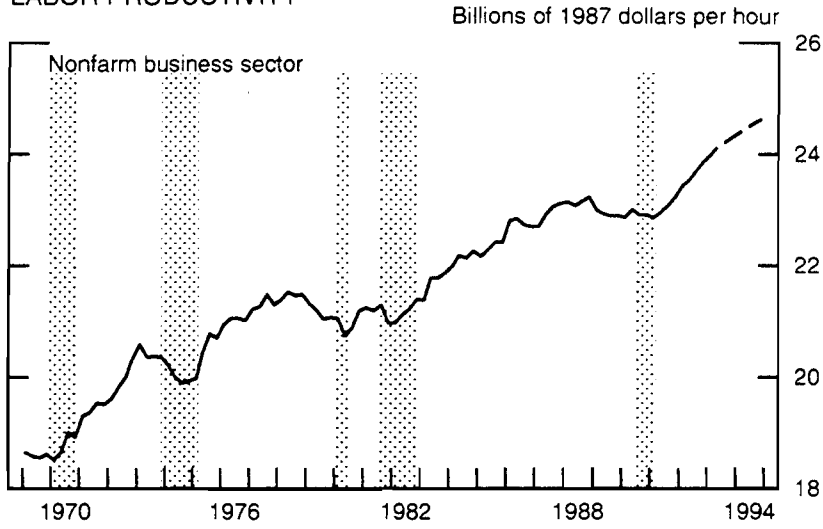
OPERATING DEFICIT

Billions of dollars, SAAR

1989	41
1990	46
1991	36
1992	23
1993	17
1994	10

### Labor Market

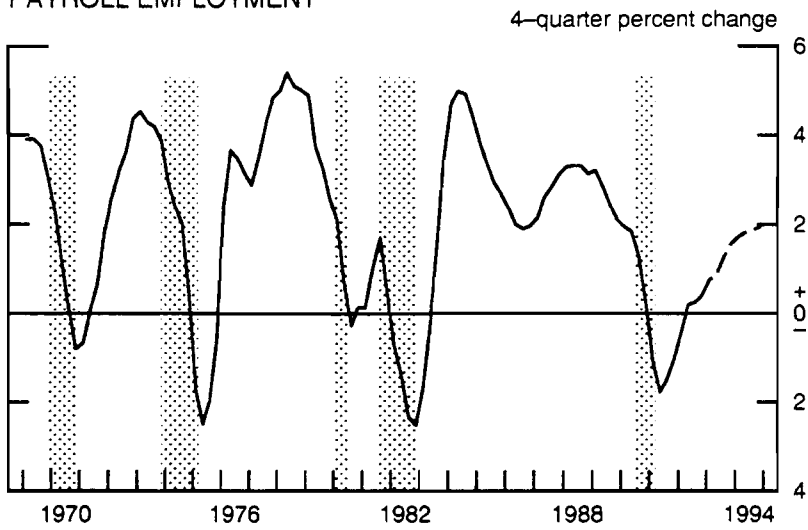
LABOR PRODUCTIVITY



PRODUCTIVITY GROWTH

Percent change, Q4 to Q4	
1989	-1.4
1990	.1
1991	1.3
1992	3.0
1993	1.8
1994	1.3

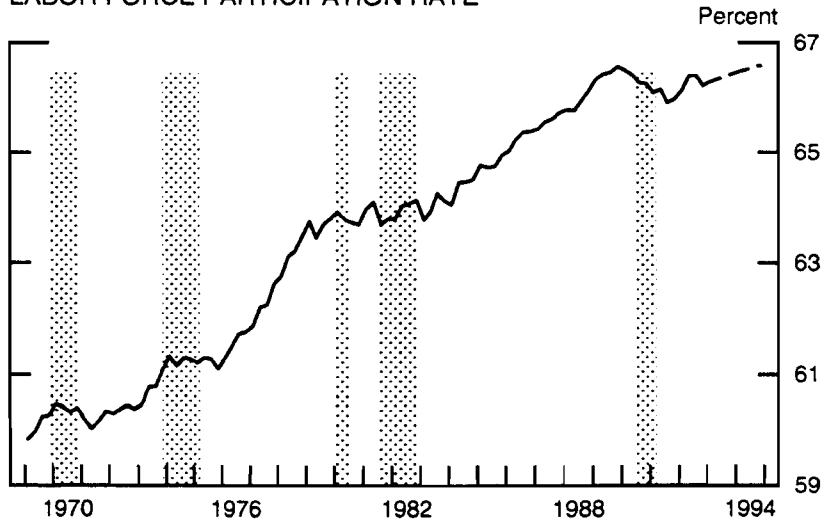
PAYROLL EMPLOYMENT



PAYROLL GROWTH

Percent change, Q4 to Q4	
1989	2.1
1990	.3
1991	-1.0
1992	.4
1993	1.6
1994	2.0

LABOR FORCE PARTICIPATION RATE



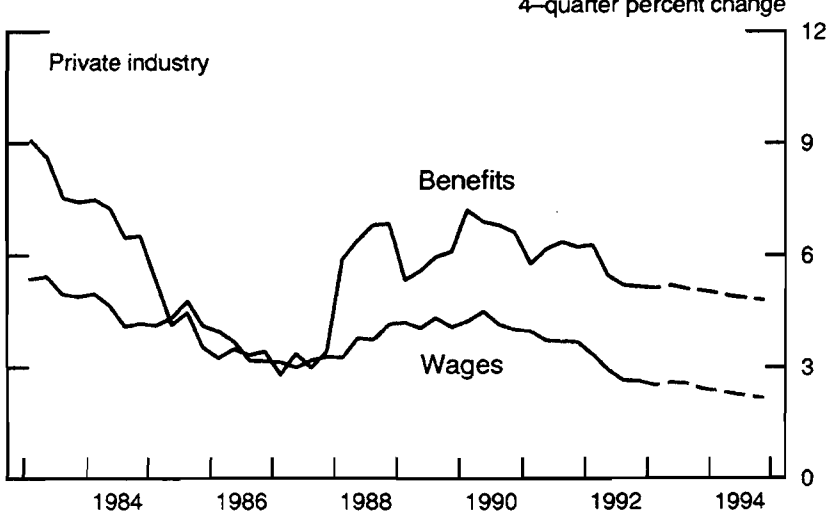
LABOR FORCE GROWTH

Percent change, Q4 to Q4	
1989	1.6
1990	.4
1991	.5
1992	1.3
1993	1.3
1994	1.2

Chart 15

# Wages and Prices

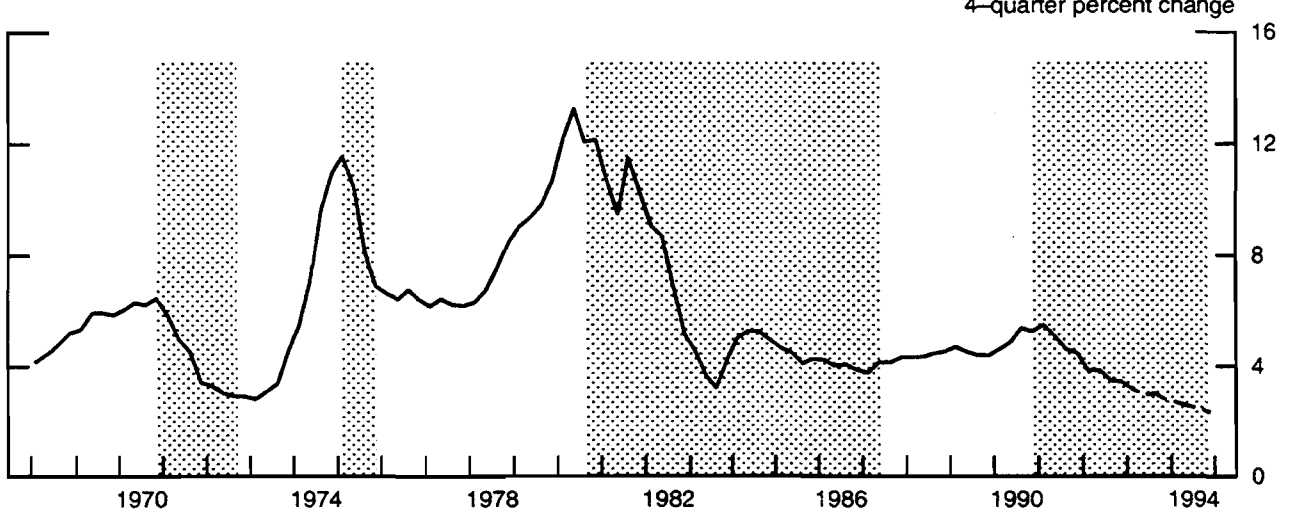
## EMPLOYMENT COST INDEXES



## TOTAL COMPENSATION

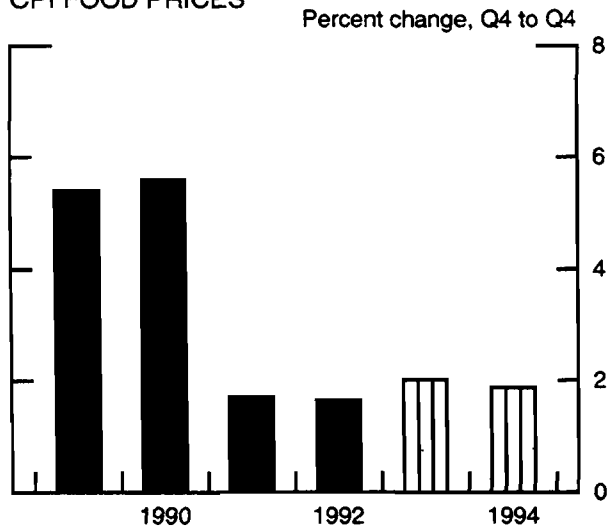
Percent change, Q4 to Q4	
1989	4.8
1990	4.6
1991	4.4
1992	3.5
1993	3.2
1994	2.9

## CPI EXCLUDING FOOD AND ENERGY

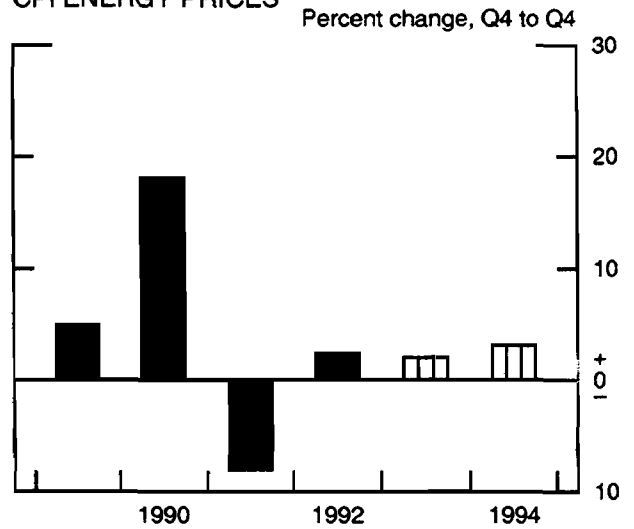


Note: Shading indicates periods when unemployment rate exceeds NAIRU.

## CPI FOOD PRICES



## CPI ENERGY PRICES



## Economic Projections for 1993

	FOMC			Board Staff
	Range	Central Tendency	Administration (Bush CEA)	
	—————Percent change, Q4 to Q4—————			
Nominal GDP <i>previous estimate</i>	5 <sup>1</sup> / <sub>4</sub> to 6 <sup>1</sup> / <sub>4</sub> 4 <sup>1</sup> / <sub>2</sub> to 7	5 <sup>1</sup> / <sub>2</sub> to 6 5 <sup>1</sup> / <sub>2</sub> to 6 <sup>1</sup> / <sub>4</sub>	5.6	5.4 5.8
Real GDP <i>previous estimate</i>	2 <sup>1</sup> / <sub>2</sub> to 3 <sup>3</sup> / <sub>4</sub> 2 <sup>1</sup> / <sub>2</sub> to 3 <sup>1</sup> / <sub>2</sub>	3 to 3 <sup>1</sup> / <sub>2</sub> 2 <sup>3</sup> / <sub>4</sub> to 3	2.9	2.8 3.0
CPI <i>previous estimate</i>	2 <sup>1</sup> / <sub>2</sub> to 3 2 <sup>1</sup> / <sub>2</sub> to 4	2 <sup>1</sup> / <sub>2</sub> to 2 <sup>3</sup> / <sub>4</sub> 2 <sup>3</sup> / <sub>4</sub> to 3 <sup>1</sup> / <sub>4</sub>	2.8	2.6 3.1
	—————Average level, Q4, percent—————			
Unemployment rate <i>previous estimate</i>	6 <sup>3</sup> / <sub>4</sub> to 7 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 <sup>1</sup> / <sub>2</sub> to 7	6.6	7.0 6.7

NOTE: Central tendencies constructed by dropping top and bottom three from distribution, and rounding to nearest quarter percent. Previous estimates are from July 1992.



February 3, 1993

LONG-RUN RANGES

Donald L. Kohn

As background for Committee discussion of its intermediate-term objectives and approaches to monetary policy, the bluebook presented three alternative policy strategies, summarized in a table on page 8. These simulations, using the staff econometric model are, at best, only rough approximations of the economic outcomes that might go with alternative financial conditions. Nonetheless, the exercise suggests a few points the FOMC might want to keep in mind as it thinks about policy over the course of 1993.

The first concerns the current situation. In fact, the economy is not that far from both full employment and reasonable price stability. As a result, policies that lean significantly in favor of one or the other of these objectives risk overshooting before too long. For example, easier strategy III, which involves an immediate drop in the federal funds rate and an increase in M2 growth, produces 3-1/2 percent growth in output for two years--somewhat less than the political rhetoric would seem to call for--but returns the unemployment rate to close to its natural rate by the end of 1994. This strategy thus requires significant tightening over 1994 to forestall accelerating inflation in 1995. A comparable lesson can be drawn from the tighter strategy: Unless tightening is fairly mild, as in the strategy presented, sufficient slack builds up to set in train forces of deflation after a few years. One implication of starting so close to both full employment and price stability is that policymakers probably need to be ready to take corrective action fairly promptly if it turns out that the results are coming in with either a much faster return to full employment or much more disinflation than contemplated.

A second point from the exercise is that indexing monetary policy on M2 growth--or judging the policy stance from this indicator--is far from straightforward. We used the new Feinman-Porter money demand model for our exercises--augmented with additional equations to get the necessary components of opportunity cost as well as a good bit of judgment. In the new model, the demand for M2 is fairly insensitive to changes in short-term rates, which by itself would be a desirable property of a targeted monetary variable if the Committee were willing to let interest rates fluctuate over a wide range. But the model also indicates that the relationship of money to spending is sensitive to the tilt of the yield curve and other variables not under the control of the Federal Reserve. And the fact that a new model needed to be constructed at all and that the staff is already judgmentally adjusting its results suggests considerable uncertainty about the behavior of velocity, especially in the midst of massive balance-sheet restructuring by depositories and their customers. As you can see from the top lines of the table, in general the easier policy entails more M2 growth than the baseline, and the tighter policy less--but the amounts vary over time and do not line up tightly with the differences in nominal GDP growth.

The lack of a nominal money anchor in which the Committee can have confidence may be especially troublesome at a time when uncertainties about the relation of spending to interest rates abound. The abating of the balance sheet adjustments, or whatever has been damping spending in recent years, is one source of unusual uncertainty. In this regard, the simulations followed the greenbook forecast of a gradual loosening of credit terms and standards and more comfort with financial positions. The simulations also used the greenbook fiscal

policy assumptions. If monetary policy wanted to damp, without completely offsetting, the effects on spending and inflation of any fiscal policy initiatives, a classic textbook prescription would be to adhere to a predetermined money supply path. In the absence of a predetermined money supply path the Committee feels comfortable with, judging the appropriate federal funds response to fiscal policy would be difficult. Delayed fiscal restraint could be stimulative in the near term if financial markets respond promptly with lower long-term rates, while the reaction of spenders to prospective increases in taxes or reductions in government spending is damped or does not occur until the actual restraint takes hold. Especially if the delayed restraint is coupled with a debt management strategy that successfully puts additional downward pressure on long-term rates, near-term fiscal stimulus, and perhaps even regulatory actions that encourage lending, the combination could boost aggregate demand significantly for a time. Moreover, movements in long-term interest rates through this period may not give the Federal Reserve very much guidance on the credibility of fiscal restraint, since markets will also be pricing in the effects of near-term stimulus--to the extent it differs from current expectations--and the Federal Reserve's reaction to the entire package. This suggests caution in reacting to any fiscal initiatives, and especially in the interpretation of the implications of financial market responses for the appropriate path of short-term interest rates.

The staff's assessment of the likely growth of the monetary aggregates under the greenbook forecast is given in detail on page 11 of the bluebook. We are projecting the same growth in M2 and M3--2 and 1/2 percent, respectively--for 1993 that we experienced in 1992. Nominal GDP is projected to continue to grow 5-1/2 percent, so this implies

that the velocities of M2 and M3 will register the same sizable increases in 1993 that they did in 1992. That result, however, reflects some shifting in the underlying forces acting on the relationship of money and spending. On the one hand, the intensity of some of the unusual forces tending to depress M2 and M3 and raise their velocities should abate a bit this year--though they would still be working in the direction of pushing velocity higher. For example, as already noted, we expect some ebbing in the pace of balance-sheet rebuilding by borrowers and more readily available credit through financial intermediaries. Partly for these reasons, we are forecasting a pickup in debt growth in 1993--to 5-1/4 percent--with all of the strengthening coming outside the federal sector. In addition, the slope of the yield curve is expected to flatten this year, and some of the portfolio restructuring prompted by the wider spread between returns on M2 and those on longer-term assets or debt repayment should begin to taper off. On the other hand, several factors will be damping demands for M2 and M3 and working to raise velocity in 1993 relative to 1992. For one, velocity in 1992 was probably held down by declining short-term interest rates, which provided at least temporary yield advantages to liquid M2 assets, and the greenbook forecast assumes flat short rates in 1993. Moreover, the RTC is expected to resume closing institutions in 1993, and mortgage repayments are not likely to be providing the boost to M2 and M3 growth they did in 1992.

Against this background, the bluebook offers two alternative sets of ranges for 1993. Alternative I carries over the provisional ranges set for this year in July. Those ranges do not encompass the staff projections for M2 and M3, and their choice would seem to connote either skepticism about the staff velocity forecast or a desire to

promote somewhat faster growth in nominal GDP than in the greenbook forecast. If the staff assessment of money demand and its outlook for the underlying strength of aggregate demand in the economy is about correct, a sizable decline in interest rates would seem to be called for to raise the odds on pushing the aggregates to within their alternative I ranges. We persist in believing that lower interest rates boost M2 growth, but with a steeping yield curve and prompt response of deposit rates acting to damp the response of M2 to lower short-term interest rates, our rough judgment is that the federal funds rate would need to be decreased by perhaps 1/2 percentage point or even more in the first quarter to achieve 2-1/2 percent M2 growth by the fourth quarter of this year.

Alternative II would lower the M2 and M3 ranges a full percentage point, encompassing the staff projections. The provisional ranges were chosen in large part because the Committee said it was uncertain about likely velocity behavior in 1993. Velocities rose quite strongly in the last half of 1992--even in the face of further declines in market interest rates--and this development, along with subsequent analysis of M2 demand, may give the Committee somewhat more confidence that another sizable velocity increase is in store for 1993. Even the reduced ranges of this alternative would provide ample room for faster money growth than the staff forecast, should velocity begin to return more to normal or should the Committee desire a stronger economy. With regard to velocity behavior, the old staff M2 model, which has been overpredicting M2 growth for three years, sees M2 growth of only 4 percent as consistent with the greenbook forecast in 1993, as money demand is held down by further adjustments in liquid deposit rates.

Alternative II does not include a reduced range for growth of the debt of nonfinancial sectors. The staff forecast is for debt growth in the lower half of the provisional range, which was carried over from 1992. Not lowering the range might tend to underline the "technical" nature of the adjustment to the money ranges. But a good case can be made for moving the debt range down as well--perhaps by 1/2 percentage point. Not only would a lower range be more centered on expectations, but it would reinforce the notion that outsized debt growth was not a healthy development, and that the Federal Reserve saw slower debt growth than in the 1980s as a key element in a sustainable expansion.

Of course other alternatives for money ranges are possible. One would be to reduce the ranges by only 1/2 percentage point. The central tendency of your projections for nominal GDP is slightly stronger than the staff's forecast, suggesting that your M2 projections might plausibly be a bit above those of the staff. Moreover, the staff has made judgmental downward adjustments to the results of the Porter-Feinman model, which is predicting in the area of 2-1/2 percent M2 growth for 1993 with the greenbook forecast. More generally, if loan growth picks up substantially, and as savers' portfolios become more fully adjusted to the emerging structure of returns, velocity could settle down more than we have predicted. These factors suggest that M2 growth above the lower end of a 2 to 6 percent range is possible, though money is likely to run well below that range, especially in light of the very weak start to the year, and end the year near the lower end.

Another alternative would be to reduce only the lower end of the money ranges. A wider range could be rationalized on the grounds

of greater uncertainty about velocity, though ranges are already fairly wide--one percentage point wider than in the early and mid-1980s. The reduced lower end would signify a willingness to allow slower money growth if velocity does increase as expected; retaining the upper end would suggest a willingness to accommodate to much faster M2 growth if that were necessary to support expansion. In that regard, retaining the higher upper end might allay some concerns that the Federal Reserve will act to stifle economic growth before long, perhaps offsetting any expansionary impact of near-term fiscal stimulus. While there is logic in this argument, it would do little to reassure the critics who are most concerned about getting M2 up into the current range.

Finally, I would draw the Committee's attention to the long-run portion of the directive. This section already has a sentence about expecting unusual increases in velocity to continue. That sentence would seem especially appropriate to retain if the Committee reduces the ranges.

February 3, 1993

SHORT-RUN POLICY  
Donld L. Kohn

Mr. Chairman, I don't sense a multiplicity of short-run policy issues in front of the Committee today, so I will be brief. Although the monetary aggregates are not getting much weight in policy, their recent weakness has been extraordinary--even by the standards of the past year--and I thought it might be worthwhile to spend just a minute or so on their behavior.

At the December meeting, the staff was anticipating quite damped M2 growth in December and January and a slight decline in M3, partly as some special factors that had boosted the aggregates in previous months unwound. In the event, M2 fell and M3 dropped more than projected. Moreover, we are anticipating another decrease in both these aggregates, and in M1 as well, in February. [I might add that the preliminary data available this morning suggest that if anything the broad aggregates are coming in weaker than we had projected for the week just ended.] It now appears that mortgage refinancing abated faster than we had anticipated in December. Another part of the story presumably is the difficulty of sorting out underlying trends from noise around year-end--especially when year-end window-dressing takes on an entirely new meaning in an age of concern about capital ratios and balance sheet safety. Further seasonal complications account for part of the weakness forecast for February; strong growth in the aggregates in the past two Februarys as a consequence of easings in December have fooled the seasonal adjustment procedures into thinking that a new seasonal pattern is emerging in the data.

Beyond these special stories, however, the aggregates remain very soft. The surprises relative to our expectations are in the



liquid components, especially savings deposits and MMDAs, but with money market funds and NOW accounts also showing signs of weakness. Savings and MMDAs decelerated from months of 10 percent or more growth to 6 percent in December and a decline in January. This change has occurred without a sudden shift in opportunity costs of these deposits over the past few months. One hypothesis is that the liquid accounts are being used to pay for purchases--either directly or through repaying credit card debt--and elevated estimated tax payments in January. Drawing down such deposits certainly is less costly than borrowing or divesting nearly any other financial asset.

Thus, the weak money supply on this view is seen as supporting concurrent spending, not indicative of underlying weakness. In fact, we are predicting growth in M2 velocity at a more than 7 percent annual rate in the first quarter and in M3 velocity at more than a 9 percent rate, with no change in M1 velocity after 10 straight quarters of decline. Our projections for the balance of the quarter do encompass some mild strengthening of money growth in March--partly on the theory that declines in money of this magnitude and increases in its velocity aren't sustainable. People will begin to rebuild balances at some point. In a sense, the money data are the counterpart of the strength in spending through a declining savings rate--and the forecast pickup in money the other side of concerns some of you expressed about the sustainability of that spending without some pickup of income growth.

The drop in money growth is not echoed in bank lending. Overall bank credit in January has softened, but only because securities ran off. Bank loans increased in December and January, with a fall in business loans in December about matched by an increase in January. But loan growth hasn't strengthened much. And the

aggregate debt of nonfederal sectors, while growing a little faster in the fourth quarter than in the first three quarters of the year, remains damped. Overall, the financial data might be read as suggesting that the headwinds have not died out entirely, reinforcing a sense of two-way risk to the outlook, despite the spate of favorable nonfinancial data and improving attitudes.

Finally, our projection for declines in the broad aggregates over the December-to-March period does raise a question about what to put in the operational paragraph of the directive. That paragraph normally would contain a reference to the December-to-March period, as in the directive draft in the bluebook. As an alternative, and with January behind us, the Committee's expectations for the period immediately ahead might be better summed up by noting that, in the case of alternative B, reserve conditions are expected to be consistent with little change on balance in the broad money aggregates over the period from January to March.