

## APPENDIX

NOTES FOR FOMC MEETING  
June 29-30, 1988  
SAM Y. CROSS

From the time of your last meeting until the Toronto summit, the dollar traded steadily but with an increasingly firm undertone in the light of improving trade figures, some better economic statistics and tighter Fed policy. But the market believed that the Group of Seven (G-7) monetary authorities would act to limit any significant increase in the dollar, as well as any decrease, and that helped keep the dollar trading in a fairly narrow range. However, on June 21, the Summit communique and accompanying statements by officials were interpreted as indicating that the G-7 might tolerate more of a rise in the dollar than the market had previously anticipated. At that point the dollar's uptrend gained momentum as market participants scrambled to adjust hedges and cover short dollar positions that had been built up since late last year. By this week the exchange rate had risen to levels that led to substantial central bank sales of dollars. Dollar rates today are around 6 to 7 percent above the levels at the time of the May FOMC meeting.

Going back to the time of your last meeting, the exchange markets at that point were sensitive to indications that international adjustment might be undermined by inflationary pressures in the United States. There were concerns that capacity constraints might limit further improvements in our trade balance and lead to inflationary bottlenecks. By early

June, however, some of these fears began to dissipate, at least in part because statistics on the domestic economy suggested that these pressures were not developing as rapidly as expected. Equally if not more reassuring was the evidence that the Federal Reserve was already responding to the early signs of inflationary pressures. Indications that the Fed had tightened its stance appeared to provide considerable comfort to the foreign exchange market, and a widening of short-term interest differentials supported the dollar.

Meanwhile, the market was becoming increasingly impressed with the dollar's continued ability to trade within a fairly narrow range. Participants seemed convinced that the Federal Reserve and other G-7 monetary authorities would keep the dollar reasonably stable. Investors world-wide became less concerned about exchange rate risk and more willing to respond to attractive interest rate differentials. We started to hear evidence of outflows from the German mark and from other continental currencies going into assets denominated in the dollar and other high-yielding currencies.

As these capital flows intensified in late May and early June, the market wondered how the Bundesbank and other foreign monetary authorities would react to the dollar's rise. The Bundesbank felt itself in a difficult situation. With German monetary aggregates already swollen by last year's intervention sales of marks and continuing to grow more rapidly than targeted this year, the German central bank became more and more troubled by the inflationary consequences of a weakening exchange rate.

By early June, officials of Germany and a number of industrial economies were also openly expressing concerns about rising commodity prices and a potential rise in inflation worldwide.

Thus, although market participants responded favorably to better U.S. statistics and signs of Federal Reserve tightening in early June, they began to anticipate that foreign monetary authorities would take advantage of increases in U.S. interest rates to raise their own rates, and they continued to feel that officials would take action to contain the dollar's rise through intervention.

Reports had begun to circulate in the markets beginning in early May that the Bundesbank was selling substantial amounts of dollars. In fact, during May and early June the Bundesbank had quietly sold all of its interest earnings and other dollar receipts accrued since the beginning of the year. Then the Germans started then to sell dollars visibly at the Frankfurt fixing, and subsequently in the open market. In total up to the time of the Summit meeting the Bundesbank dollar sales amounted to about \$5-1/2 billion. The market proved able to absorb these dollar sales in an orderly fashion and, once the market began to realize this, the dollar gained further strength.

At the close of the summit, the communique issued by the G-7 repeated the precise words of the last December's G-7 communique, that is, "either excessive fluctuation of exchange rates, a further decline of the dollar, or a rise in the dollar to an extent that becomes destabilizing to the adjustment process could be counterproductive by damaging growth prospects in the world

economy."

But though the same words were repeated in the June communique, suggesting that some rise in the dollar was more tolerable to the G-7 than any decline, the response this time was different as conditions were in some ways different. In particular, at the time the June communique was issued,

--First the dollar was 8 percent higher in terms of DM than at the time of the December G-7 statement, so that tolerance for a higher dollar started from a higher base.

--Second, the previously bullish sentiment towards the yen had begun to weaken, and prospects for yen bond and stock prices had deteriorated.

--Third, banks' customers were sitting on large short dollar positions which had been established since late last year to protect them from dollar declines but which would result in losses if the dollar were to strengthen much more.

Thus, when many in the market interpreted the Summit communique, along with reported comments of various G-7 officials, as reflecting greater tolerance toward a higher dollar than they had expected, a scrambling to cover short-dollar positions set in and dollar rates moved up quickly for the rest of last week. On Monday this week, the buying pressure was again intense and the Desk entered the market, buying \$170 million against marks in operations that began in the morning and resumed later in the day. On Tuesday, the Bundesbanks sold almost \$750 million and other Europeans joined in. Together the European central banks sold \$1.4 billion that day. The Desk was at first

reluctant to follow up on these European operations lest the market believe the U.S. was actively trying to push the dollar down. But when later in the day the dollar moved up to levels that exceeded those of Monday, we reentered the market to sell \$150 million against marks. On half of the U.S. dollar sales on Monday and Tuesday, or \$160 million, was for the Federal Reserve, and I request your approval of these operations.

Today we did not enter the market in an open and visible way, as we did Monday and Tuesday, but we did purchase \_\_\_\_\_ dollars, \_\_\_\_\_ for \$200 million, no discreet operations, using agents so as to avoid detection. We made purchases only as the dollar was rising, and mainly at levels higher than those we had seen in recent days and weeks. We think it is very useful to accumulate these balances to provide more resources for future needs.

The Desk has not operated openly in the market in Japanese yen. The dollar has risen about 5 percent against the yen since the December G-7 meeting as compared with a rise of about 12 percent against the mark. The Desk has continued to take the opportunity to buy small amounts of currencies from customers for the Federal Reserve. We purchased \$8.7 million equivalent of yen, as well as \$1.5 million equivalent of Deutsche marks in this fashion.

In other operations during the period, the Argentine central bank repaid \$160 million of its swap agreement with the U.S. Treasury. The U.S. Treasury and the Bank for International Settlements, on behalf of its member central banks, provided \$250

million in short-term credits to the National Bank of Yugoslavia.  
The National Bank of Yugoslavia drew the \$50 million of its swap  
with the U.S. Treasury on June 15.

**Notes for FOMC Meeting**

**June 29-30, 1988**

**Peter D. Sternlight**

In carrying out domestic open market operations since the last meeting of the Committee, the path allowance for adjustment and seasonal borrowing was raised in two steps, by a total of \$150 million to a level of \$550 million. First, directly in line with the May directive, the borrowing allowance was increased from \$400 million to \$500 million on May 25--about a week after the meeting. It was anticipated that this step-up in borrowing pressure would be associated with a move in the Federal funds rate from the neighborhood of 7 percent to around 7-1/4 percent. As it worked out, the implementation of this change, interacting with market expectations and to some extent with seasonal reserve pressures, tended to produce funds rates closer to 7-3/8 - 7-1/2 percent by mid-June. Against this background, and also in light of the "asymmetric" May directive and the continuing flow of information suggesting well sustained economic growth, it was deemed appropriate to accept or validate the slightly higher funds rates that had emerged in the market by increasing the path level of borrowing a little further, to \$550 million--as reported to the Committee at the June 22 conference call. This level of borrowing was expected to be associated with funds trading continuing in the 7-1/2 percent area.

Borrowing levels have run fairly close to path during the intermeeting interval. The greatest deviation came in the

first maintenance period when borrowing bulged over the Memorial Day weekend and produced about a \$580 million two-week average-- compared to the \$500 million path level set midway through that period. In the next maintenance period, ended June 15, with the path at \$500 million, borrowing was about \$480 million. For the two-week period ending today, borrowing has averaged about \$515 million thus far--with the path again having been adjusted midway from \$500 to \$550 million.

While borrowing was close to path, Federal funds tended to run a bit higher than expected over most of the interval. Even in the first reserve period, when funds averaged about 7-1/4 percent, that reflected a first week around 7-1/8 and a second week, which followed the rise to a higher borrowing path, average slightly over 7-3/8 percent. The 7-3/8 percent average persisted through the second maintenance period, ended June 15, while in the final reserve period, ending today, trading has more typically ranged around 7-1/2 percent, and even higher in the last couple of days as we were up to the quarter end. Some of this added firmness apparently reflects seasonal pressures associated with the June tax date and quarterly statement date. In addition, market expectations have worked in the direction of anticipating some snuggling of policy in response to signs of sustained economic growth and potential inflationary pressure.

Desk operations were confined to temporary reserve adjustments during the period. Apart from routine exchanges of maturing issues there were no outright transactions, as the

zig-zag pattern of needs to add or drain reserves did not present significant opportunities for sustained moves in either direction. For about the first week of the interval, reserves were over-abundant and were drained through several matched-sale purchase transactions in the market. Starting May 27, the Desk was on the add side, providing temporary reserves on most days through repurchase agreements. Until June 23 these all took the form of customer repos of varying size. In the last several days, the projected size and duration of needs were such that we undertook some multi-day System repurchase agreements as well.

Responding to higher money rates and short-term funding costs, most short-term market rates rose about 15 to 40 basis points over the period. Treasury bills rose about 15 to 40 basis points, with longer bills showing the smaller increases. Three- and six-month bills were auctioned last Monday at 6.59 and 6.75 percent, respectively, compared with 6.28 and 6.50 percent just before the last meeting. The Treasury continued to pay down bills modestly during the period--a net \$1.6 billion--but is now reaching a point where they will start building up bill issues again. In fact, yesterday, the Treasury announced a small increase in the weekly bills to be sold next week. In moderation, some build-up in bill issues would be welcome in the market, relieving scarcities that have tended to distort usual rate relationships as official holdings (Federal Reserve and foreign accounts) have tended to absorb rising proportions of weekly bill issues in recent quarters. Rates on private short-

term instruments such as Cds and commercial paper also rose about 30 to 45 basis points over the period, while there has been some anticipation that a rise in bank prime rates may not be far off.

For intermediate and longer-term issues, it was a different story--with a variety of cross-currents and much day-to-day volatility leading to little net change in the intermediate area and declines of about 10 to 25 basis points at the longer end. Initially, the long-term market was set back when the March trade deficit was reported with its sharp rise in exports, as this was read as implying inflationary pressures ahead. The first reported upward revision in first quarter GNP to nearly 4 percent reinforced this impression. The long bond yield climbed as high as 9.36 percent from 9-1/8 at the start of the period. But by late May prices began to turn around. For a time the rally was considered merely a "technical" move in a "bear" market, and some would still hold that view, but over time some investor buying did develop. It was encouraged by hints of moderation in the economy's advance, still-moderate behavior of broad price measures, a reduced trade deficit for April with particular attention paid to a reduction in imports and, of increasing importance as the period progressed, a markedly strengthening dollar. At one point, the Treasury's long bond yield came down to about 8.80 percent, only to push back above 9, and then fluctuate day to day to end the period roughly around 8.90 percent. Even with bond prices showing net gains, investor participation has been spotty and lacking in real conviction,

from what we hear. Moreover, to some extent, the strong performance of the long bond, with its net yield decline of about 20 basis points reflected a growing expectation that the Treasury would lack sufficient authority to sell more bonds in August, or perhaps for even longer. The Treasury's 10-year note came down a more modest 12 basis points or so over the period and now yields just a whisker less than the active long bond. Meantime, the Treasury raised about \$6-1/2 billion in the coupon sector.

While news on the economy tended to suggest some slowing of growth and broad price measures remained moderate, inflation concerns were by no means put to rest. The economy was still expected to be strong enough to continue pressing against capacity in a number of lines, and there is widespread sentiment that the rate of price increases will drift higher by perhaps a percentage point or so over the next 6 to 12 months. Higher commodity prices, while recognized as largely reflecting the drought situation, also kept price concerns alive, though the market did not get quite as wrapped up in commodity prices as it has in some recent past times. Against this background the market has rather anticipated and even welcomed a sense that the Fed was tugging a bit on the reins--and indeed this may have been an additional factor imparting some strength to the longer maturity issues.

As to where the market currently perceives policy to be centered, ideas range around \$500 or \$500-600 million for borrowing, with funds expected to be around 7-3/8 to 7-1/2

percent, or perhaps more evenly centered around 7-1/2 percent. The rates above 7-1/2 in the last couple of days are widely regarded as temporary products of quarter-end pressures. There is little anticipation of dramatic further policy moves on the immediate horizon, but there is a sense among many participants that policy will continue to edge to the firmer side as the year progresses.

Finally, a couple of words about Desk dealer relationships: Around the end of May, the Desk began trading with three additional firms--CRT Government Securities, Lloyds Government Securities, and Nikko Securities. All three had been added to the primary dealer list about six months earlier. With those additions, we were trading with 40 of the 42 primary dealers. In mid-June First Interstate Capital Markets withdrew themselves as a primary dealer because of the pending sale of their dealer operation, and then just a few days ago we added three other firms to the primary dealer group: Dillon Read, S.G. Warburg, and Wertheim Schroeder. This brings the published primary dealer list to 44. The press has noted that no new Japanese dealer names were added to the primary dealer list--although the latest list does show a name change for an existing primary dealer to reflect its new Japanese bank ownership. While not saying so publicly in so many words we have in fact deferred consideration of another Japanese dealer firm that might well have qualified at this time in order to allow more time to see additional complementary actions by the Japanese in opening their

financial markets, and especially the Japanese Government bond market, to U.S. firms. In the past, it has been possible to point to such complementary actions when adding new Japanese names and we'd like to continue this approach to encourage the further opening of their market.

Michael J. Prell  
June 29, 1988

FOMC CHART SHOW - INTRODUCTION AND OUTLOOK FOR DOMESTIC SPENDING

We shall be referring to the materials labeled "Staff Presentation to the Federal Open Market Committee."

The first chart outlines the key assumptions in the staff forecast. As regards monetary policy, we have based our projection on the premise that the System would place a priority on avoiding any deterioration in underlying inflation trends--a deterioration that we think likely unless aggregate demand decelerates considerably. On the fiscal policy side, we are not anticipating that any additional restraint will be applied, beyond what was mandated in the Budget Summit agreement last fall.

Under the circumstances, we believe that interest rates probably will be trending upward, at least into the first half of next year. As you know, it has proven difficult in recent years to get even the direction of rate movements right; with that caveat, I note that we have built into our forecast an increase in market yields of something over a percentage point. Such a rise should induce an appreciable increase in M2 velocity; consequently, we expect that M2 growth will slow in the second half, producing an increase of around 6 percent for this year and 4 percent for 1989. The velocity of M3 is less sensitive to interest rate movements, so M3 growth should exceed that of M2. On exchange markets, the dollar is projected to come under pressure again and to decline moderately on balance by the end of next year.

Chart 2 provides an overview of our economic forecast. As you know, the Commerce Department released revised first-quarter numbers after the Greenbook was published. However, because those revisions didn't change the picture materially, we didn't attempt to incorporate them in this presentation. Real GNP, the black bars, is now estimated to have risen at a 3.6 percent annual rate in the first quarter--rather than 3.9 percent--and we have projected only a modest slowing--to 3-1/4 percent--in the second quarter.

In our forecast, output decelerates noticeably this summer and growth averages just a touch above 2 percent from now through 1989. Although a decline in auto assemblies explains a part of the near-term slowdown, another major factor is our assumption that drought will substantially reduce farm output and that the national income accounts will put a large portion of that effect into the third quarter. Were it not for this stab at assessing the effects of the drought, we would have had a bit more growth in the second half of this year, and a bit less in 1989. As indicated by the red bars, domestic spending is projected to continue lagging output growth, mirroring the ongoing external adjustment.

Consistent with the below-trend output growth we are forecasting, we are anticipating a small increase in the unemployment rate, as depicted in the middle panel.

On the price side, data through May indicate a considerable pickup in inflation in the second quarter, and we see that higher rate of price increase persisting until the latter part of 1989.

A major element in our projection of weak overall growth in domestic demand is a continuation of sluggish consumer spending, shown at the top of chart 3. Over the six quarters ended in March, real PCE rose at an average of only 1-1/2 percent per annum. During the projection period, spending is expected to rise at that same rate. As you can see, we have outlays tracking disposable income quite closely. Real income expansion is constrained by two influences: slower employment growth and a continuing erosion of nominal wage gains by relatively rapid consumer price increases. This weakness in real income is symptomatic of the terms-of-trade loss associated with the lower exchange value of the dollar.

As indicated at the right, we are projecting that the personal saving rate will remain around the higher level recorded since the stock market break. To be sure, this is still a low level historically, but there are no signs that consumers are on the brink of a further notable retrenchment. The ratio of household net worth to income, shown at the middle left, has recovered the ground lost last fall, and while we would anticipate lackluster stock market performance in the projected economic environment, the overall financial position of the sector should hold up well. Consumer sentiment seems to be quite positive at this time; both indexes shown at the right have rebounded smartly since last fall.

Higher interest rates will be a deterrent to household spending on big ticket items and the item with the biggest ticket is, of course, a house. We believe that the drop in housing starts to less than a 1.4 million unit rate in May was something of a fluke, but we expect that--

after a near-term rebound--starts will move back down to that level by early 1989. The slide in construction activity occurs in the single-family sector as mortgage rates push upward; high vacancy rates will work along with rising financing costs to damp multifamily building, but we think that this segment is at or near a bottom nationally.

One volatile area, and thus a point of risk area in any forecast, is inventory behavior. As may be seen in the top panel of chart 4, nonauto inventories--the red bars--rose at a brisk pace in the fourth and first quarters, and we have estimated a further sizable addition in the second quarter. To date, most of the accumulation seems to have been voluntary. With sales trends improving and supplies becoming harder to get, it is not surprising that manufacturers have been building inventories. Moreover, as the middle left panel shows, given the upswing in prices, the real carrying cost for stocks of materials and supplies has declined sharply over the past couple of years.

At the right, you can see that stocks generally remain lean in manufacturing. Such excesses as there are seem to be in the trade sector. The bottom panel highlights a few features of recent inventory developments. Manufacturers and wholesalers have accounted for the bulk of the accumulation since last fall, and much of the increment to stocks in those areas has occurred among firms involved in producing or distributing capital goods or industrial materials, for which demand has been robust. In contrast, a lesser part of the accumulation has occurred at retailers. Although apparel stores are widely reported to

be burdened with unwanted inventories, their stocks apparently haven't changed: weak demand has held their stock-to-sales ratios at a high level. Among general merchandisers, on the other hand, a combination of sluggish demand and inventory increases has elevated stock-to-sales ratios.

We've already seen the retail inventory situation feeding back to some softness in consumer goods production recently, and that likely will continue; but, in other sectors, the recent pace of stock accumulation is in excess of a sustainable rate of final sales growth, and we're expecting that, by the end of this year, a broader desire to moderate inventory growth will begin to damp output significantly.

We're also looking for growth in capital spending to taper off by early next year. As indicated in the top panel of chart 5, we have projected a substantial further increase in real business fixed investment over the second half, in line with the readings of recent surveys of spending plans. In 1989, though, less favorable financial conditions and what might be called the decelerator effect of slower overall spending growth take hold to damp investment.

Equipment outlays are likely to continue to be by far the stronger component of capital spending; although burgeoning exports make the orders data somewhat trickier to read, the uptrend shown in the middle left panel points to solid near-term gains in domestic investment. We also expect to see some growth in industrial construction, given the higher capacity utilization rates now

prevailing, but the trend in contracts shown at the right doesn't bode well for total spending on nonresidential structures.

The bottom panels are intended to convey some sense of what the economic projection may imply for corporate finances. If price increases and profit margins are constrained in the way we are anticipating, then our forecast of business spending points to a rather sizable corporate financing gap. Moreover, interest coverage seems likely to deteriorate further, and these numbers bring to mind again the financial risks that may be lurking out there as a result of the heavy leveraging activity of the past few years.

Turning now to the final exhibit in this segment of our presentation, the top panel of chart 6 summarizes the federal budget picture. Our forecast puts the fiscal 1989 deficit above both the \$136 billion Gramm-Rudman target and the \$146 billion trigger for sequestration. We can readily envision OMB coming up with a deficit estimate that is below the trigger. However, Administration spokesmen have been making less optimistic statements, and it could be that there is more going on here than simply an effort to discourage the Congress from adding to expenditures.

Be that as it may, we've assumed neither a sequestration nor any other new deficit-reducing action, and even so, the outlook for real federal purchases, in the middle panels, seems to be one of restraint. We appear now to be witnessing the effects of earlier cuts in defense appropriations, and nondefense spending is leveling out as well.

At the same time, there is financial pressure at the state and local government level, too--partly as a result of the oil patch economic difficulties, but also reflecting in some cases a miscalculation by states of the effects of tax reform. Despite the substantial backlog of infrastructure requirements, we have projected slow growth of real state and local purchases. This should move the sector back into marginal surplus on an operating and capital accounts basis.

Ted Truman will now discuss the outlook for the external sector.

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E. M. Truman  
June 29, 1988

FOMC Chart Show -- International Developments

Chart 7, after the divider, provides an overview of our forecast for the external sector. As can be seen from the red line in the top panel, the deficit for real net exports of goods and services has been narrowing since mid-1986, and we are projecting a continuation of this trend. As is shown in the lower panel, real exports of goods are projected to continue to increase rapidly this year and next at about 18 percent. The increase in imports of goods is projected to slow to the 3 percent range.

It is these trends, combined with the higher levels of resource utilization now prevailing in the U.S. economy, that produce the tension in the staff's forecast between inflation and adjustment. Pressures are being exerted on domestic resources from the ongoing process of external adjustment; the issue is the manner in which they will be manifested: to what extent will they result in higher inflation; alternatively, to what extent will restraint be exerted on domestic demand through other channels.

That is the bad news; the good news, shown in the black line in the upper panel, is that the current account deficit in nominal terms has finally begun to narrow. We also expect this trend to continue over the forecast period, although the pace of adjustment will be slower in nominal than in real terms.

The more definitive evidence of improvement in our external accounts is undoubtedly one of the principal factors underlying the firmness of the dollar recently. As is illustrated by the red line in

the top panel of the next chart, the foreign exchange value of the dollar in terms of the other G-10 currencies on June 28, yesterday, was about 7 percent above its average level in December of 1987. While the recovery of the dollar this year has been substantial, it is not much larger than the temporary recovery that occurred between May and August of last year.

Although the narrowing of the U.S. external deficits appears to have been the major factor behind the performance of the dollar so far in 1988, the stance of the Federal Reserve and the relative rise in U.S. real long-term interest rates, which is approximated by the red line in the bottom panel of the chart, also have been important.

However, we believe that the expected further progress on external adjustment and relative restraint in U.S. monetary policy will not be sufficient to prevent a further moderate decline in the dollar. As Mike Prell noted earlier, we are projecting that the dollar will resume its decline against the other G-10 currencies. To be more precise, we have incorporated into our forecast a nominal depreciation of the dollar in terms of the currencies of the other G-10 countries at a 7-1/2 percent annual rate from the average level in June. That implies a somewhat faster rate of depreciation from the June 28th level plotted on the chart. Because of the higher rate of inflation projected for the United States, the projected depreciation in real terms is only about 5 percent at an annual rate.

Chart 9 presents the staff's outlook for economic activity abroad. Growth in the major foreign industrial countries over the past year or so has been somewhat more rapid than had been expected. That

growth has been associated primarily with various categories of investment spending and, to a lesser extent, with consumption purchases. However, special factors such as unusually good weather and the statistical influence of leap year may have boosted the figures actually recorded for the first quarter of this year.

We continue to see a difference between the pace of economic growth in Canada, Japan, and the United Kingdom, shown in the upper left panel of the chart, and that in France, Germany, and Italy, shown in the right panel. Over the forecast period, we expect the expansion of total domestic demand -- the red lines -- to continue to exceed that of real GNP -- the black lines -- in both groups of countries. However, we expect growth to slow over the balance of 1988 and into 1989 under the influence of tighter monetary and fiscal policies.

In Japan, the package of fiscal measures introduced last year successfully stimulated domestic demand, and we do not expect further expansionary actions, given the buoyant level of activity achieved and the rapid growth of money. In Canada and the United Kingdom, the authorities are clearly concerned about a buildup in inflation pressures and are moving to tighten monetary policies. In Germany the unemployment rate remains high, but with monetary growth above target and given previous pledges to return to fiscal rectitude, the expansion in economic activity that extended into the first quarter provides a rationale for the move toward restraint that is already under way. Despite the persistence of high unemployment, France and Italy have little scope to stimulate their economies, given their growing external imbalances.

Growth in the developing countries is also expected to be lower on average in 1988 than was recorded in 1987, especially in Latin America. However, a pickup in 1989 should help to sustain the average growth of economic activity in all foreign countries, shown in the lower left panel, at about the same 2-1/2 percent rate as this year. Such an average rate of expansion of foreign real GNP next year would be about a 1/2 a percentage point higher than that shown in the lower right panel for the United States, reversing the pattern of 1987 and 1988.

The behavior of commodity prices, illustrated in the upper left panel of the next chart by the staff's experimental index excluding crude oil, is one of the background factors contributing to somewhat greater caution in policymaking in other industrial countries. At the same time, this trend in commodity prices is a source of strength for exporters among the developing countries. On the basis of the index shown and most other broad indexes, dollar prices of commodities on average now exceed the previous peak for this recovery. Although much of the recent run up in commodity prices has been associated with the adverse impact of drought conditions in the United States, commodity prices had been rising on average for more than a year prior to their latest surge.

An additional factor underlying moves toward greater policy restraint in the major foreign industrial countries is the smaller margin of excess manufacturing capacity now prevailing in the world economy. As is shown in the upper right panel, in the first quarter of this year capacity utilization rates in manufacturing on average in the six major foreign industrial economies exceeded the previous peak at the beginning

of 1980. For Japan and the United Kingdom, one has to go back at least to the early 1970s to find similar rates of capacity utilization.

Meanwhile, as is shown by the red line in the lower left panel, wholesale prices in the major foreign industrial countries have been rising, on a year-over-year basis, since the middle of last year. Because of the construction of some of the foreign wholesale price indexes, the influence of increases in commodity prices is larger than in the U.S. PPI for finished goods. Nevertheless, the trend is indicative of an end of the deflation of recent years and of the emergence of an environment in which inflation is more worrisome.

This trend can also be seen in the gradual acceleration of consumer prices shown by the red line in the right panel. Consumer price inflation in the major foreign industrial countries is projected to rise a bit further over the forecast period. However, as I noted earlier in connection with my discussion of the outlook for the dollar, on average foreign inflation is expected to be substantially less than in the United States.

Against the background of expanding demand abroad, rising rates of capacity utilization, and the increased price competitiveness of U.S. goods, the volume of U.S. nonagricultural exports has been growing rapidly, as shown in the upper left panel of Chart 11. As you can see from the data in the table, growth in the volume of such exports accelerated over the past year, and it has been broadly based, though the pickup in exports of business machines and other capital goods has been particularly pronounced.

Moreover, the value of our nonagricultural exports to all major markets has been expanding at annual rates of 20 percent or more, much more rapidly than the expansion of aggregate demand abroad. This suggests that the dominant factor underlying the growth of exports has been our improved price competitiveness. However, rapid growth in domestic demand in the Asian NICs and Japan has boosted exports to that area relative to the overall average.

As can be seen in the right panel, we are projecting a continued strong expansion in the volume and value of our nonagricultural exports over the forecast period. However, the growth will be at slightly less than the exceptional rate of the past four quarters, in part, because of a drop off in aircraft deliveries in the second half of this year.

Turning to agricultural exports, the lower left panel, we have experienced a significant recovery over the past year in this area, as well. In late 1987 and the first half of 1988, shipments to the Soviet Union and China have been substantial. However, the backlog of contracts for deliveries to these two countries has been largely eliminated. By itself, this would contribute to a dropoff in agricultural shipments in the second half of the year. In addition, we have incorporated into the forecast an adjustment for the effects of the drought on available export supplies.

Thus, as can be seen from the red line in the chart, the volume of agricultural exports is projected to drop off, but the reduction in value — the black line — is expected to be substantially smaller because of higher prices. Next year, an anticipated recovery in the volume of agricultural exports and only a modest easing in prices over

the course of the crop year are projected to generate about \$42 billion in agricultural exports -- close to the record level of \$44 billion tallied in 1981.

The situation with respect to oil imports is summarized in the lower right panel. Over the projection period we are assuming that the availability of OPEC supply is not materially changed from the current average of about 1.5 million barrels per day in excess of the agreed level of OPEC quotas, and we are projecting that the average price of imported oil will recover after the dip to \$15.25 per barrel in the first quarter of this year. We expect the price to climb back to \$17 dollars a barrel by the fourth quarter. This level of prices would be more in line with OPEC's official average price of \$18 per barrel. For next year, we are projecting a further increase of \$1 per barrel.

With domestic demand projected to rise about 200 thousand barrels a day next year and domestic production projected to decline by about the same amount, oil imports should rise to almost 8 million barrels a day by the end of 1989. Their value will be around \$50 billion at an annual rate.

The next chart deals with non-oil imports. As can be seen in the bottom line of the table in the upper left panel, the average price of non-oil imports increased by more over the four quarters ending in March than it had over the previous four quarters. However, much of the increase has stemmed from increases in commodity prices as reflected in the prices of imported food and industrial supplies. Nevertheless, prices of all the categories of non-oil imports, aside from business

machines, have continued to rise more rapidly than the general price level.

As can be seen in the table in the right panel, this has led to a marked slowing in the growth of the volume of non-oil imports, with the notable exception of imports of business machines and other capital goods. These two categories, which account for about one third of the total value of our non-oil imports, have been stimulated by the higher investment demand in recent quarters.

The lower left panel shows our projection for the average price of non-oil imports. We are projecting that the average price, measured by the fixed-weight index, will increase about 10 percent this year before slowing to about 7-1/2 percent next year under the influence of the projected slower rate of depreciation of the dollar and more moderate increases in commodity prices.

As is shown in the lower right panel, the expansion of the volume of such imports -- the red line -- is projected to be moderate over the entire period, consistent with the slowing of overall domestic demand as well as with higher prices for imported goods. The small increase in import volume in our forecast is entirely accounted for by business machines. However, the value of non-oil imports will continue to expand rapidly because of the continuing rise in their prices.

Chart 13 summarizes the staff's projection for the external sector.

The trade balance -- the black line in the top panel -- is projected to resume its recent trend of improvement after a pause in the second half of this year produced by the fall-off in agricultural exports

and the pickup in oil prices. I might also note that our projection assumes that the trade deficits in May and June were substantially larger than that recorded for April. In any case, by the end of next year, the trade deficit is projected to narrow to almost \$100 billion at an annual rate, compared with \$144 billion recorded in the first quarter of this year.

The improvement in the current account deficit — the red line — is projected to be about the same. This improving trend in the U.S. current account is expected to generate an almost imperceptible slowing in the deterioration of the U.S. international investment position, depicted in the lower panel. As a rough approximation, the U.S. trade deficit would have to be eliminated entirely in order to stabilize the ratio of our net indebtedness relative to nominal GNP, which might be viewed as a sustainable condition. Such considerations underlie the staff's view that the dollar will continue to come under downward pressure and will at some point depreciate further in real terms.

Nevertheless, the projected improvement in our external accounts over the forecast period is substantial, and the issue is whether an improvement on the scale we are projecting can be accomplished smoothly while avoiding excessive pressures on domestic resources and an acceleration of inflation.

Larry Slifman will now continue our presentation with a discussion of the inflation outlook.

Lawrence Slifman  
June 29, 1988

FOMC CHART SHOW - OUTLOOK FOR INFLATION

As Mike noted earlier, the drought has had a noticeable effect on our projection for GNP. It also has altered our price forecast. As shown in the upper panel of chart 14, we expect consumer food prices to rise rapidly over the remainder of this year. In quantifying the drought effects, we have relied in part on the signals from the commodity markets. Of course, if the weather turns out to be even worse than the markets thus far have anticipated, the near-term outlook for production and prices would worsen considerably. Next year, however, we assume more normal weather patterns and an easing in government acreage set-aside requirements. This generates more production, and in response, food prices are projected to rise at a slower rate than overall inflation.

We recognize that beef prices will likely move in a different direction--falling in the near term as cattle are sent to slaughter and then rising sharply next year. Nonetheless, past experience suggests that, overall, retail food prices tend to rise at the time the drought affects crops, reflecting fairly prompt changes in prices of products most directly associated with grains--for example, cereal and bakery items, poultry, and vegetable oils.

In contrast to food prices, we think energy prices will be quiescent over the next year and half. As Ted noted earlier, we expect the price of imported oil--the middle panel--to climb to \$18 per barrel

over the projection period. Given this path, and looking at retail margins and other factors, retail energy prices are projected to be a moderating force on overall inflation.

In terms of non-oil import prices, the effects of more than three years of dollar depreciation have become increasingly pronounced. The lower panel shows a measure of import prices that excludes not only oil but also business machines, in order to eliminate a distortion caused by the fact that for computer imports the current practice at the Commerce Department is to actually use a price index for U.S. produced computers. Although we expect the rise in prices of imports to moderate somewhat, it is large enough, in combination with some lagged effects from earlier increases, to account for about half a percentage point or so of overall consumer price inflation in both this year and next. The effect on domestic output prices would be smaller--for example, about a quarter of a point on the GNP fixed-weight price index.

Your next chart addresses the issue of supply problems in the industrial sector. To date, most reports of capacity constraints or product shortages have been confined mainly to materials. To assess the seriousness of the problem, the top panel compares the percentage of materials-producing industries currently operating well above normal utilization rates with the numbers in earlier periods. Eighty-nine non-energy materials industries have been classified into four groups: the heavy black bars are for those operating well below normal--that is, with utilization rates more than one standard deviation below their industry long-run averages; the lightly striped black and red bars

indicate those operating at close to average rates; and the heavy red bars denote those operating more than one standard deviation above average.

As can be seen by comparing the two sets of bars on the left, since late 1985 and early 1986--when pressures in materials markets were almost non-existent--slack has disappeared rapidly and the distribution of utilization rates has shifted considerably, with nearly a quarter of materials industries now operating at rates significantly above their long-run averages. By way of comparison, in late 1978 and early 1979, when prices were rising very steeply, some 34 percent of materials industries were operating well above normal.

This same story of rising pressures in materials markets, but short of previous peaks, is indicated by data from the survey of purchasing managers--the middle two panels. As you know, purchasing managers are asked to identify industrial items in short supply. We have gone through the reports for the past decade, and divided the items mentioned into 21 broad categories. Currently, items are being reported in short supply in 43 percent of the categories.

Another indicator of possible supply problems is the report on lead times for ordering production materials. As shown in the middle right panel, average lead times have moved up only moderately since late 1985--clearly a less ominous picture than that painted by the short supply list.

On balance, the evidence suggests that the economy is not facing major supply constraints, despite a few specific problem areas.

Nonetheless, reduced overall slack in materials markets already has been associated with higher prices for many industrial commodities. In terms of the outlook, although materials inputs generally are a relatively small part of overall production costs, these price hikes likely will have some noticeable effects on aggregate inflation.

As shown in the lower panel, there is considerably more slack in the advanced processing industries. But even in that sector, operating rates have been moving up for the past year and a half-- especially in those industries benefiting directly from brisk export growth. Given our projection of relatively slow growth in domestic demand, the utilization rate in this sector is projected to level off soon and then edge down, thereby avoiding any serious supply difficulties. However, should this slowing fail to materialize, while the external sector continues to strengthen, capacity pressures undoubtedly would begin emerging before too long.

Your next chart focuses on the influence of labor costs on the inflation outlook. As shown by the red line in the upper panel, the acceleration of consumer inflation in 1987 cut sharply into real compensation per hour, reflecting the tendency of wage increases to lag price increases. Looking forward, we are forecasting little change in real pay rates. Labor markets currently are relatively tight, with reports of hiring difficulties in scattered areas and occupations. However, in our forecast, unemployment rises a bit, and this, in combination with continuing competitive pressures in many industries, is

projected to hold nominal wages to an increase no larger than that of consumer prices.

The offset to accelerating nominal wages from productivity gains is projected to diminish. As shown in the middle panel, during the initial phases of the current cyclical expansion, productivity grew rapidly as businesses were able first to utilize more fully their existing staffs and then re-employ or hire the most able workers. The result was that output per hour rose rapidly, moving well above its longer-run trend. But with the margin of slack in many labor and product markets relatively narrow, the quality of new hires probably has deteriorated, and they may be working (at the margin) with less efficient capital. Consequently, productivity is anticipated to drift back toward its long-run trend line over the next year and a half, rising at less than a 1 percent annual rate on average.

Reflecting these wage and productivity developments, unit labor costs--shown in the bottom panel--are projected to rise at nearly a 4 percent annual rate. Thus, while price developments in the food and energy sectors should be favorable next year, unit labor costs will be providing some momentum to overall inflation.

Mike will now conclude our presentation.

\*\*\*\*\*

Michael J. Prell  
June 29, 1988

FOMC CHART SHOW - CONCLUSION

The top panel of the last chart presents an alternative to our Greenbook forecast, designed to give you some idea of what the projected rise in interest rates is doing to the economy. Because the lags tend to be long, we extended our projection, in a tentative way, into 1990. With interest rates probably easing back some from the 1989 highs, the extension of the Greenbook forecast--labeled as the "baseline"--points to continued slow growth, with little change in the unemployment rate. Inflation edges off slightly in 1990--partly because of some carryover of the late '89 deceleration of food and import prices.

I might note that, in formulating the Greenbook projection and the extension into 1990, we have adopted what might be viewed by some as a fairly optimistic view of the implications of the current level of the unemployment rate for inflationary pressures. We are, in essence, assuming that, whatever its explanation, the recent tendency for wages to behave better than most models would have predicted will persist.

The lines labeled "stable rates" represent a model-based estimate of what would happen if the federal funds rate were held fixed at the current level through an easier monetary policy. In the staff models used--as in most other models--wages and prices adjust slowly to demand shocks, owing to backward-looking expectations and to contractual rigidities. Consequently, an easier policy yields noticeably more output and employment in the next couple of years, and the additional

inflation begins to become visible only late in the period. The drop in unemployment to around 5 percent by the end of 1990 probably would imply an appreciable further divergence of the two inflation paths in 1991.

Finally, the bottom panel presents your forecasts, lined up against those of the Administration and the Board staff. The range of FOMC forecasts is broad, but the central tendencies are well defined. There is little difference between the central tendencies and the staff projection, except that the staff shows somewhat more inflation and a touch higher unemployment rate over the remainder of this year. The Administration, on the other hand, differs substantially in its view of 1989, showing a good deal more growth, but no more inflation than is in the central tendency forecast. You will recall that the Humphrey-Hawkins Act requires the Board to tell the Congress whether there is any conflict between the monetary ranges adopted by the FOMC and the Administration forecast. Since the Administration's nominal GNP figures are only a little above the FOMC consensus and within the full range of FOMC forecasts, there does not appear to be a glaring inconsistency. It is interesting to note, however, that in the Administration forecast interest rates decline over the next year, which might imply a decline in M2 velocity--rather than the rise anticipated in the staff's projection.

Mr. Chairman, that concludes our presentation.

\*\*\*\*\*

*Material for*

*Staff Presentation to the  
Federal Open Market Committee*

*June 29, 1988*

## **Policy Assumptions**

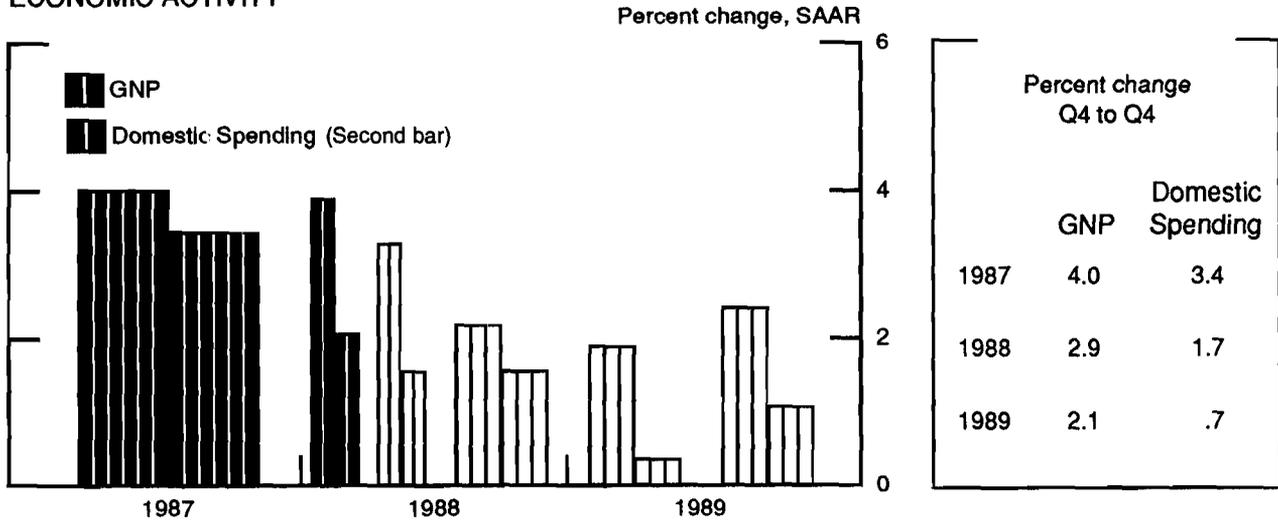
- Federal Reserve seeks to curb inflationary pressures.
- No additional steps are taken to cut the federal budget deficit through FY89.

## **Financial Conditions**

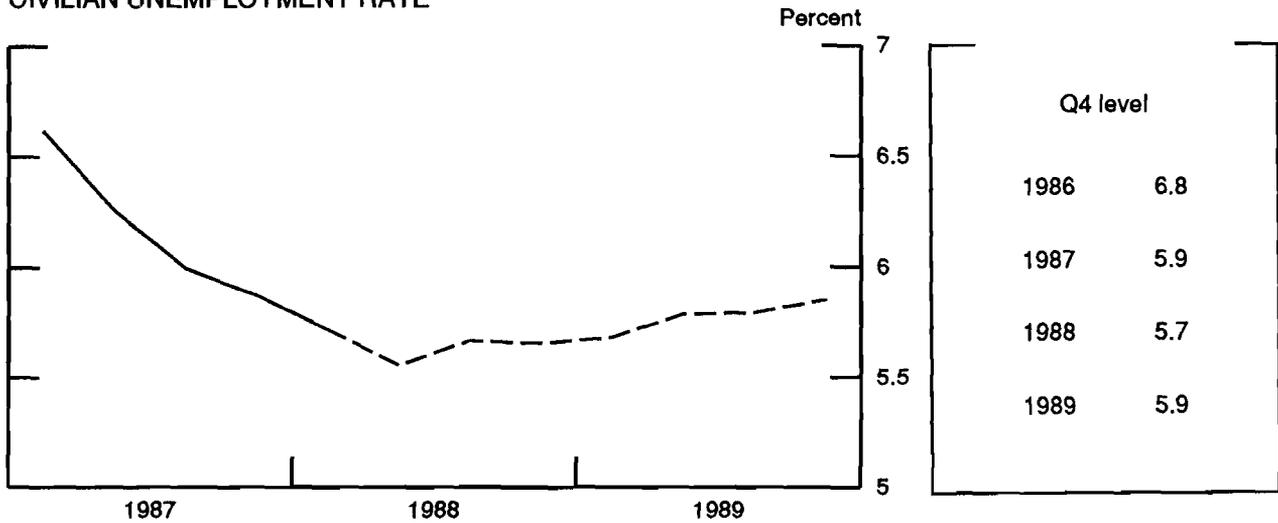
- Interest rates rise, probably by a percentage point or more between now and next spring.
- Rate increase induces a rise in monetary velocity
  - M2 grows around 6 percent in 1988 and 4 percent in 1989.
  - M3 grows faster than M2 in both years.
- The dollar depreciates moderately on balance over the projection period.

Chart 2

ECONOMIC ACTIVITY



CIVILIAN UNEMPLOYMENT RATE



INFLATION

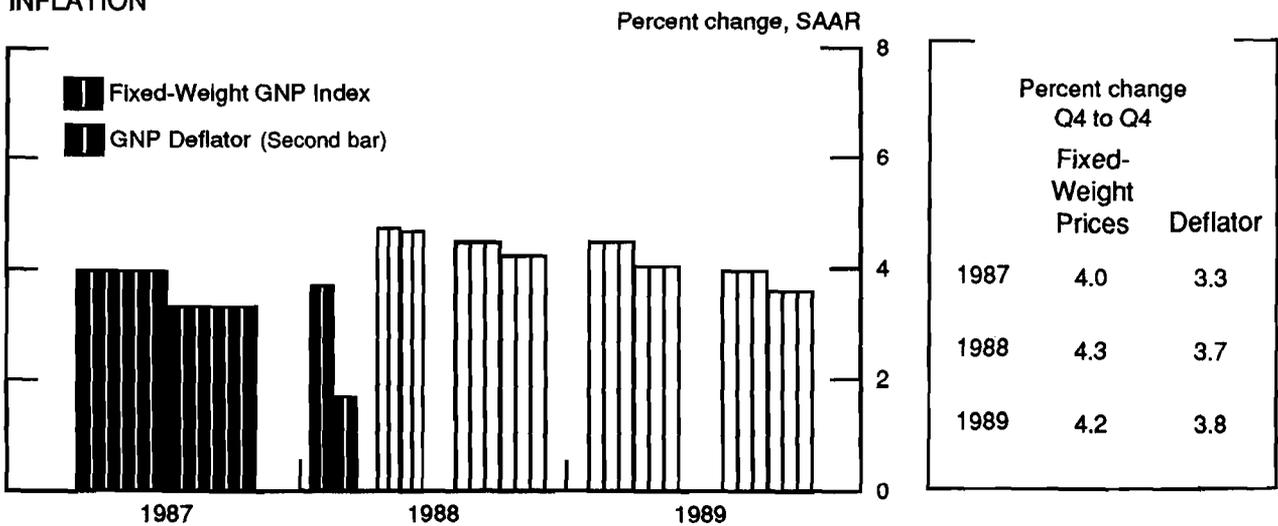
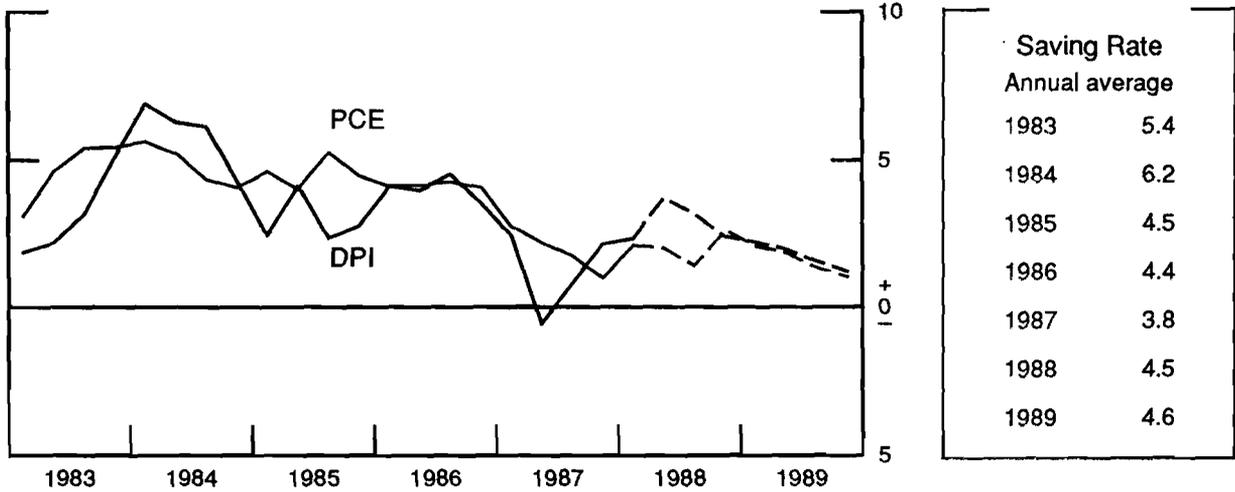
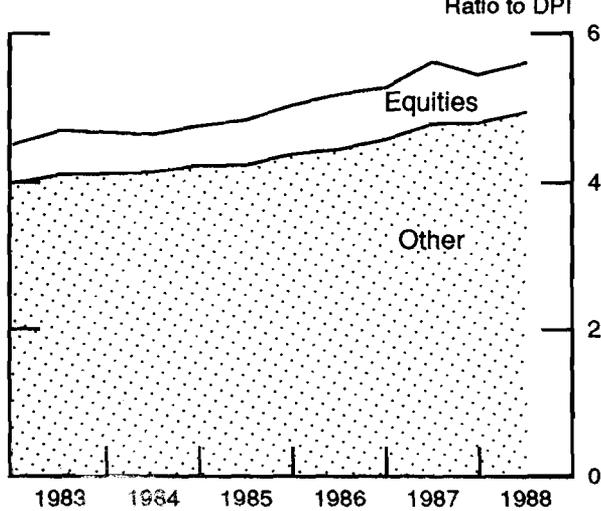


Chart 3

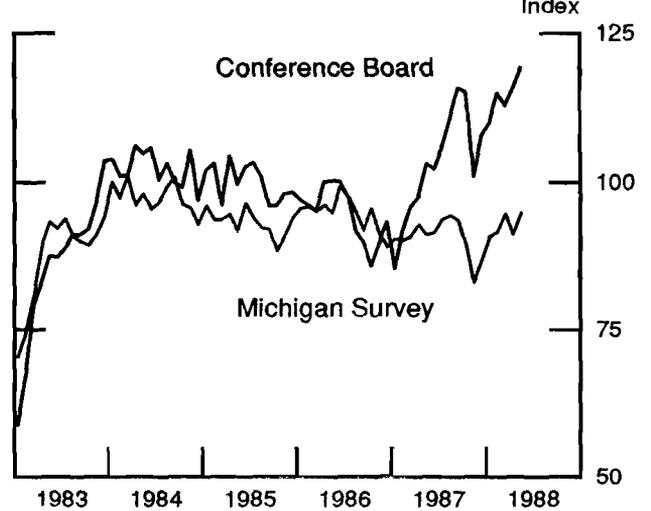
**REAL PERSONAL CONSUMPTION EXPENDITURES  
AND DISPOSABLE INCOME** Percent change from four quarters earlier



**HOUSEHOLD NET WORTH**



**CONSUMER SENTIMENT**



**HOUSING STARTS**

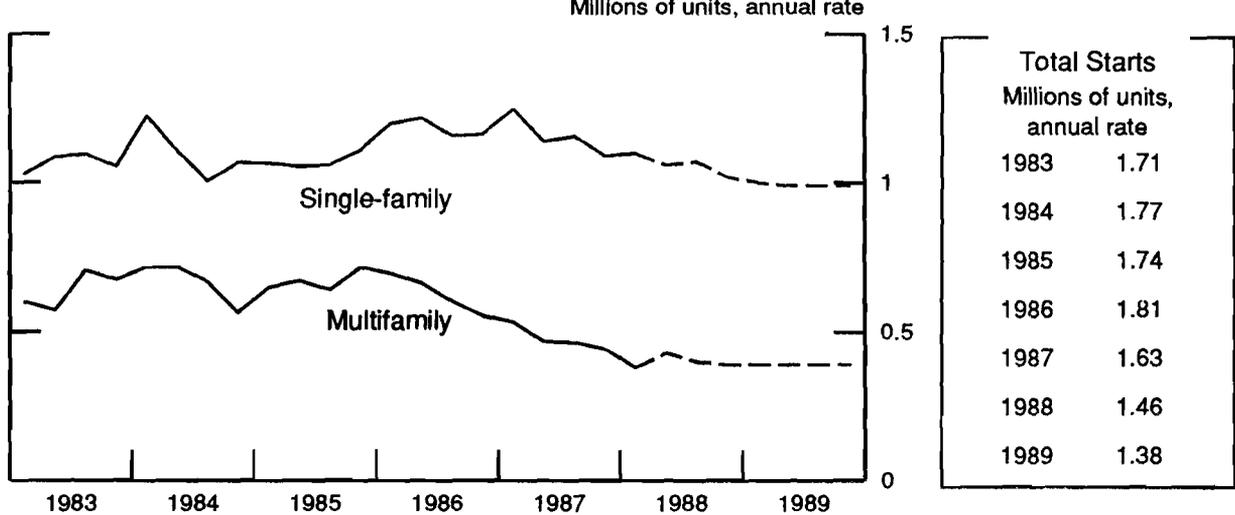
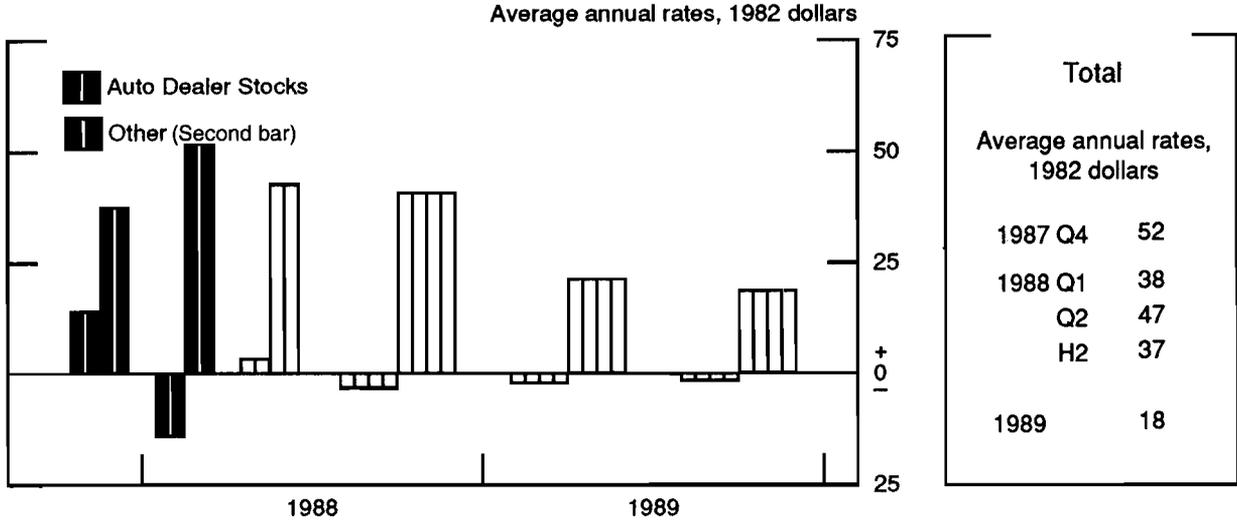
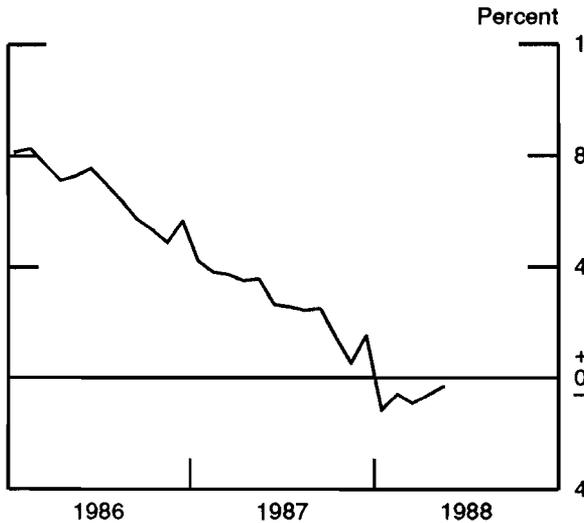


Chart 4

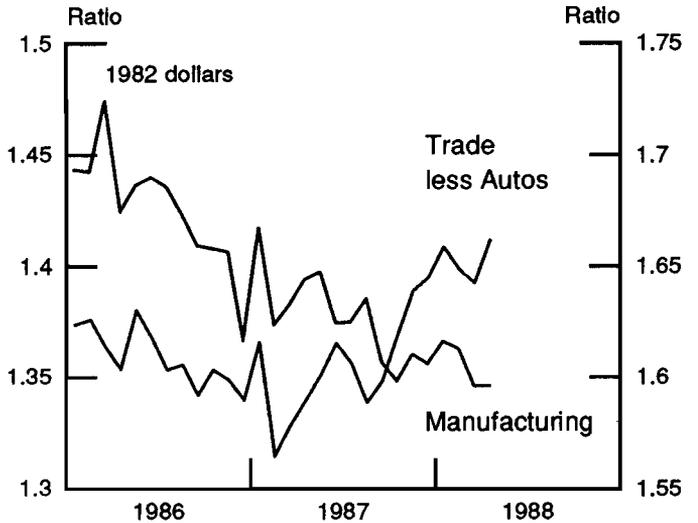
**NONFARM INVENTORY INVESTMENT**



**REAL INTEREST RATE \***



**BUSINESS INVENTORY-SALES RATIOS**



\* 90 day paper rate minus prior 6-month inflation rate for PPI intermediate goods excluding food and energy.

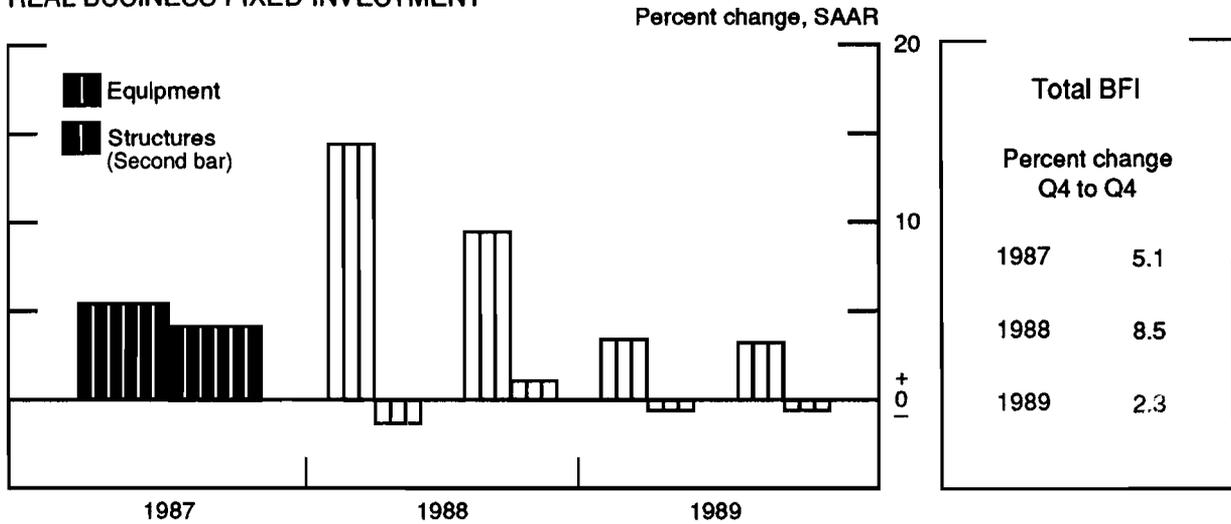
**RECENT INCREASES IN NONFARM BUSINESS INVENTORIES**

September 1987 to April 1988 — Current Cost Data

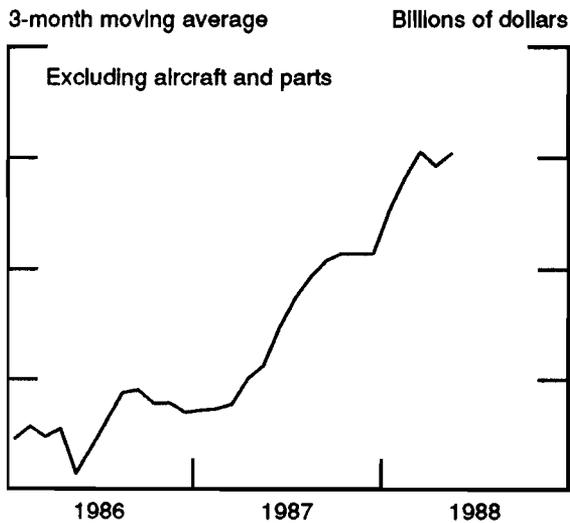
	In billions of dollars	In percent
<b>Total excluding retail auto</b>	<b>61</b>	<b>5.3</b>
Manufacturing	24	4.4
Industrial materials, nondefense capital goods	14	6.0
Wholesale	24	8.9
Machinery and metals	10	13.8
Retail	13	4.6
Apparel	0	0.0
General merchandise, appliances, furniture	6	4.9

Chart 5

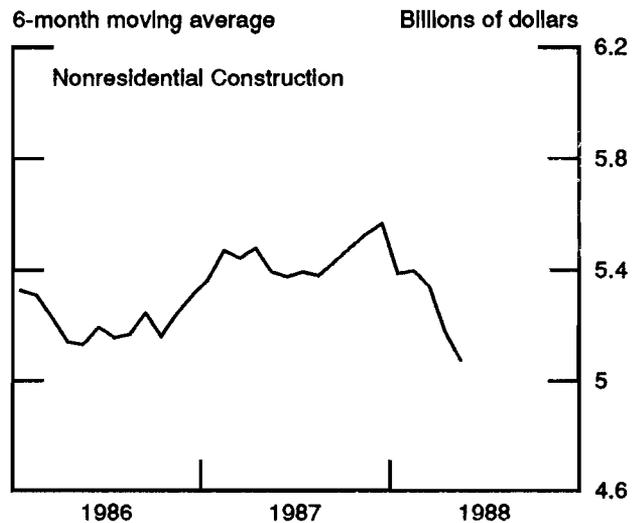
**REAL BUSINESS FIXED INVESTMENT**



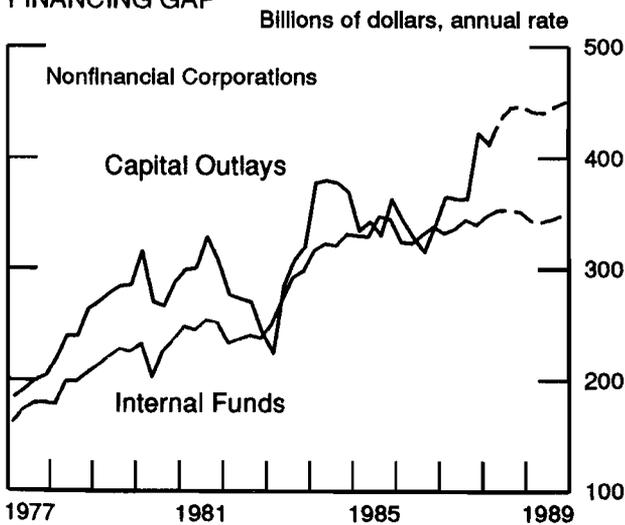
**NONDEFENSE CAPITAL GOODS ORDERS**



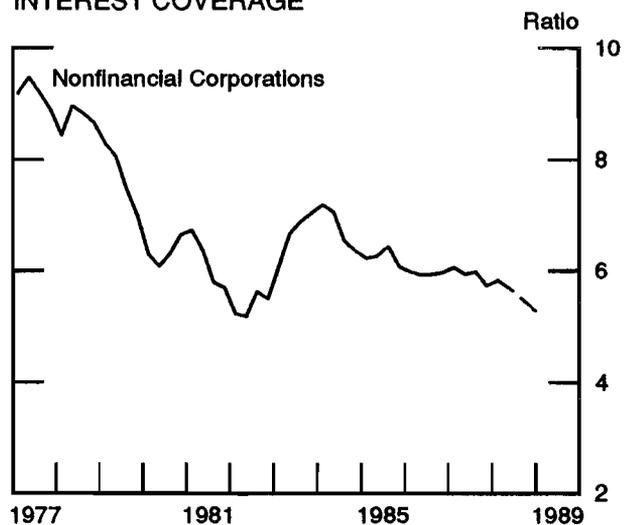
**CONTRACTS**



**FINANCING GAP**



**INTEREST COVERAGE \***

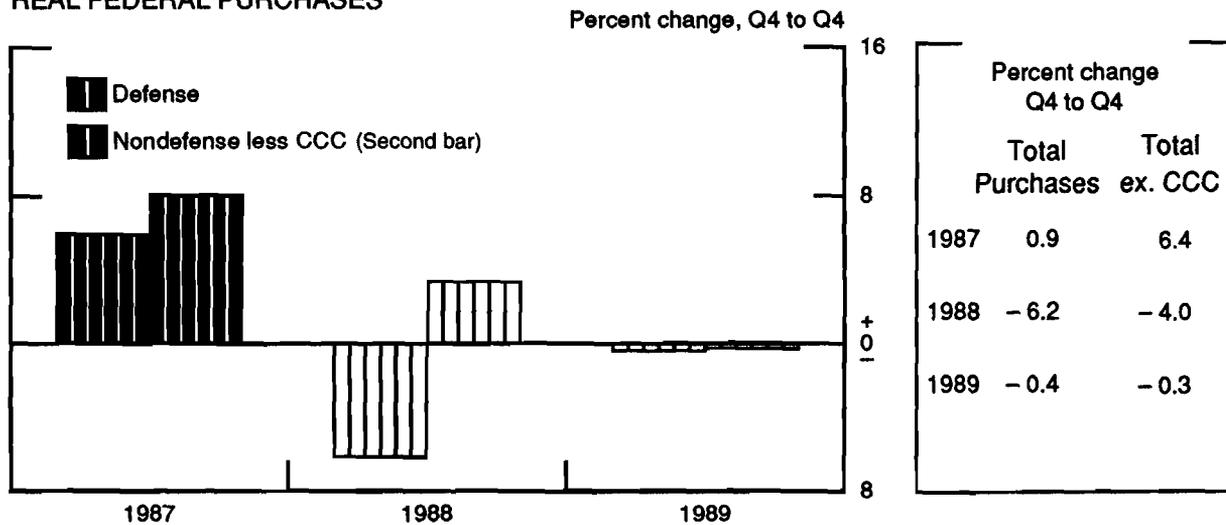


\* Gross pretax cash flow and net interest divided by net interest.

FEDERAL BUDGET DEFICIT

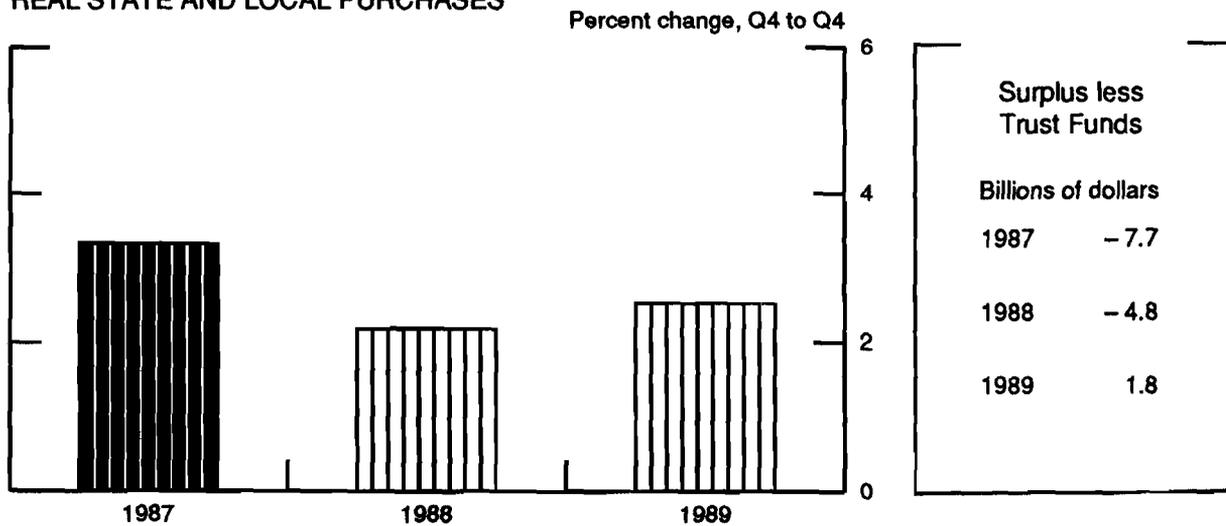
Fiscal Year	Greenbook Forecast	Gramm-Rudman	
		Target	Trigger
1988	158	144	n.a.
1989	157	136	146

REAL FEDERAL PURCHASES



Percent change Q4 to Q4		
	Total Purchases	Total ex. CCC
1987	0.9	6.4
1988	-6.2	-4.0
1989	-0.4	-0.3

REAL STATE AND LOCAL PURCHASES



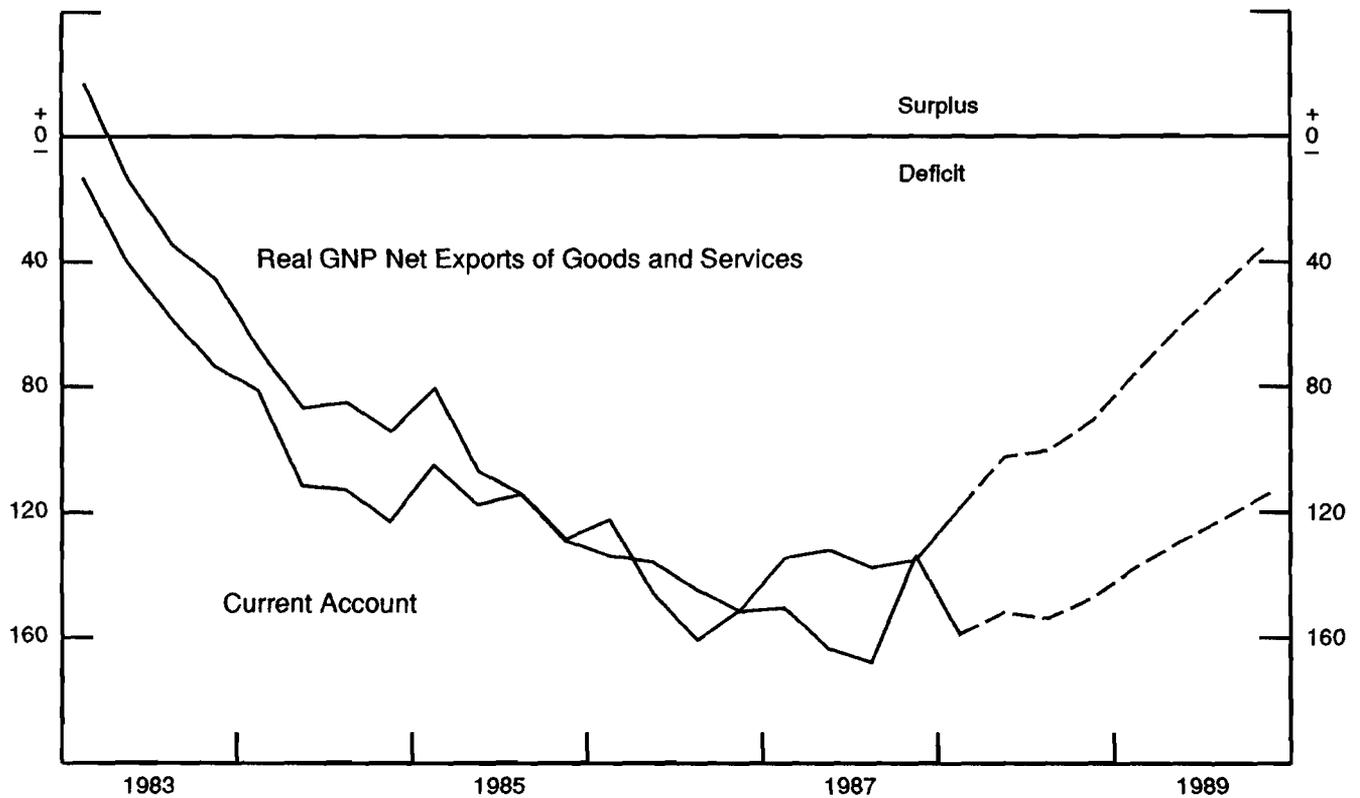
Surplus less Trust Funds	
Billions of dollars	
1987	-7.7
1988	-4.8
1989	1.8

Chart 7

**EXTERNAL BALANCES**

Billions of 1982 dollars

Billions of dollars



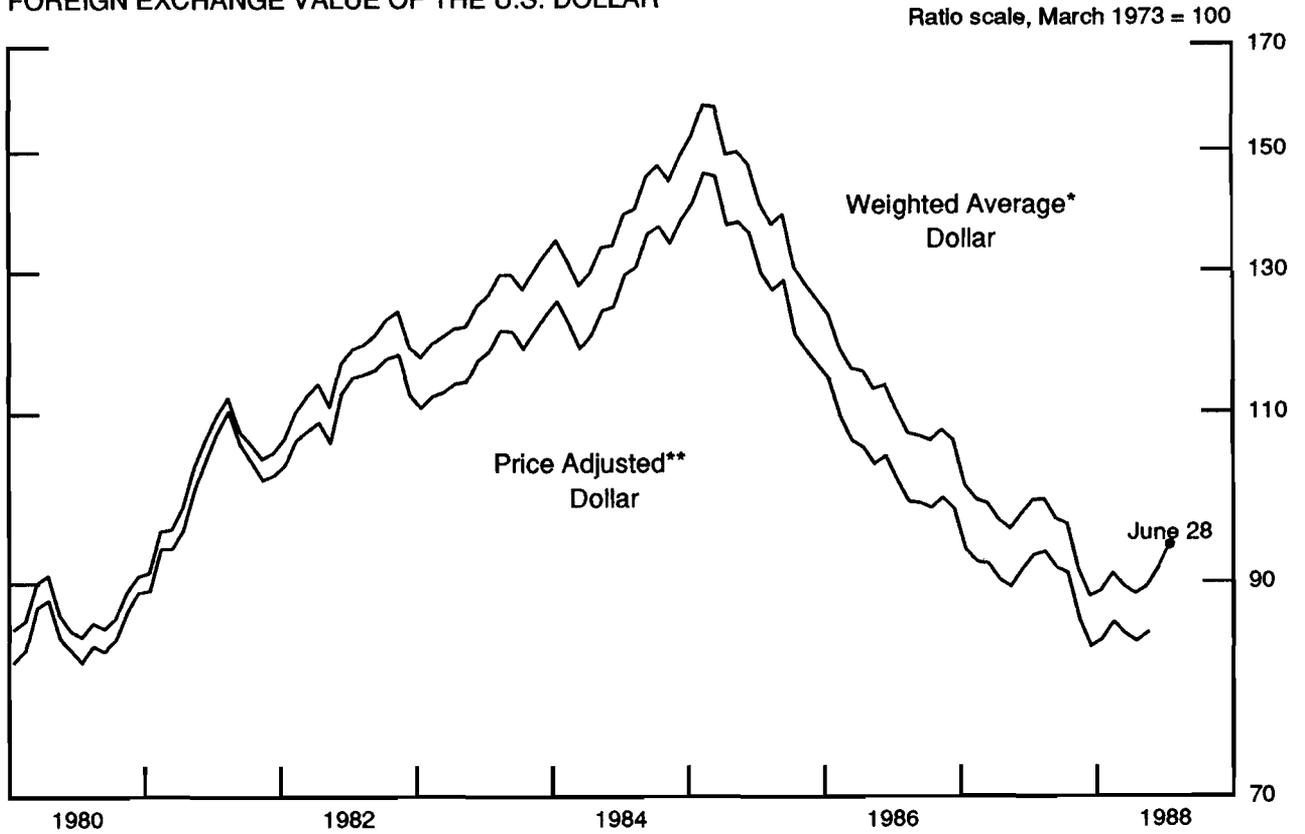
**Components of Real Net Exports of Goods and Services**

Percent change, Q4/Q4

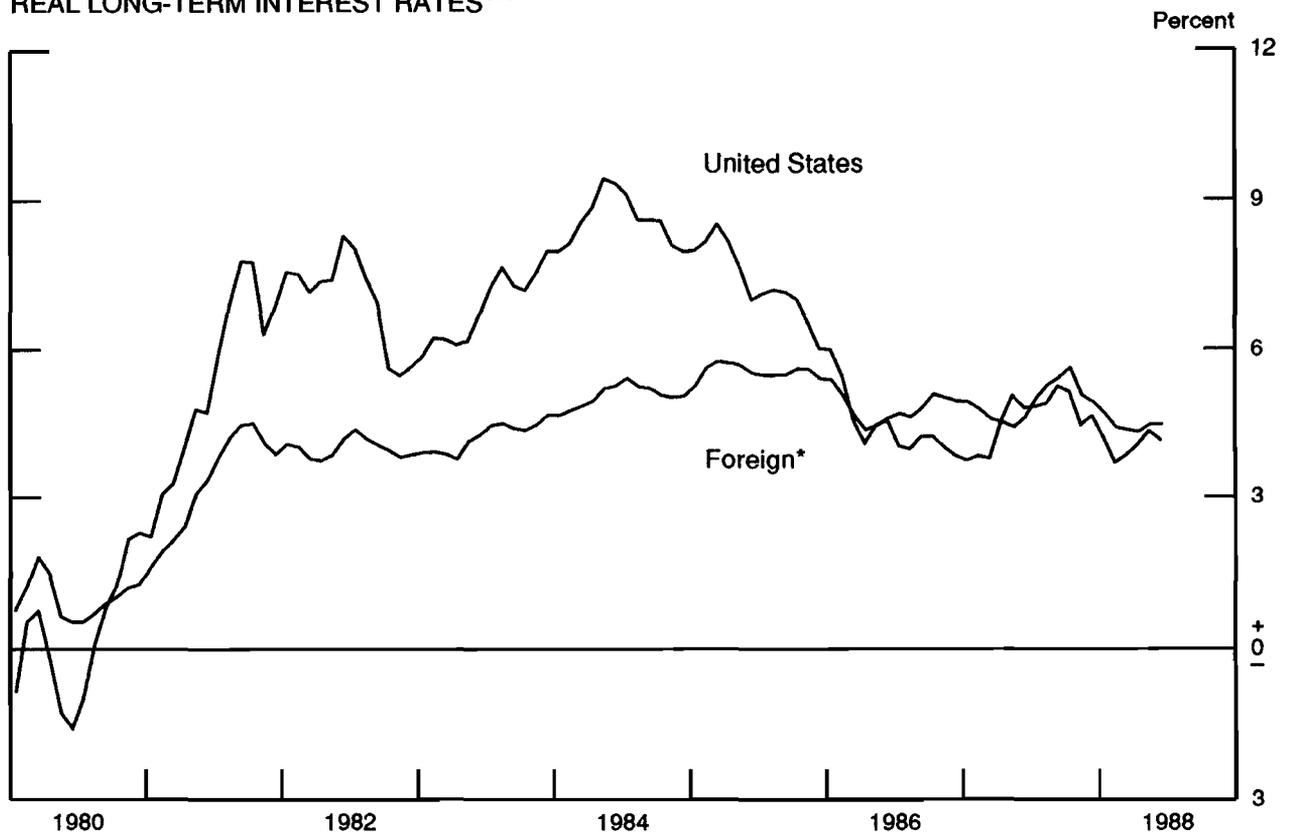
	1986	1987	1988	1989
Exports of Goods and Services	6	17	14	16
Goods	10	18	17	18
Services	-2	14	8	14
Imports of Goods and Services	9	9	3	5
Goods	11	7	2	3
Services	1	19	7	10

Chart 8

FOREIGN EXCHANGE VALUE OF THE U.S. DOLLAR



REAL LONG-TERM INTEREST RATES\*\*\*



\* Weighted average against or of foreign G-10 countries using total 1972-76 average trade.

\*\* Adjusted by relative consumer prices.

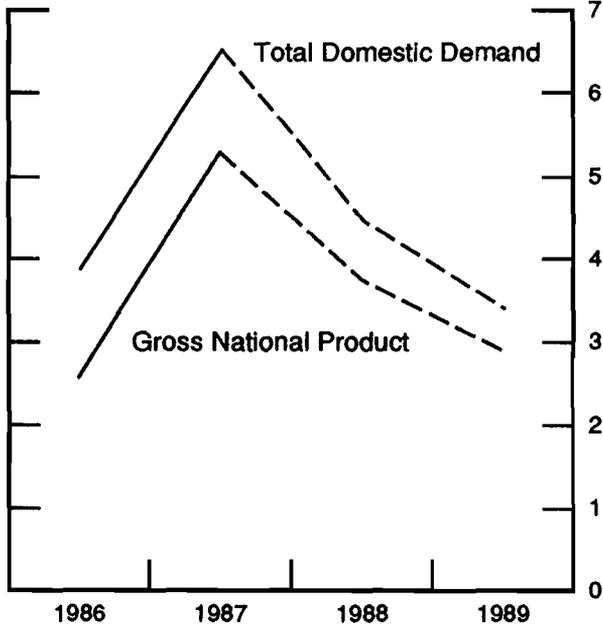
\*\*\* Multilateral trade-weighted average of long-term government or public authority bond rates adjusted for expected inflation estimated by a 36-month centered moving average of actual inflation (staff forecasts where needed).

Chart 9

### Economic Activity

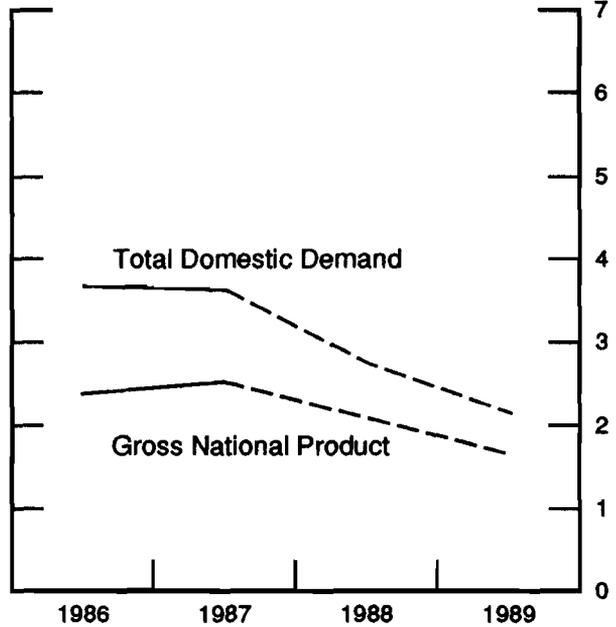
CANADA, JAPAN, AND UNITED KINGDOM \*

Percent change, Q4 to Q4



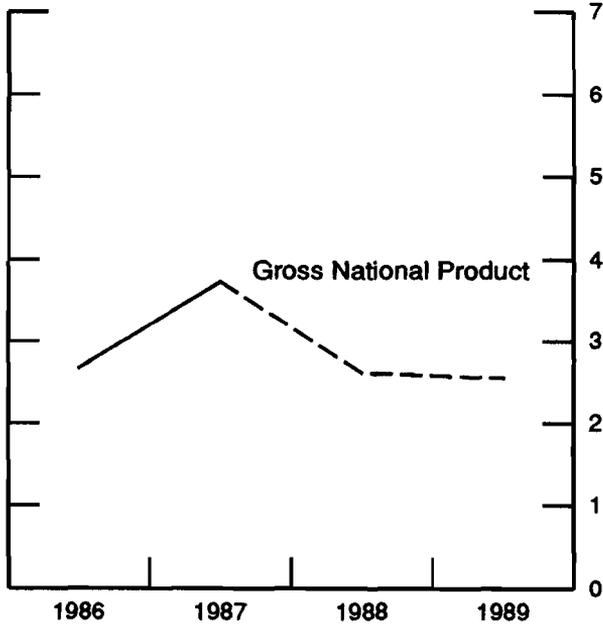
FRANCE, GERMANY, AND ITALY \*

Percent change, Q4 to Q4



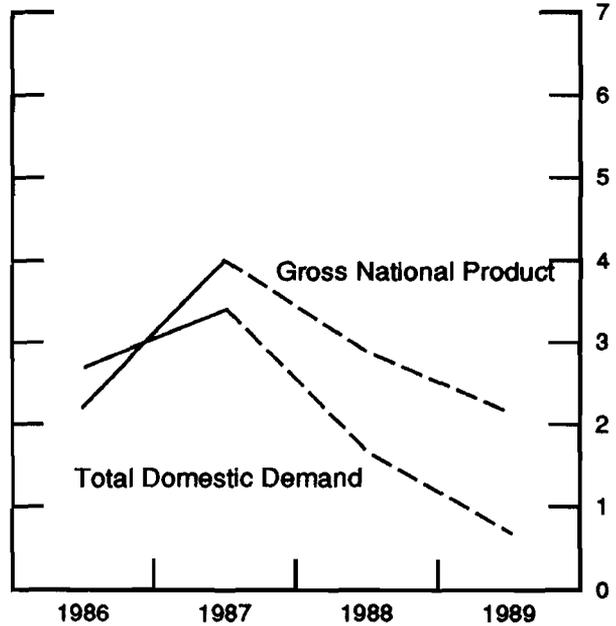
ALL FOREIGN COUNTRIES \*\*

Percent change, Q4 to Q4



UNITED STATES

Percent change, Q4 to Q4

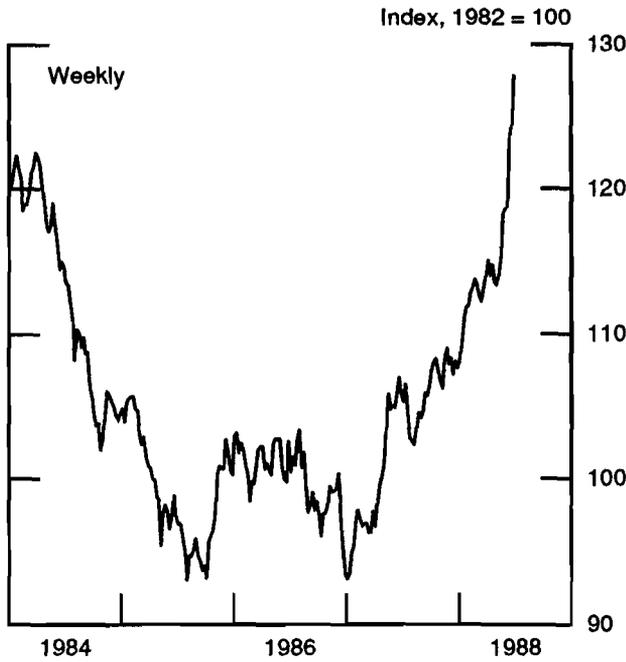


\* Weighted average using 1982 GNP.

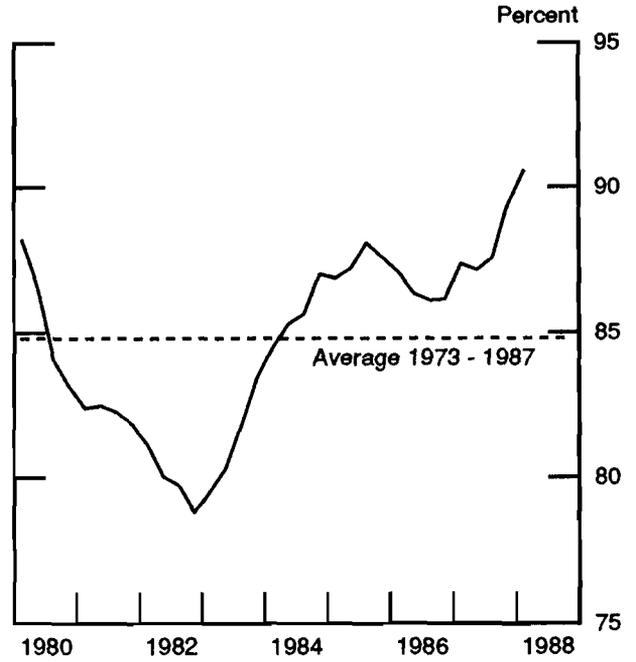
\*\* Weighted average using 1978-83 U.S. non-agricultural exports.

Chart 10

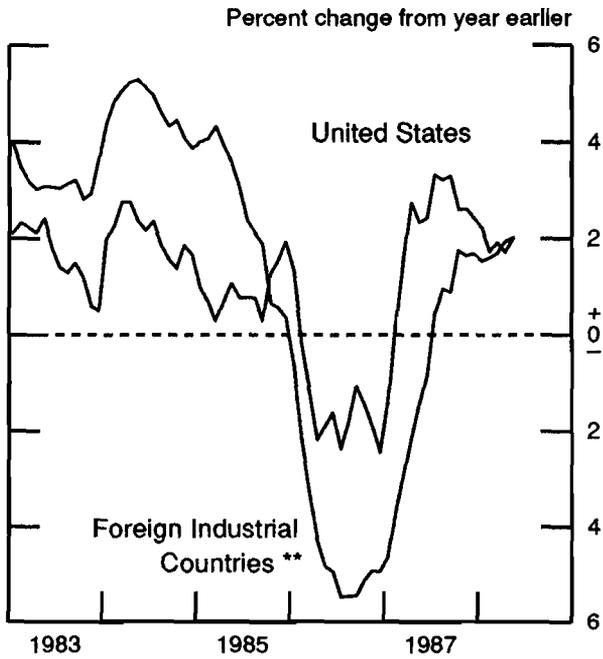
COMMODITY PRICES \*



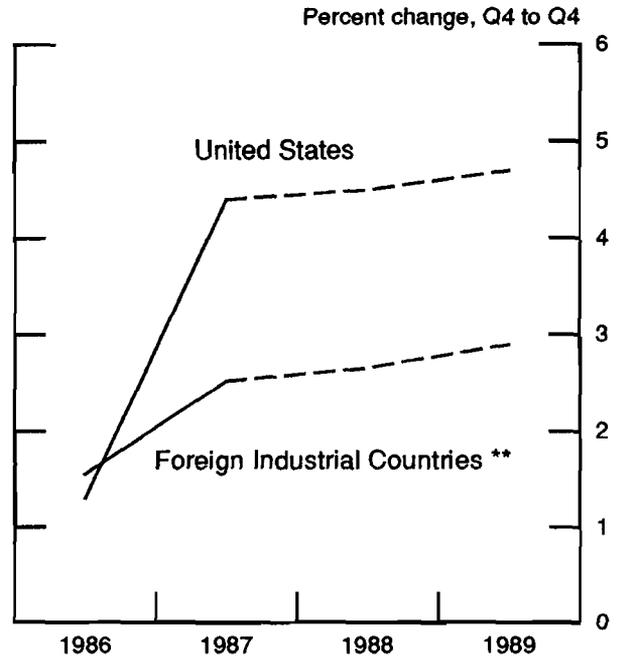
CAPACITY UTILIZATION ABROAD \*\*



WHOLESALE PRICES



CONSUMER PRICES



\* FRB experimental price index excluding crude oil.

\*\* Weighted average for the six major foreign industrial countries using 1982 GNP.

Chart 11

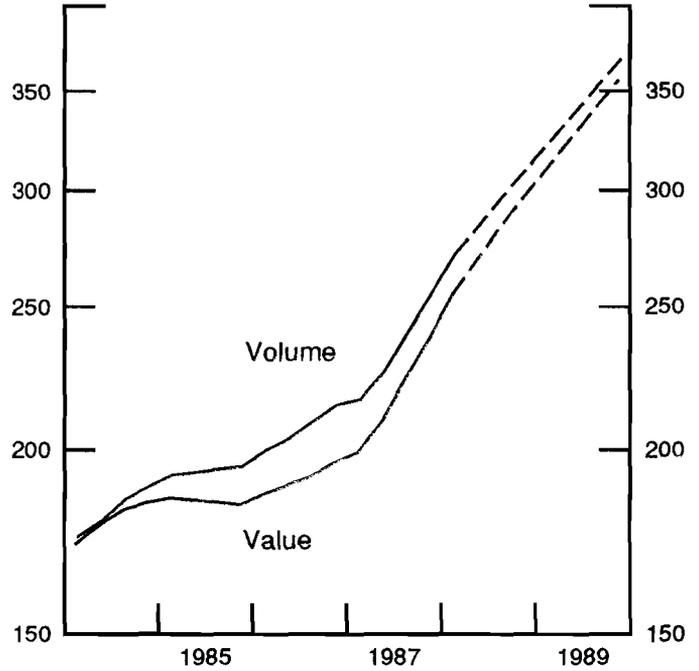
**Volumes of Nonagricultural Exports\***  
Percent change

	<u>1987Q1</u> 1986Q1	<u>1988Q1</u> 1987Q1
1. Industrial Supplies	8	13
2. Business Machines	20	51
3. Other Capital Goods	-1	27
4. Automotive	-5	23
5. Consumer Goods	16	25
6. All Other	31	11
<b>7. Total Nonagricultural</b>	<b>8</b>	<b>25</b>

**NONAGRICULTURAL EXPORTS\***

Ratio scale,  
billions of 1982 dollars

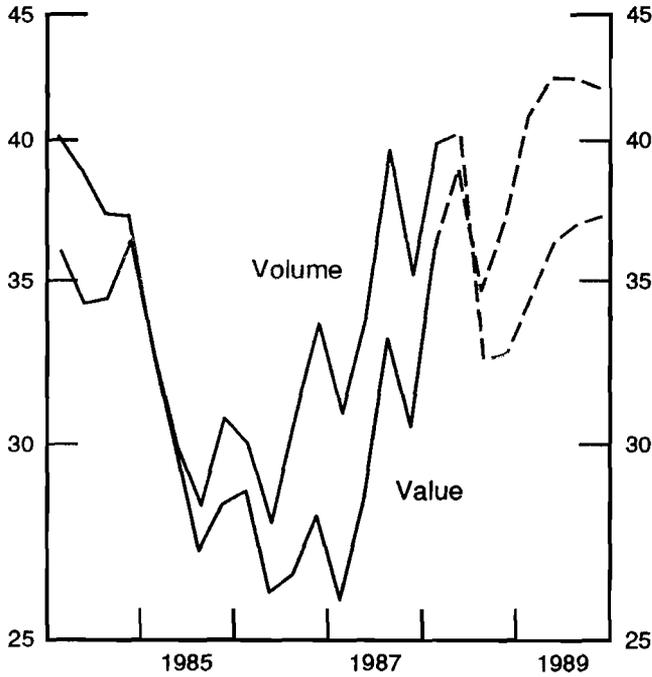
Ratio scale,  
billions of dollars



**AGRICULTURAL EXPORTS**

Ratio scale,  
billions of 1982 dollars

Ratio scale,  
billions of dollars

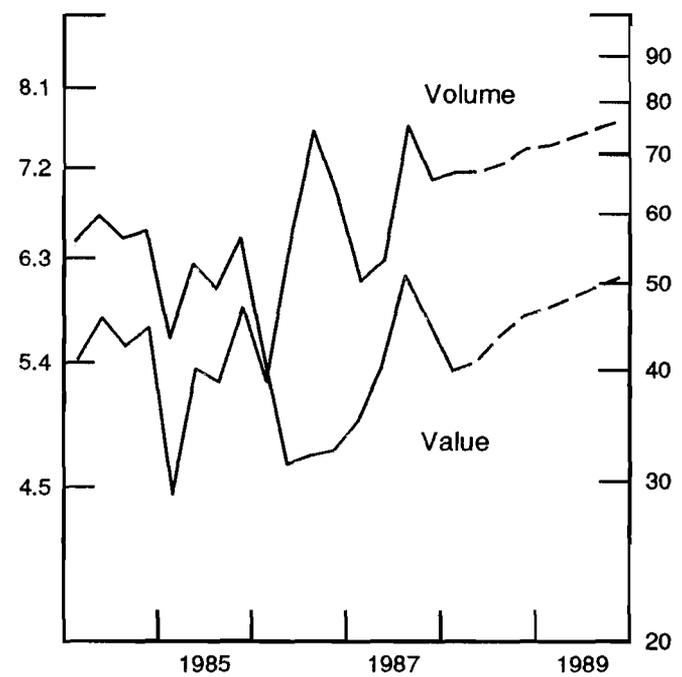


\* Excluding gold.

**OIL IMPORTS**

Ratio scale,  
MBD

Ratio scale,  
billions of dollars

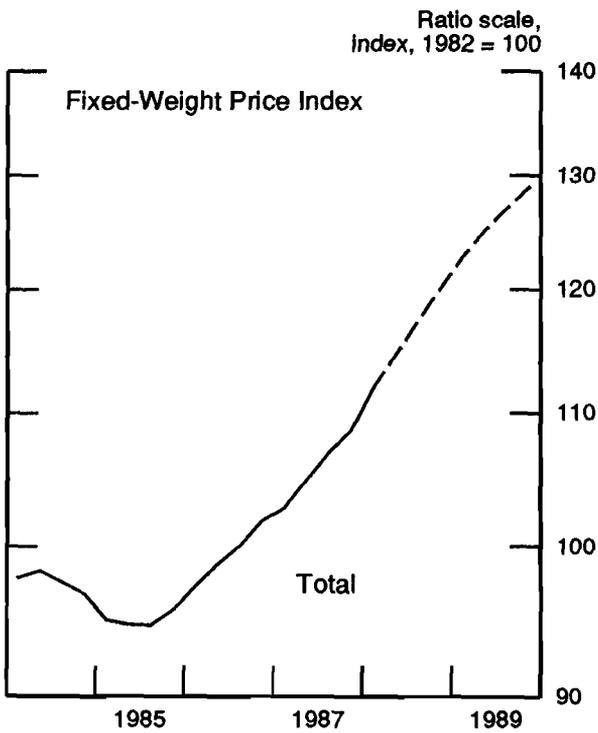


Prices of Non-oil Imports		
Percent change		
	<u>1987Q1</u> 1986Q1	<u>1988Q1</u> 1987Q1
1. Food	-1	6
2. Industrial Supplies	0	17
3. Business Machines	-4	-9
4. Other Capital Goods	13	8
5. Automotive	8	6
6. Consumer Goods	8	9
<b>7. Total Non-oil</b>	<b>6</b>	<b>9</b>

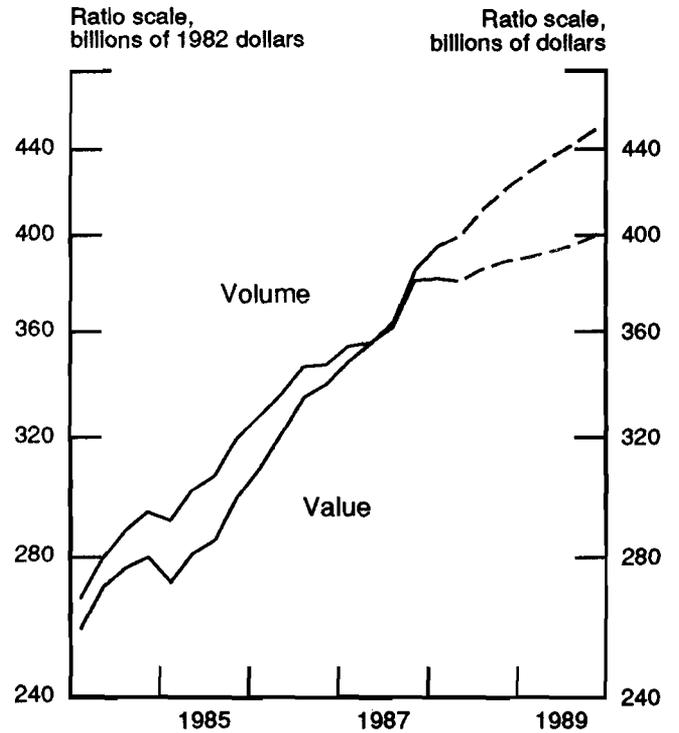
NIPA fixed-weight indexes

Volumes of Non-oil Imports*		
Percent change		
	<u>1987Q1</u> 1986Q1	<u>1988Q1</u> 1987Q1
1. Food	0	2
2. Industrial Supplies	5	1
3. Business Machines	31	47
4. Other Capital Goods	1	16
5. Automotive	7	-1
6. Consumer Goods	-3	1
<b>7. Total Non-oil</b>	<b>8</b>	<b>7</b>

PRICE OF NON-OIL IMPORTS



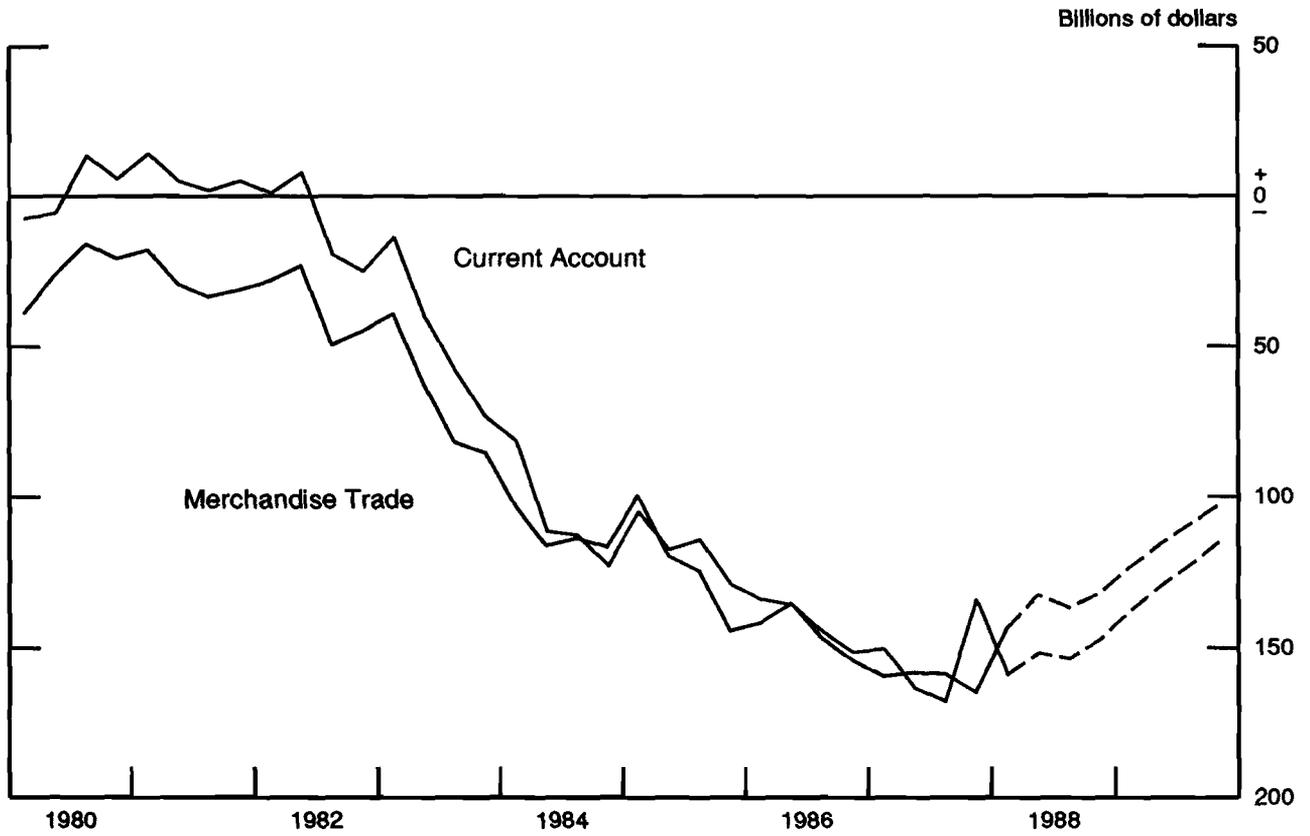
NON-OIL IMPORTS\*



\* Excluding gold.

Chart 13

### EXTERNAL BALANCES



### U.S. INTERNATIONAL INVESTMENT POSITION

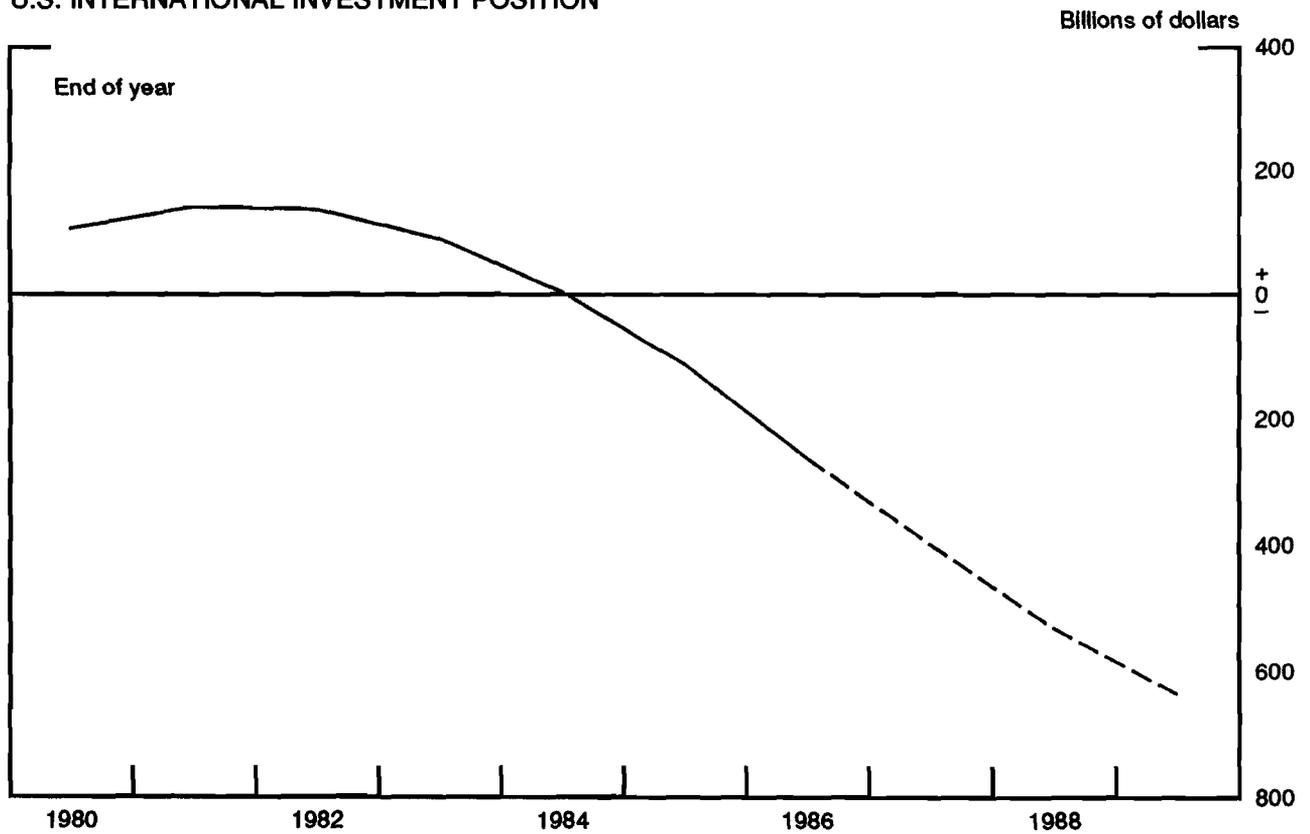
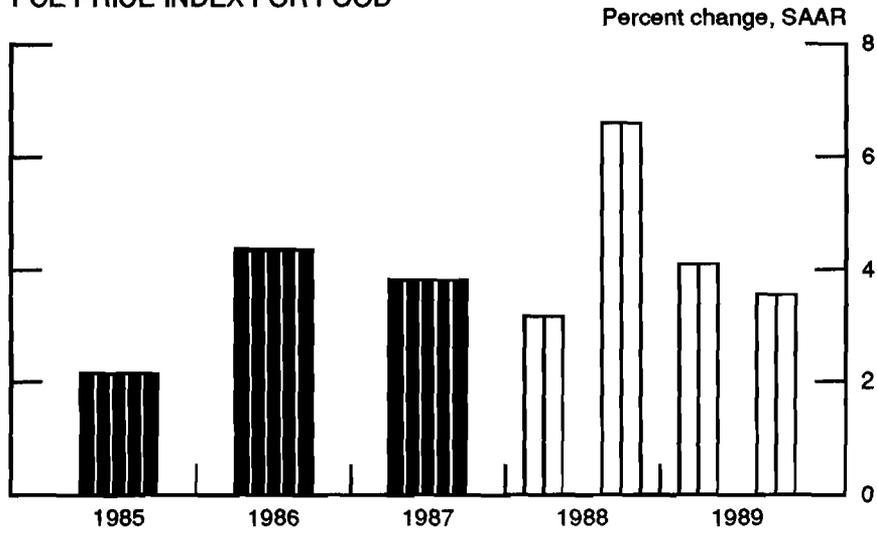
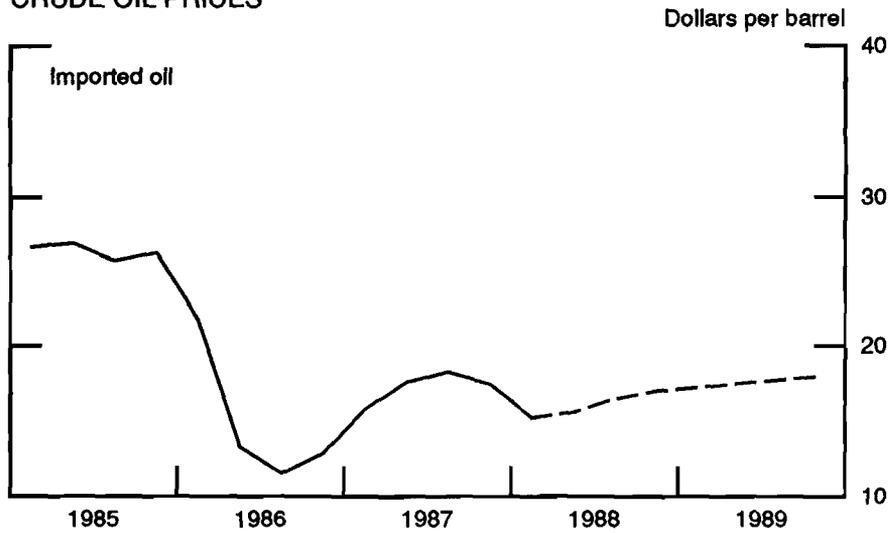


Chart 14

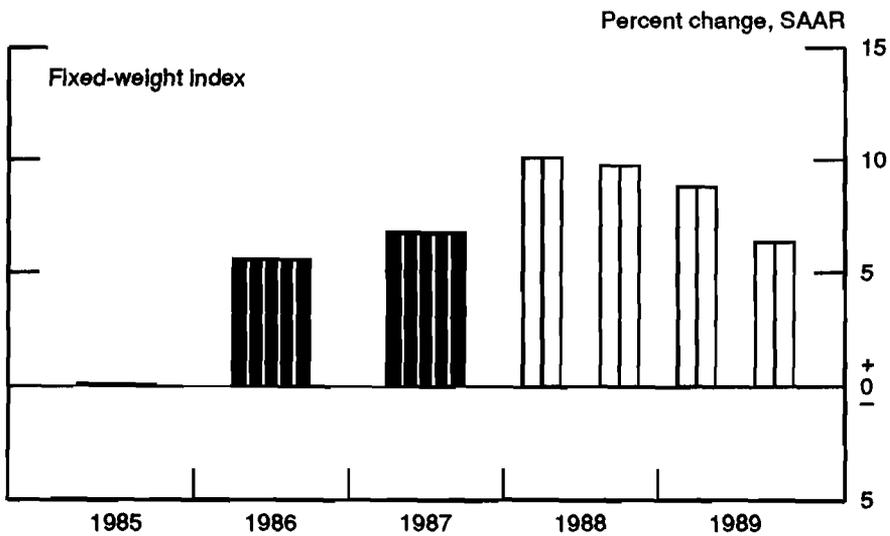
PCE PRICE INDEX FOR FOOD



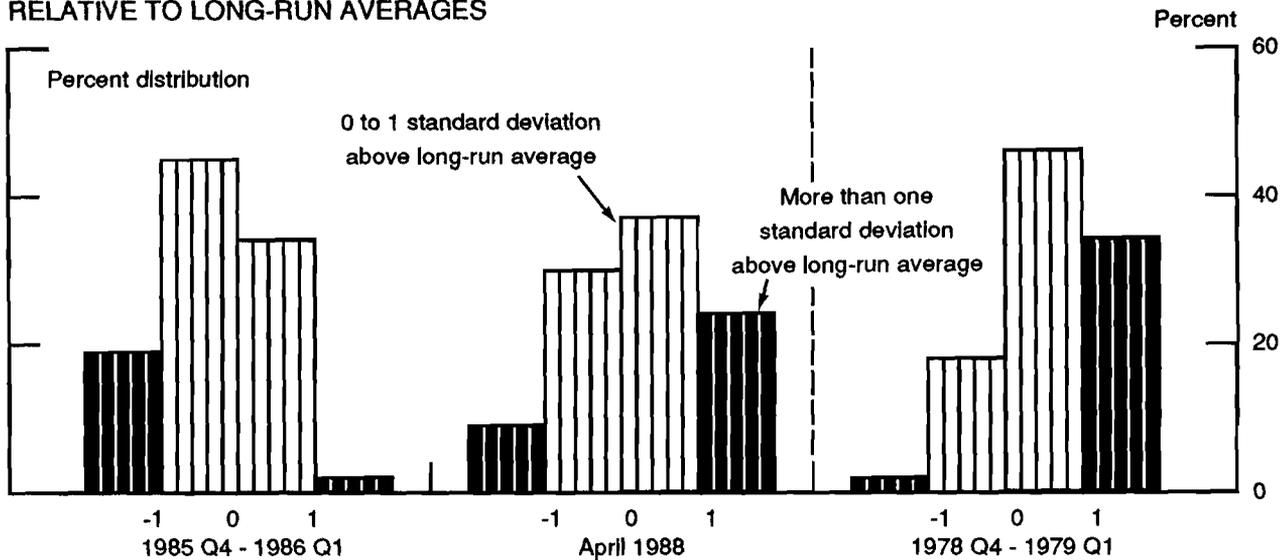
CRUDE OIL PRICES



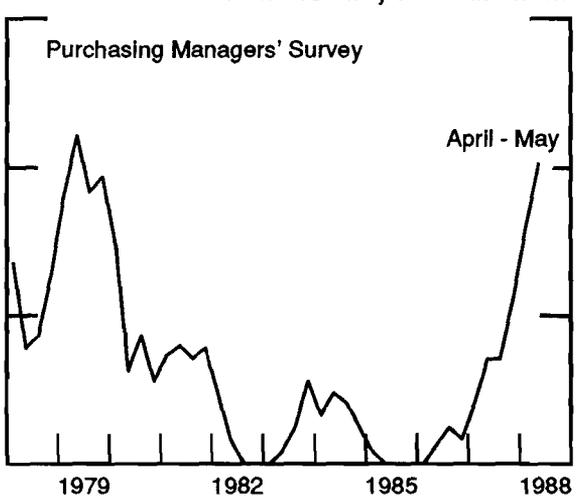
PRICE OF NONOIL IMPORTS EXCLUDING BUSINESS MACHINES



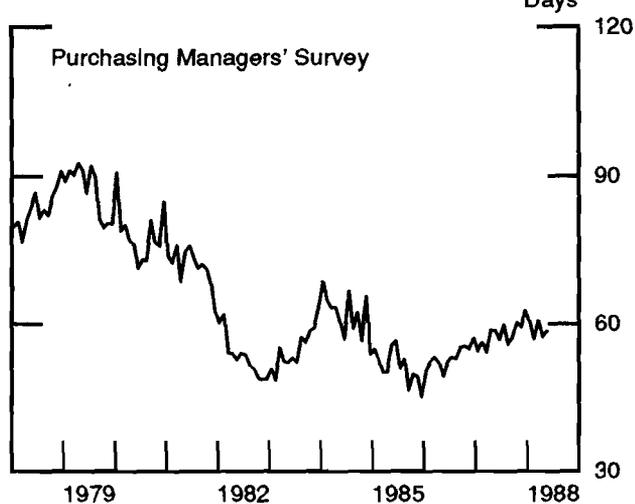
UTILIZATION RATES IN NONENERGY MATERIALS INDUSTRIES  
RELATIVE TO LONG-RUN AVERAGES



INDUSTRIAL MATERIALS IN SHORT SUPPLY  
Percent of 21 major Industrial items



ORDER LEAD TIMES FOR  
PRODUCTION MATERIALS



CAPACITY UTILIZATION RATE -- ADVANCED PROCESSING INDUSTRIES

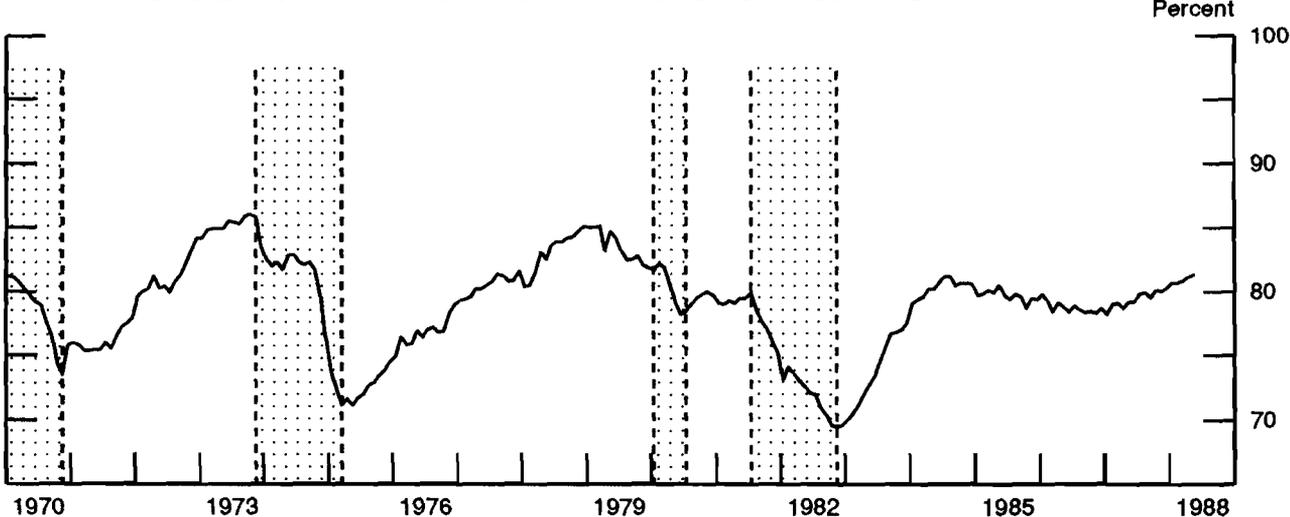
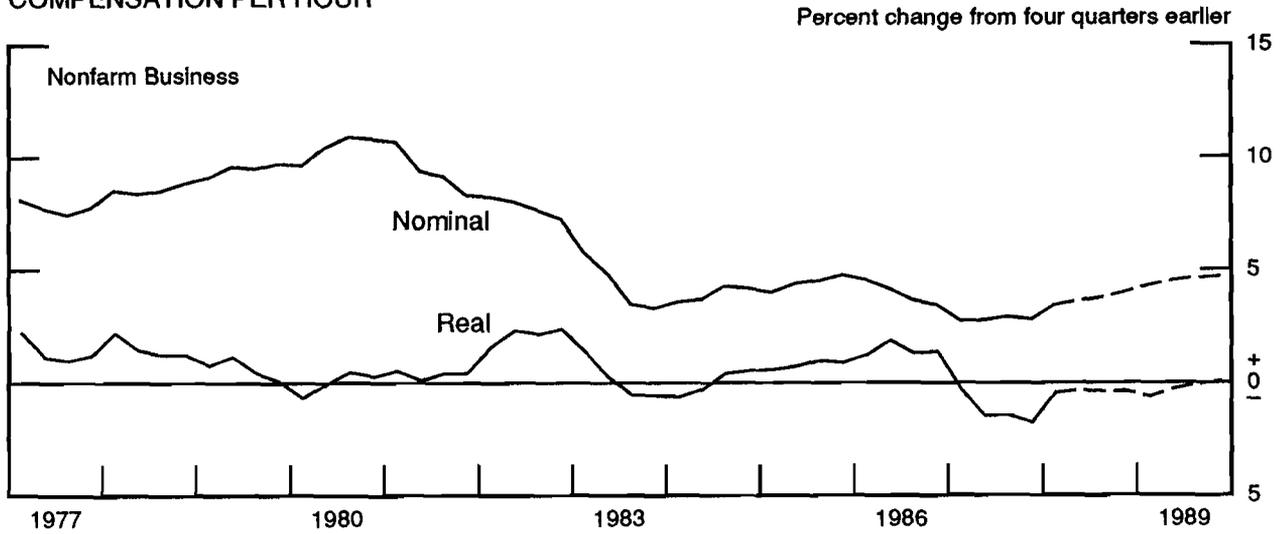
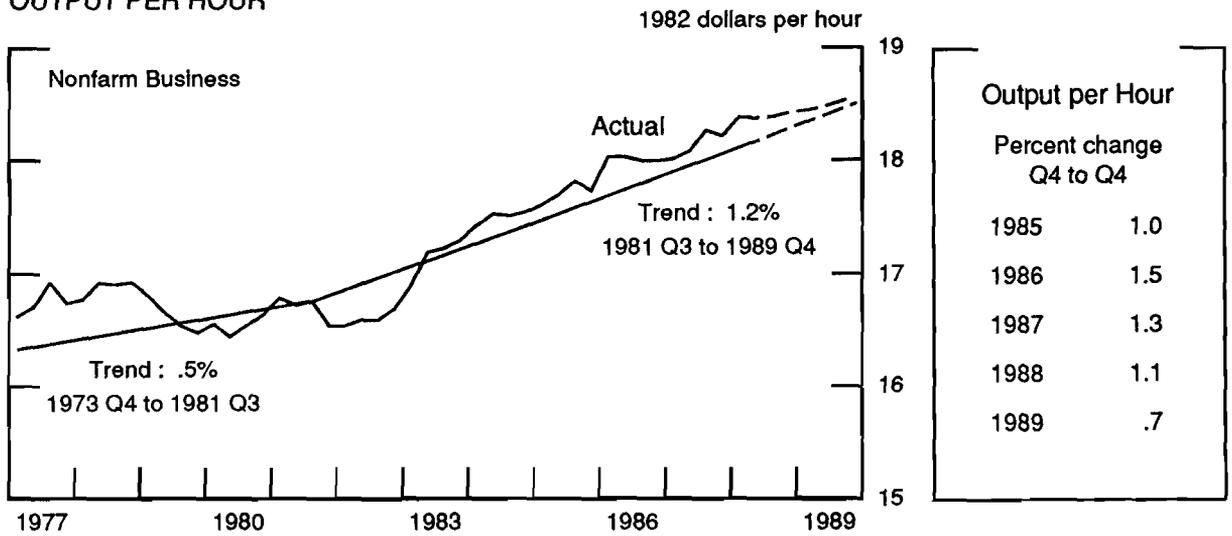


Chart 16

COMPENSATION PER HOUR



OUTPUT PER HOUR



LABOR COSTS AND PRICES

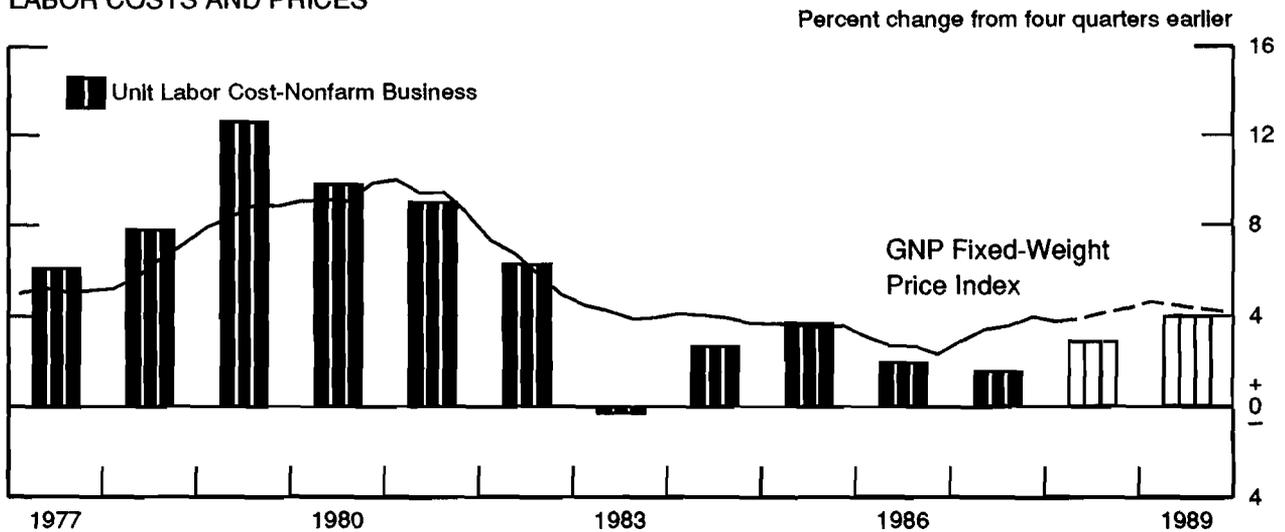


Chart 17

## ALTERNATIVE PROJECTIONS

		1988	1989	1990
Real GNP	<i>Baseline</i>	2.9	2.1	2.2
Percent change, Q4 to Q4	<i>Stable Rates</i>	3.0	3.0	3.6
GNP Prices	<i>Baseline</i>	4.3	4.2	3.8
Percent change, Q4 to Q4	<i>Stable Rates</i>	4.3	4.3	4.4
Unemployment	<i>Baseline</i>	5.7	5.9	6.0
Percent, Q4	<i>Stable Rates</i>	5.7	5.5	5.1

## FORECAST SUMMARY

	FOMC			Administration	Staff
	Range	Central Tendency			
Percent change, Q4 to Q4					
Nominal GNP					
1988	4 to 7	6 to 6 <sup>1</sup> / <sub>2</sub>		6.6	6.7
1989	4 to 7 <sup>1</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>4</sub> to 6 <sup>1</sup> / <sub>2</sub>		7.1	6.0
Real GNP					
1988	1 to 3 <sup>1</sup> / <sub>2</sub>	2 <sup>3</sup> / <sub>4</sub> to 3		3.0	2.9
1989	1 to 3	2 to 2 <sup>1</sup> / <sub>4</sub>		3.3	2.1
GNP Deflator					
1988	2 <sup>3</sup> / <sub>4</sub> to 4	3 to 3 <sup>1</sup> / <sub>2</sub>		3.5	3.7
1989	2 to 5	3 <sup>1</sup> / <sub>2</sub> to 4		3.7	3.8
Average level, Q4, percent					
Unemployment Rate					
1988	5 <sup>1</sup> / <sub>4</sub> to 6 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>2</sub>		5.5	5.7
1989	5 to 7	5 <sup>3</sup> / <sub>4</sub> to 6		5.3	5.9

June 29, 1988

**LONG-RUN RANGES**

Donald L. Kohn

At this time the FOMC is required both to reconsider its 1988 ranges for money and credit and to establish on a tentative basis ranges for 1989. I will be briefly reviewing the 1988 situation, before discussing some of the issues the Committee may want to consider in assessing the 1989 ranges.

With respect to 1988, M2 and M3 are now in the upper halves of their target ranges, though well below the upper ends of those ranges. The strength in M2 relative to income--reflected in the 3/4 percent estimated rate of decline in its velocity in the first half of the year--is partly attributable to the drop in interest rates from October through February, and also perhaps to some special factors boosting M2 demand. In any event, the rise in rates over recent months seems already to be damping the quantity of M2 demanded and would be expected to lead to slower M2 growth in the second half of the year than in the first, even if interest rates were to remain at current levels. This would leave M2 close to, though possibly a little above, the midpoint of its range. M3 growth is expected to remain well above the midpoint of its range, given the tendency for rising rates to encourage borrowers to favor the short-term and floating rate obligations issued and held by depository institutions, but it is not seen as threatening the upper end of its

range. Debt is running around the middle of its range and should remain in that general area.

Under these circumstances, the staff saw no need to propose alternatives in the bluebook to the existing 1988 ranges. Reducing them seemed inappropriate at a time when the money aggregates are running high in their ranges, and raising them, say for M3 to more symmetrically encompass the expected outcome, would seem to send the wrong message about the Committee's intentions for policy in 1988 and for money growth over time. Moreover, any tendency for money to accelerate to threaten the upper ends of the existing ranges might well signal unexpected strength in the economy that the Committee would want to react to rather than to accommodate.

Consideration might be given to narrowing the ranges. Being halfway through the year, it ought to be possible to give a more precise idea of where one wants to end up than is true in February. This should be especially true this year, given the unusual uncertainties in the outlook earlier in the year associated with the effects of the stock market crash. However, the Committee has never before chosen to take advantage of the information at midyear to narrow the ranges--though it never before had 4 point ranges. And, the most logical narrowing would seem to involve raising the lower ends, especially for M3, which wouldn't appear on the surface to be consistent with an anti-inflationary stance.

For 1989 the bluebook presented three alternative sets of ranges. Alternative I; which would retain the 1988 ranges, is more consistent with a view that the risks in the economy are not tilted toward greater infla-

tionary pressures and that the ranges should provide about as much scope for an easing of policy, should that prove needed to support growth, as for a tightening. A more even distribution of risks than in the staff forecast might be seen, for example, if strength in the dollar were to retard improvement in the trade balance, or if fiscal policy turned out tighter than expected. This alternative might also be interpreted as allowing for more rapid expansion of nominal income than the other alternatives, on the thought that the structure of labor markets would permit the accommodation of one-time increases in some prices--for example, for imports--without entrenching them in wages and in a more general inflation process.

Alternative II would reduce all the ranges by 1/2 of a percentage point, suggesting a concern about restraining income growth to a degree and moving toward money growth ranges over time that are more consistent with price stability. However, although the staff is forecasting about 4 percent growth in M2 in 1989 for the income and interest rates in the Greenbook, some model results, plus the possibility of surprises in money demand, suggest that the 3-1/2 percent lower end of alternative II for M2 might be uncomfortably constraining, if the Committee wishes to damp inflation over 1989 and underlying demands on the economy turn out to be as strong as in the staff forecast. At least, given the interest responsiveness of M2, alternative II allows essentially no room for greater restraint than assumed by the staff. The likelihood of a shortfall for M3 or debt would be much smaller, given their lower interest sensitivities

and expectations that they would be near the middle of the alternative II ranges under the staff forecast.

Alternative III would allow a little more room for policy restraint or for a sharper than expected rise in M2 velocity. The full one percentage point reduction in the M2 range has a recent precedent in the one point reduction in the midpoints of ranges between 1987 and 1988. Also, the higher range for M3 than for M2 is consistent with the long-run relationship of their velocities; reflecting this relationship, in the past, ranges for M3 have on occasion been above those for M2. The 7 percent upper end of the M2 ranges under this alternative is low compared with M2 growth rates over the 1970s and most of the 1980s. For the most part, however, those growth rates were registered when nominal income and prices were increasing fairly rapidly, or when the economy was in recession and interest rates were falling. Alternative III definitely is geared toward a situation in which the risks are seen more on the side of strength in the economy and inflation, given high levels of resource utilization, than of weakness, and in that context, one in which the Committee is committed to resisting tendencies for income growth to run much above 6 percent.

As Mike has noted, however, even the staff forecast implies only meager progress toward price stability in 1989 and 1990. The table distributed to the Committee marked "alternative long-run monetary policy strategies" repeats the baseline forecast and gives another set of policy assumptions designed to reduce inflation in 1990 by an additional 3/4 of a percentage point. As with the constant interest rate scenario discussed

in the chart show, the results are based on the underlying assessment of the economy in staff judgmental forecast, using various econometric models to gauge how key variables would have to differ from their values in that forecast to achieve the desired end. They should be considered less an exact road map than a general indication of the sorts of policies that might be involved and the responses of the economy.

One aspect of this alternative that stands out is the amount of additional monetary tightening needed over the near term to get inflation down to 3 percent in 1990. In this scenario, the 3-month Treasury bill rate rises nearly 2 percentage points over the next two quarters and a bit further in 1989, while M2 growth is reduced to 4 percent over the second half of the year and only 1-1/2 percent in 1989. Largely as a consequence of policy restraint, the dollar would fall less rapidly, especially over the near term.

This severity results in part from the fairly long lags in the models between policy impulses and their effects on prices, as Mike has already discussed, which dictate a sharp tightening in the latter part of 1988 to damp inflation significantly in 1990. In addition, the desired slowing of inflation rates must occur in the face of continuing upward movement in the prices of imports, though at a slower pace, necessitating more substantial moderation in other prices. The models make no allowance in wage and price setting behavior for any enhanced credibility of the Federal Reserve's pursuit of its objective for price level stability. In fact, the evidence of such an effect, even after late 1979, is mixed at best, but a policy tightening of the magnitude envisioned at the current

rate of inflation certainly would get the attention of the relevant parties and might speed the adjustment process. Moreover, this alternative leaves the economy at the end of 1990 in a position that would seem to suggest considerable weakness in activity and increase in unemployment in 1991, though also substantial further gains against inflation. Clearly, in the context of the models' structures, if the Committee were to accept a more gradual downward course for inflation, something between the baseline and the alternative might be appropriate, with a smaller increase in unemployment that developed more slowly.

Such "fine-tuning" of policy paths is probably pushing the exercise beyond its inherent limitations. The point remains, however, that if the staff's assessment of the underlying strength of demand in the U.S. economy and the pressures on exchange rates is about on track, a decision to seek a greater slowing of inflation than in the base line forecast probably calls for even lower ranges for money growth in 1989, especially M2, than in the alternatives in the bluebook--for example a 2 to 6 percent M2 range. This alternative might even be considered more consistent with the baseline forecast, since it is symmetrical around the 4 percent M2 growth expected in that forecast. Such a range, however, would involve a full 2 percentage point decrease from 1988 ranges. And given the central tendency of FOMC members forecasts that imply nominal GNP growth of around 6 percent, it would be tantamount to announcing an FOMC expectation of rising interest rates to obtain the needed velocity increase.

An additional problem with moving promptly to very low money growth ranges, and a more general complexity of formulating a long-run strategy for money growth in a world with appreciable interest sensitivity of money demand, is illustrated by the projected path of M2 under both the base line and the lower inflation strategies. In both cases, money growth strengthens in 1990 relative to 1989 even though nominal income growth is unchanged or slows. This is a function of the response of M2 to the decline in nominal interest rates resulting from lower inflation rates and a softer economy. At some point, as inflation comes down, nominal interest rates will have to decline and the Federal Reserve will need to allow money growth to accelerate to avoid high real rates and real output below its potential. This implies that a strategy of reducing money growth year after year will not necessarily be optimal. It also means that if the ranges were reduced to 2 to 6 percent, there is some chance that at some point the ranges may have to be raised temporarily or money growth in excess of the ranges tolerated for a time.

Alternative Long-run Monetary Policy Strategies  
 (Percent change, QIV to QIV, unless otherwise noted)

	<u>1988</u>	<u>1989</u>	<u>1990</u>
M2			
Base line	6.2	4.0	5.4
Lower inflation	5.6	1.4	2.5
Treasury bill rate (percent, fourth quarter)			
Base line	7.1	7.8	7.4
Lower inflation	8.4	9.6	9.2
G-10 weighted dollar exchange rate			
Base Line	-4.5	-7.5	-7.5
Lower inflation	-.6	-5.6	-6.7
GNP fixed-weight deflator			
Base line	4.3	4.2	3.8
Lower inflation	4.3	4.0	3.1
Real GNP			
Base line	2.9	2.1	2.2
Lower inflation	2.7	.7	.4
Unemployment rate (percent, fourth quarter)			
Base line	5.7	5.9	6.0
Lower inflation	5.7	6.5	7.3

June 30, 1988

**Short-run Policy Alternatives**  
Donald L. Kohn

Monetary policy decisions are being made today in a somewhat different environment of asset price movements than we have been used to over most of the past year or so. Of course, for most of that period a weak dollar and rising bond yields had reinforced the analysis that policy had to tighten to head off accelerating inflation. The question is whether the recent improvements in bonds and the dollar suggest that interest rates have been raised enough or at least that the recent trajectory of firming should be moderated.

Both the causes and the implications of these recent developments are difficult to interpret. On balance, as both Peter and Sam indicated, it would seem that incoming information on both trade and the economy, along with the actions of the Federal Reserve, allayed some of the market's worst fears about accelerating inflation, a declining dollar, and the need ultimately for a very much sharper tightening of monetary policy. This change in attitude made long-term dollar securities much more attractive, in a situation in which many dealers and other professionals had thought that prices would continue to head down.

The very volatility and noise in these asset prices should strike a note of caution in any reaction to them. The rather large day-to-day price movements in the bond market suggest that current levels are not held with much conviction, and recent movements could easily be

reversed. In some sense, such a reversal is embedded in the staff forecast, though I should hasten to add that that forecast is not so sensitive to relatively small rate movements that it is incompatible with the current configuration for a time. Even so, the underlying assessment of that forecast is that pressures on prices and the pace of the external adjustment process at some point will show through in substantial increases in short- and long-term interest rates and declines in the dollar.

Even if strength in the dollar and bonds persists, or at least is not reversed, the following points may be relevant to their interpretation for policy.

1. Despite the recent rally in the bond markets, at 8.90 percent the yield on 30 year Treasury bonds is quite high relative to the inflation of recent years, and certainly relative to the FOMC's goal of price stability. And this yield is 1/2 percentage point above earlier this year and 1-1/2 percentage points above its level at the beginning of 1987. Investors apparently are still of the view that on balance the risks are weighted toward additional price pressures.

2. The yield curve still slopes upward, albeit by considerably less than a few weeks ago. The differential between short- and long-term rates is not at a level that in the past has suggested an impending recession, or even necessarily a very soft economy, especially if one makes some allowance for the expected Treasury bond shortage. It seems likely that investors still anticipate that monetary policy will continue to firm, though by less than in the staff forecast.

3. Real short-term rates have risen along with the tightening in monetary policy, but their increase from earlier this year probably has been less than the increase in nominal rates, given some intensification of at least short-term inflation expectations seen in the various surveys. Moreover, these rates are probably not much higher than they were in the spring of 1987, which was compatible with growth in excess of potential for the last few quarters. The recent direction of real long-term rates is even more difficult to determine. If the extreme inflation fears have abated, so too probably has the mean of expected inflation over a long period. This suggests that at least a portion of the very recent declines in bond yields did not represent a drop in real rates. To the extent real rates did decrease, their impact on the economy would depend on whether that decrease was in response to a weakening demand picture, or to a shift in demand for bonds, perhaps from internationally diversified investors. The latter could represent a net stimulus to the economy.

4. The implications of the dollar's strength are especially hard to read. If the staff assessment is correct, this is only a temporary detour in the downward movement of the dollar. As such, if it persisted, it could slow adjustment and damp growth, as Ted pointed out yesterday, in a sense supplementing the tighter monetary policy of recent months and reducing, at least for a time, the degree of further policy restraint needed. If, however, the dollar remains firm because the trade balance continues to improve at a rapid pace, the implications would be somewhat different. The improvement in the trade balance still

will require restraint on domestic demand to free resources and forestall an intensification of price pressures. In this case, policy might have to be firmed substantially even in the face of some strength in the dollar.

5. With all the gyrations in these markets, money growth generally has come in about where the Committee expected. Growth in M2 is a touch stronger, especially in its M1 component. Data received in the last few days now suggest M2 growth in June of 6-1/2 percent, rather than the 6 percent in the bluebook, and M1 growth of 9-1/2 percent. We have interpreted the strength in demands for liquid components of M2 as a function of uncertainty about future interest rate movements, rather than a symptom of greater growth in transactions and income than expected. June M2 growth remains well below the rates of earlier this year, and we continue to expect a further slowing in the months ahead in lagged response to previous increases in interest rates and opportunity costs. The most recent data would not cause us to alter our assessment of the growth rates of M2 or M3 given the alternatives in the bluebook.

6. Finally, uncertainties about the impact of these developments might imply some caution in immediate policy moves, though not a change in course if the risks were still seen to lie on the side of some uptick in prices, given current levels of resource utilization. If exacerbating recent strength in the dollar were a particular concern, because of its potential effect on external adjustment, or because of a possible demonstration effect of U.S. actions on the general level of interest rates in industrialized countries, the foreign exchange markets

might be given more prominence in the directive and short-run policy implementation.