

**SHADOW OPEN MARKET  
COMMITTEE**

**Policy Statement and  
Position Papers**

**September 30 - October 1, 1990**

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## **SHADOW OPEN MARKET COMMITTEE**

The Shadow Open Market Committee met on Sunday, September 30, from 2:00 p.m. to 6:00 p.m. in Washington, D.C.

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## **SOMC POLICY STATEMENT SUMMARY**

Washington, October 1 — The Shadow Open Market Committee charged today that Congress and the Administration have failed to deal with the nation's basic fiscal problems. "No one can be heartened or encouraged by months of negotiations that concentrate on the least important aspects of fiscal policy, and after much labor, produce little substantive improvement."

The SOMC, a group of academic and business economists who regularly comment on public policy, cited three reasons for its concern: "*First*, there is inadequate reform of the budget process. *Second*, insufficient attention was given to the allocative effect of the budget — principally its effect on saving and investment. *Third*, there appear to be only marginal cuts in the growth of spending and substantial tax increases."

The SOMC added that "Congressional leaders and the Administration labored long and produced little. They should not now compound their failure by pushing for an expansive monetary policy. The appropriate policy for the Federal Reserve is to maintain money growth on a disinflationary path... Monetary policy is not a substitute for fiscal policy."

The SOMC, which meets in March and September, was founded in 1973 by Professor Allan H. Meltzer of Carnegie Mellon and the late Professor Karl Brunner of the University of Rochester.

The Committee called on the Federal Reserve to continue its battle against inflation. "In 1973-74 and in 1979-80, we urged the Federal Reserve to ignore the effects of a sharp run-up in energy costs on prices and output and to maintain the growth rate of money consistent with declining inflation. We repeat our earlier recommendation."

The SOMC added that "A shift to more restrictive monetary policy is not warranted... The likely effect would be a more severe recession and higher long-term inflation... Expansive policy to offset the oil shock is also unwarranted and undesirable... A more expansive monetary policy now would cause a return of persistent, higher inflation after the oil shock passes through the economy."

The Shadow Committee also renewed its criticism of U.S. government manipulation of the foreign exchange market. The Committee recommended that the Treasury Department's Exchange Stabilization Fund "should be abolished." The SOMC charged that the Federal Reserve's "warehousing" of the Treasury's holdings of foreign exchange amounted to "off-budget loans" which should be banned.

The SOMC noted that "The U.S. economy has stopped growing. Some sectors and regions were contracting before the Middle East crisis. Whether or not a "recession" is

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**declared to have begun is of little importance. Monetary policy has been a major factor bringing the economy to this point, but the risk of a decline in real activity has been heightened by recent increases in the price of oil."**

## SHADOW OPEN MARKET COMMITTEE

Policy Statement

October 1, 1990

The U.S. economy has stopped growing. Some sectors and regions were contracting before the Middle East crisis. Whether or not a "recession" is declared to have begun is of little importance. Monetary policy has been a major factor bringing the economy to this point, but the risk of a decline in real activity has been heightened by recent increases in the price of oil.

The two effects differ. Monetary actions work by changing demands for goods and services. Their first effect is on output. After a lag, restrictive policy lowers the rate of inflation. If the Federal Reserve maintains a disinflationary monetary policy, the public will gain from a permanent decline in the rate of inflation.

By contrast, the initial impact of the oil shock is on the supply of output. Costs of producing goods and services and transport costs go up as the oil price increase spreads through the economy. This leads to a temporary increase in the measured rate of inflation and a temporary reduction in real growth. Once these effects pass through the economy, inflation returns to the path consistent with the maintained growth of money and output.

### Monetary Policy

Under current circumstances, Federal Reserve officials have three options. *One*, they could interpret the 1990 oil shock as evidence of renewed inflation that must be offset by slower money growth. *Two*, they could listen to those who see an oil-induced decline in output and reduced growth of demand as a reason for increasing money growth to stimulate aggregate demand. Or, *three*, they could maintain money growth at a rate consistent with the long-term growth of output and declining inflation.

In 1973-74 and in 1979-80, we urged the Federal Reserve to ignore the effects of a sharp run-up in energy costs on prices and output and to maintain the growth rate of money consistent with declining inflation. We repeat our earlier recommendation.

A shift to more restrictive monetary policy is not warranted. The effect of energy prices on the price level is a one-time change that will pass through the economy. Federal Reserve action to prevent the price rise would reduce aggregate demand, deepen the recession, and increase the cost to the public. Later on, it would create demands for increased stimulus. The likely effect would be a more severe recession and higher long-term inflation.

Expansive policy to offset the oil shock is also unwarranted and undesirable. Faster money growth cannot offset the effect of higher oil prices on the supply of output. A more expansive monetary policy now would cause a return of persistent, higher inflation after the oil shock passes through the economy.

We urge the Federal Reserve to maintain the long-run policy that it has emphasized in the past three years. Money growth should be brought to a level consistent with sustained long-term growth of real output and stable prices. Currently, the Federal Reserve's announced target for growth of M2 has a mid-point of 5 percent for the four quarters ending fourth-quarter 1990 and  $4\frac{1}{2}$  percent for the four quarters of 1991. A 5 percent growth rate is consistent with the Federal Reserve's goal of reducing inflation. With the economy on the edge of recession, we urge that this target be maintained and achieved.

### **The Conduct of Monetary Policy**

During the 1960s and 1970s, the Federal Reserve held the Federal funds rate within a narrow band between meetings of the Federal Open Market Committee. This procedure led the Federal Reserve to produce the swings in money growth that were a principal cause of the alternating periods of inflation and recession during those decades. The Federal Reserve abandoned its "narrow band" target for the Federal funds rate in 1979. Since 1987, policymakers have returned to the narrow band.

This is a mistake, and it is likely to be a costly mistake. The unintended consequences will be a return of alternating periods of excessive and insufficient money growth that produced rising inflation and a stop-go economy in the 1960s and 1970s. While we have long urged the Federal Reserve officials to target the growth of the monetary base to avoid these swings, we recognize that they have rejected this advice. As an alternative, we urge that they restore the wider band to their Federal funds rate target and allow the funds rate to fluctuate freely within the wider band. The band should be chosen to achieve disinflation.

### **The Credit Crunch and Disintermediation**

In the 1960s and 1970s, swings in Federal Reserve policy often produced "credit crunches." These periods were characterized by high or rising demands to borrow and slow or negative growth of the monetary base (and other measures of the money supply). Interest rates rose rapidly and short-term rates surged above long-term rates. With Regulation Q interest rate ceilings in place, the public withdrew time deposits from banks

and purchased securities directly in the open market. Disintermediation further restricted banks' ability to lend.

During the recent clamor about the threat of a regulator-induced credit crunch, none of these characteristic signs of a "credit crunch" have been present. There is little evidence of disintermediation. Aggregate bank loans have grown slowly, but banks have substantially increased their purchases of securities.

Complaints about a credit crunch reflect the specific problems of certain regions and individual borrowers. These problems arise because lenders have reevaluated the risk in particular markets. This is especially true of real estate loans in the Northeast and the financing of leveraged buyouts. As a result, lenders require more equity investment as a precondition for loans. The terms and conditions of certain types of loans have tightened, and the supply of loans for these purposes has been reduced. But there has been no general "credit crunch." It would be a mistake for public policy to attempt to reverse or modify the judgment of lenders about the risk in specific markets.

While recently denying there is a credit crunch, Federal Reserve officials contributed to misunderstanding by claiming that the shrinking size of the savings and loan sector contributed to the slower growth of monetary aggregates in 1990. This claim is true for M3, which includes large denomination certificates of deposit at thrift institutions. By June 1990 these certificates had declined 25 percent from their peak in June 1989. We find no evidence of a substantial effect of this reduction on growth of narrower monetary aggregates such as M1 and M2.

### **Foreign Exchange Intervention**

As of June 1990, foreign currency holdings of the Federal Reserve and the Treasury amounted to \$47.3 billion, 50 percent above the June 1989 level. The cumulated amount of foreign exchange held is more than five times the level maintained in the early 1980s. Since 1987 the Federal Reserve has sterilized increased holdings of foreign currencies by sales of government securities.

The very large holdings of foreign exchange impose a risk for U.S. taxpayers without any benefit. Further, as we noted in March, purchases by the Treasury's Exchange Stabilization Fund (ESF) have been financed with funds supplied by Federal Reserve "warehousing" operations. Warehousing is an off-budget loan from the Federal Reserve to the Treasury.

On August 14, Chairman Gonzalez of the House Banking Committee held hearings on the amount of intervention and the method of financing ESF purchases. We urge that the hearings be followed by legislation to ban "warehousing" as a means of off-budget



financing, to restrict the amount of exchange market intervention, and to provide a firmer legal basis for any remaining foreign exchange operations. If authority for intervention is to be assigned, it should be given to a single agency, the Federal Reserve. The Exchange Stabilization Fund should be abolished.

### **The Budget and the Deficit**

Yesterday, President Bush announced a compromise agreement with Congressional leaders to reduce the 1991 fiscal year deficit by \$40 billion. The agreement is disappointing for three reasons: *First*, there is no meaningful reform of the budget process. *Second*, insufficient attention was given to the allocative effect of the budget — principally its effect on saving and investment. *Third*, there appear to be only marginal cuts in the growth of spending and substantial tax increases.

No one can be heartened or encouraged by months of negotiations that concentrate on the least important aspects of fiscal policy, and after much labor, produce little substantive improvement. The deficit as a percent of GNP will *rise* substantially to nearly 5 percent of GNP.

The budget agreement did little to improve fiscal discipline. Neither Congress nor the Administration faced up to the need to cut non-military consumption by reducing entitlements. In an economy near full employment, the growth of investment can increase only if the growth of consumption declines. The budget agreement includes measures designed to increase saving and encourage investment. However, we regard these measures as minimal. Much of the deficit reduction is achieved by raising taxes and reducing defense spending.

Concerns about the impact of the deficit reduction on a fragile economy are unwarranted. With the projected growth of the economy, the deficit will rise from the fiscal year 1990 level even if the spending for the bailout of thrift depositors is excluded. Further, the deficit, and the changes in the deficit, are misleading measures of fiscal thrust.

A large part of the deficit consists of interest payments, a growing portion of which are intragovernmental transfers. The government acts as a conduit for collecting and paying interest. The operation has no significance for aggregate economic activity and very little effect on income distribution. Excluding interest payments is, therefore, appropriate in determining the aggregate fiscal stance of the Federal government. When this is done, the deficit is a very small portion of GNP — even when the thrift-related expenditures are included.

Similarly, payments by the Resolution Trust Corporation are a pure transfer, with little economic or distributional effect. The real economic costs of the thrift industry failure occurred in the past when funds were misallocated and national resources squandered. The central fiscal issues are allocative — how spending and tax policies affect the use of resources. The budget process focuses on "the deficit" to the exclusion of all other issues. No rational policy will emerge as long as this remains true.

Congressional leaders and the Administration labored long and produced little. They should not now compound their failure by pushing for an expansive monetary policy. The appropriate policy for the Federal Reserve is to maintain money growth on a disinflationary path. Long-term interest rates should be allowed to fall if market participants choose to lower these rates. Short-term rates should continue to be set so as to maintain the Federal Reserve's announced targets for money growth consistent with declining inflation. Monetary policy is not a substitute for fiscal policy.



## **ECONOMIC OUTLOOK**

**Jerry L. JORDAN**  
**First Interstate Bancorp**

### **SUMMARY**

The course of the economy this year may have detoured slightly, but has not been derailed by the crisis in Middle Eastern deserts. The U.S. economy was already flirting with recession before Iraq invaded Kuwait. The short-run effects of the invasion create the worst of all worlds from the viewpoint of economic policymakers — higher rates of inflation and sluggish growth of output and employment.

While some analysts now forecast sustained "stagflation," volatility, and uncertainty, we do not believe that is the most likely outlook for 1991. Instead, the outlook for the period after the Middle East crisis is quite good. The slow economic growth from late 1989 through 1990 is helping to set the stage for further solid expansion with little inflation.

Whether or not a "recession" is ultimately declared to have occurred in 1990 is of little importance. Some sectors and regions of the economy have definitely contracted. Some will still contract in 1991. Others are still expanding. There is no risk of a "cumulative contraction." Even if the long expansion since November 1982 is declared to be over, the depth of the downturn will be shallow and the duration will be short.

**Pre-invasion Outlook** — Before the invasion of Kuwait by Iraq, most forecasters were revising down their projections of real economic growth for the second half of 1990. The sustained restrictive policies of the Federal Reserve were holding growth below potential, while inflationary pressures were still viewed as unacceptable. Before the "oil shock" of August 1990, inflation this year was generally expected to have been about the same as 1989's 4.6 percent — too high for the Fed. But, even that rate included the temporary effects of a run-up of oil prices early in the year.

**After the Crisis** — The prospects for 1991 will be much more to the policymakers' liking — lower rates of inflation accompanied by faster growth of output and employment. By the end of 1991, we expect output to be rising at a rate of 2.5 – 3.0 percent. At the same time, we expect consumer prices to rise by no more than 4 percent and interest rates to fall considerably from their oil-crisis highs.

We look for oil prices in 1991 to average in the range of \$19 to \$21. Inflation psychology will improve with lower oil prices, so nominal interest rates will tend down and restore investor confidence.

The housing and auto sectors can be expected to post modest gains from their 1990 cyclical lows. Non-residential construction is likely to remain weak in view of the continuing glut of office space, hotels, and shopping centers in numerous parts of the country.

The tradable-goods sectors of the economy performed well in 1990 and should remain strong in 1991. The spreading industrialization of Asian economies, the renewed vigor in some of the restructuring economies of Latin America, and the enormous demands for new physical plant and equipment in Eastern Europe and the Soviet Union suggest a long and healthy expansion for capital-goods and industrial products firms.

## **THE U.S. ECONOMY**

Iraq's invasion of Kuwait on August 2, 1990, has made interpretation of U.S. economic policy even more difficult. Suddenly, the leap in inflation concerns restricted the Federal Reserve's options, while estimates of the federal budget deficit were already escalating.

Federal Reserve policy has been generally restrictive since early 1987. Over the  $3\frac{1}{2}$  years ending in mid-1990, the money supply measured in terms of M2 (currency, checking and savings accounts, and certificates of deposit less than \$100,000) increased at an annual rate of only 4.7 percent. This contrasts with the rapid 8.7 percent average rate of increase during the prior three years.

The intent of U.S. monetary policy is to reduce inflation, with stable prices the ultimate goal. Zero inflation should not be dismissed as an impossible objective. The United States experienced inflation averaging only about 1 percent during the early 1960s. Japan and Germany achieved essentially stable prices as recently as 1987 and recorded inflation rates of only about 1 percent in 1988.

As the American economy began the second half of 1990, the impact of restrictive monetary policy was evident. Real GNP had expanded at less than a 2 percent annual rate for five consecutive quarters, with growth averaging barely over 1 percent during the latest three quarters. This impact was not surprising since changes in monetary policy typically first affect output before prices, in part because inflationary expectations can prove to be relatively "sticky."

The Middle East crisis prevented the Federal Reserve from lowering the Federal funds rate in August 1990 despite growing signs of a slowing economy. Soaring oil and gold prices, together with a falling dollar, revived inflation concerns. The Fed hopes to avoid the mistakes of the 1970s when it tried to offset the wealth effects of the oil price

shock through rapid money creation. The present Federal Reserve believes it is much easier to reverse a temporary slump in the economy than to quash an upsurge in inflation and inflation psychology.

If oil prices decline in 1991 as we assume, the Federal Reserve is likely to pursue a somewhat more expansive policy. We expect M2 growth to equal about 5.3 percent in 1991, compared with the 4.1 percent increase estimated for 1990.

The National Bureau of Economic Research will ultimately decide if the current downturn in economic activity is sufficiently deep, long, and widespread to be classified as a recession. Regardless of the outcome, it is clear that certain parts of the economy are depressed — autos, housing, and non-residential construction. Manufacturing jobs were reduced by a total of more than 450,000 between the peak of January 1989 and August 1990. At the same time, agriculture, export industries, and various services are holding their own, while the commercial aircraft industry continues to operate at capacity levels.

Our forecast is that the U.S. economic slump will be short and shallow. The economy is likely to show no growth on average in the last half of 1990, and real GNP may still be crawling at only about a 1 percent pace in the first quarter of 1991. Growth should pick up, however, to about a 3 percent rate by the end of next year.

Just as the slump in American economic activity will be comparatively mild, a recovery will be restrained. The debt loads of both consumers and industry will limit spending. The Federal Reserve will attempt to prevent the economy from growing faster than its potential, which Fed officials view to be about 2.5 percent per year. The overhang of unleased office and other non-residential property will restrict new activity in that sector.

On balance, we expect real GNP to rise 2.3 percent on a fourth-quarter-to-fourth-quarter basis in 1991. This growth rate would mark an improvement over the anemic 0.7 percent gain estimated for 1990. Fourth-quarter-to-fourth-quarter numbers, which give a better sense of the trend of growth during the year, will indicate a distinctly different picture than annual averages next year. Real GNP will be up an average of only 1.4 percent in 1991. Our estimates place 1990's average growth number at 1 percent.

Consumer confidence dropped sharply in August 1990 with concerns over a possible recession, inflation, and events in the Middle East. Retailers were forced into heavy discounting to generate volume increases of any size. We expect a moderate pickup in consumer spending in 1991 as the outlook for employment and income growth improves. Consumer spending will expand at a rate slightly less than the overall economy, with a fourth-quarter-to-fourth-quarter real gain of 2.2 percent in 1991. In contrast, consumer spending is anticipated to end 1990 with a gain significantly less than 1.0 percent.

We expect 1990 to mark a cyclical low for the auto industry before a modest pickup occurs in 1991. Combined sales of cars and light trucks are likely to total only 13.8 million units for all of 1990, the lowest level since 1983. Unit sales should improve to 14.1 million in 1991. Japanese auto makers will continue to shift production to the United States.

We also expect housing to begin to emerge from the doldrums of 1990. Housing starts are likely to total less than 1.25 million units for 1990, the lowest since 1982. Although 1991 will remain a relatively soft year, housing starts should move up to about 1.3 million units.

The easing of fixed-rate mortgages below 10 percent in 1991 should help the housing industry, although housing has become much less sensitive to swings in market interest rates since the deregulation of deposit rates in 1982. The availability of adjustable-rate mortgages has also cushioned the impact of interest rate changes. Next year's increase in housing construction will be concentrated in single-family homes, with builders and lenders limiting the size of development projects.

No improvement in the profitability of most non-residential segments is likely before 1992. The overbuilt condition of offices, shopping centers, and hotels will continue to depress the real value of non-residential building in 1991, following a large drop in 1990.

Business spending on capital equipment had been one of the strongest parts of the economy until declining profits and general economic uncertainty prompted many firms to defer various outlays. By the second half of 1991, however, we expect business investment in new equipment to again be growing faster than the overall economy.

Exports will continue to help support economic growth in the United States, although gains will be much more moderate than in recent years. American producers have a competitive advantage in various high-technology goods, a position which has been bolstered further by the dollar's decline on foreign-exchange markets. We expect the deficit in terms of net exports of goods and services to continue to shrink in real terms over the forecast period. As a result, American output will be rising slightly faster than our total consumption.

In contrast to faster growth from the private sector in 1991 relative to 1990, we anticipate a slower increase in spending from the public sector. Budget pressures will constrain outlays at the federal, state, and local levels. Events in the Middle East are likely to slow the rate of decline in military outlays, but they are not expected to reverse a downward trend. After briefly stabilizing in 1990, defense spending is likely to drop by 1 – 2 percent in real terms next year. This decline in military spending, coupled with slow

growth at other levels of government, will hold total public spending to a trend of less than 1 percent real growth during the next two years.

By the middle of 1990, the economic slowdown was affecting not only the job market in manufacturing and construction but also other areas ranging from retailing to business services. Labor force growth at less than 1 percent a year will restrain the rise in unemployment. Nevertheless, we expect the jobless rate to peak at about 6 percent in late 1990 or early 1991 before easing back to a level of 5.3 percent by the end of next year.

Profits appear to have borne the primary brunt of the economic slowdown until now. Economic, or "true" after-tax profits, measure depreciation on a replacement-cost basis and exclude inventory profits. This measure of profits will probably show a drop of 3 percent when 1990 is over, following last year's 12 percent slide. The profitability picture should begin to recover in 1991 with better profit margins and volumes. We look for a 5 percent gain in economic profits for next year as a whole.

Consumer prices are likely to end 1990 with a fourth-quarter-to-fourth-quarter increase of 6 percent, the largest rise since 1981. Although a discouraging setback, the outlook for 1991 is much brighter. Much of the acceleration in the 1990 price index can be attributed to the escalation of energy prices. An expected easing in energy prices in 1991 will partially offset increases in other areas and help dampen the overall rise in prices.

It is important to remember, moreover, that swings in the price of energy represent mainly a change in relative prices. Monetary policy remains the primary determinant of the general rate of inflation. As long as Federal Reserve policy remains relatively restrictive, higher energy prices will not feed through the entire wage and price structure. The tightness of monetary policy during the past three to four years strongly suggests that inflation will subside in 1991.

Consequently, we believe that consumer prices will rise by 3.9 percent between the fourth quarters of 1990 and 1991. Largely reflecting continued upward pressure on the cost of non-wage benefits, employee costs are likely to rise by 5 percent in 1991, slightly below the 5.1 percent advance estimated for 1990.

The pace of U.S. economic growth, inflation, and events in the Middle East will dictate the course of interest rates during the next few months. We expect these factors to produce lower levels of interest rates in 1991.

While temporarily inhibited by events in the Middle East, we expect the Federal Reserve to reduce its target for the federal funds rate from the 8 percent of September 1990 to as low as 7.25 percent by the spring of 1991. In response to other short-term rates, the bank prime rate is also likely to ease to 9.5 percent by the beginning of next year, with a 9



percent prime possible next spring. A pickup in economic growth would then push short-term interest rates slightly higher by the end of next year.

Although U.S. monetary authorities can "fine tune" the level of the federal funds rate and influence other short-term rates, the long-term bond market tends to be more sensitive to market forces. The market for 30-year Treasury bonds is a mirror of U.S. inflationary expectations. The yield on 30-year bonds had fallen to about 8.35 percent at the beginning of August 1990, but by the end of the month, inflation concerns stemming from the Middle East crisis had driven the yield up to 9 percent. Resolution of the Middle East crisis would allow the yield on 30-year government bonds to again move back towards 8 percent by early next year, its level at the end of 1989. Reflecting this forecast for long-term Treasury instruments, we expect 30-year fixed-mortgage rates to average 9.7 percent in 1991. This would be down from the 10.2 percent average estimated for 1990.

The yield curve was very flat at the end of 1989, with long-term interest rates close to the level of short-term rates. By August 1990, the yield curve had steepened markedly. Signs of a slowing economy and increased preference for liquidity had pushed short-term interest rates slightly lower, but the major steepening was caused by a jump in long-term rates because of inflation concerns. We expect the entire yield curve to shift downward by the middle of 1991 and to retain a more normal positive slope next year.

## **FINANCIAL STRUCTURE REFORMS**

**Jerry L. JORDAN**  
**First Interstate Bancorp**

By comparison with other developed countries, the U.S. financial system continues to be handicapped by fragmentation, overcapacity, excessive dependence on deposit insurance, and a cumbersome maze of regulation based on a 1930s vintage "permission and denial" system. The failures in the S&L industry and the weakness in the commercial banking industry are a result of the regulatory morass, rather than the product of inadequate regulation.

While some regulators have stated that they see their mandate as "insuring the safety and soundness of the U.S. financial system," we would argue that there is a more basic objective. The valid purpose of all economic policy, including regulation of financial institutions, is to enhance the stability of the U.S. economy and achieve the greatest degree of sustainable prosperity.

The efficiency and competitiveness of the financial system is crucial to economic stability and growth. Any regulation or supervisory practice that lowers our standard of living should be terminated. Any new proposal for regulation and supervision should meet the test of economic efficiency and fairness of competition. In this spirit, we believe that there are a number of reforms that should be implemented.

In framing financial reform legislation, Congress must reform the present deposit insurance system. While the original intent of deposit insurance was to strengthen the depository institutions, the effect has been to virtually destroy the S&L industry and greatly weaken commercial banks. In addition to reforming deposit insurance, Congress should:

- (a). *Broaden the powers* of banks to offer products not normally associated with the deposit-taking and credit-extension functions of commercial banks.
- (b). *Remove the geographical restrictions* on depository institutions. They have proved to be a serious limitation to market access, growth, and the ability to diversify risk.
- (c). *Ease the regulatory burden* on financial institutions. Competitiveness is reduced by the high cost of reserve requirements, deposit insurance, compliance requirements, and multiple regulatory oversight.
- (d). *Realign capital adequacy rules*. Market discipline on risk taking can be effective if equity and debt capital are adequate. However, capital standards cannot mitigate the "moral hazard" problems of government deposit insurance.

## A. Universal Banking

The ability of American banks to compete with foreign banks is impaired by the Glass-Steagall restrictions against engaging in the securities business (with a few exceptions). This is further compounded by the restriction against underwriting insurance, and again with a few exceptions, acting as an insurance broker.

The "universal" banking license of the European Community (EC), which will broaden the powers of banks in all member nations to include securities and insurance, will undoubtedly exacerbate the competitive disadvantage of U.S. banks.

- West Germany, France, the United Kingdom, Belgium, the Netherlands, and Luxembourg already allow the intermingling of these powers.
- Canada, Italy, and Switzerland allow their banks to engage in the securities business, but restrictions against offering insurance products remain.
- The United States and Japan currently have the most restrictive banking systems with respect to the ability to offer a wide array of financial services.
- Close cooperation among Japanese banks, securities firms, and insurance companies — through ownership of stock and overlapping boards of directors — has largely circumvented the restrictions. Although Article 65 of the Japanese constitution (similar to Glass-Steagall) is still intact, these "keiretsu" groups, with the tacit understanding of the Ministry of Finance, have evolved a *de facto* system less restrictive than would appear on paper.
- A few exceptions have been recently made in the United States. The Federal Reserve, empowered to regulate bank-holding companies, has granted permission to a few large banks to engage in securities underwriting — to a very limited extent. This token regulatory initiative hardly addresses the gravity of the issue.

## B. Geographical Restrictions

The limitations imposed on U.S. banks by the McFadden Act with respect to geographical expansion are perhaps the most archaic legacies of the 1920s and 1930s. Some progress has been made towards removal of boundary lines, but at a snail's pace through a patchwork of "regional compacts," permitting expansion through costly acquisition across state lines. This process is likely to continue and will help to ease restrictions somewhat, but this approach is not a good substitute for a uniform national law that would allow interstate *branching*.

- The inadequacy of the current rules can best be seen in the concentration of failed savings and loans associations and troubled banks, in the late 1980s, in Texas and other Southwest states, whose economies were plunged into "recession" by the sharp drop in oil prices.

Banks and thrifts in those regional economies could not diversify their risk by either gathering deposits or making loans outside of their narrow geographical markets. By contrast, in the Canadian environment where nationwide banking is the practice, widespread bank failures did not result from regional concentration of loan portfolios in the energy regions.

- Up to a few years ago, the economics profession was fairly convinced that economies of scale did not exist for banks larger than \$500 million in assets. More recently, there is a growing body of evidence that argues that technology and the erosion of monopolies allow larger banks to achieve economies of scale — thus benefiting from efficient use of capital and human resources to achieve lower unit cost.

- For all practical purposes, banks in EC countries, Japan, and Canada hold a substantial advantage over U.S. banks with their nationwide operations — making our structure not only inefficient but almost ludicrous. This element of our financial system — geographical boundaries — is broken and should be fixed without delay.

### **C. Reserve Requirements and Other Regulatory Burdens**

A recent study by the American Bankers Association indicates that U.S. banks have the heaviest overall regulatory burden of all G-10 countries. This is based on the costs of reserve requirements, deposit insurance, reporting requirements, and compliance regulations. This makes cost of capital higher in the U.S. than in other countries as well.

*Reserve Requirements.* With reserve requirements as high as 12 percent on transaction accounts, banks in the United States find themselves operating with relatively high "effective" cost of deposit funds — and these reserves held at the Federal Reserve district banks are idle, paying no interest to banks.

- Elsewhere in the world, reserve requirements are in the process of being reduced or eliminated entirely, and U.S. regulators need to reevaluate the role that this tax plays. The low (one-half of 1 percent) reserve requirement in the U.K. is putting pressure on other EC countries to lower their reserve requirements, especially as the unified "Single Market" becomes a reality in 1992. Canada is expected to eliminate its reserve requirements later this year. The Swiss central banks has on a *de facto* basis eliminated its reserve requirements.

*Deposit Guarantees.* In certain industrial countries, deposit guarantee systems are voluntary, not administered by government agencies, and are funded by periodic assessments. In six countries (Canada, Italy, Japan, the Netherlands, the United Kingdom, and the United States), national/federal government agencies administer the

depositor protection programs. Of these, regular annual premiums are assessed in Canada, Japan, and the United States.

- Unfavorably affecting the international competitiveness of American banks is the fact that annual premiums are highest in the U.S. — 0.12 percent of insured deposits in 1990 and scheduled by FIRREA to rise to 0.15 percent in 1991, and as high as 0.325 if a high failure rate requires that FDIC funds need to be supplemented. By contrast, the annual premium in Canada is fixed at 0.1 percent and only 0.012 percent in Japan.

- Clearly, the bitter lessons we have learned about the contribution of our "flat-premium and broad-coverage" deposit insurance system to the current crisis in the savings and loan industry argues convincingly for reform, including lessening the cost to financial institutions.

*Reporting Requirements.* Supervision of the safety and soundness of banks, through periodic on-site examinations, independent audits, and written or oral reports, is more burdensome and costly for American banks than for banks in other industrialized countries.

- This is because of multiple regulators — the Federal Reserve System, the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and 50 state banking departments. With the exception of Canada, U.S. banks must provide more frequent financial reports than banks in other countries and are subject to more frequent on-site examinations.

*Compliance Regulations.* The scope and detail of compliance regulations imposed on banks in the United States are unmatched in any of the other G-10 countries. The cost associated with consumer protection, equal opportunity, and community redevelopment considerations affecting mergers and acquisitions are considerable.

- While government agencies participate with banks in Belgium, France, and the Netherlands in the pricing of deposit and credit services, this does not constitute as onerous a burden on their banks as in the U.S.

- The U.K. has enacted a system of anti-fraud regulations in the area of consumer lending — but again, this compliance regulation is not as onerous as in the United States.

- In France and in Italy, where large banks are being privatized, compliance regulations are likely to be imposed.

#### **D. Capital Adequacy**

Until the risk-based capital requirements are fully implemented in 1991, of the 12 signatory nations to the Basel Accord, U.S. banks will continue to have higher capital requirements than their foreign counterparts. With U.S. regulators applying a "leverage

ratio test" (based on CAMEL ratings) in ruling on a bank's application to expand, U.S. banks are likely to have higher capital requirements than the Basel standard even after 1991.

- Federal Reserve Chairman Alan Greenspan, in major speeches earlier this year and in testimony before the House Committee on Banking, Housing, and Urban Affairs (July 12, 1990), strongly proposed capital standards even higher than the 4 percent equity-to-asset ratios stipulated in the Basel Accord (to some extent, that could raise the 8 percent total capital-to-asset ratio which the Accord also stipulates). The Chairman's contention is that the increasingly competitive environment requires high capital standards and that would strengthen incentives of shareholders to be more prudent and vigilant about the bank's management, risk strategies, and performance.

- The stated objective of mandating higher capital standards to protect the federally-furnished deposit insurance is not valid. The "safety net" is intended to protect the real economy from financial shocks. It would be a mistake to adopt regulatory or supervisory practices that are intended to "protect the safety net" at the cost of reduced efficiency and competitiveness of the financial system.

- U.S. regulators should take a balanced approach to setting capital requirements, so that our banks are not at a disadvantage relative to the higher-leveraged positions of foreign competitors. Chairman Greenspan's viewpoint should be evaluated in terms of whether enhanced market discipline would boost the price-earnings ratios of U.S. banks and in turn reduce their cost of capital.

- Whether or not capital standards are set for U.S. banks at levels higher than those set among the Basel Accord nations, capital requirements should be identical for all deposit-taking intermediaries.

*In Conclusion*, we need to move rapidly towards modernizing the U.S. financial system, in order to enhance the ability of our financial institutions to compete at home and abroad, on a fair and evenhanded basis, with foreign institutions. To do this, we need to reduce the burden of excessive regulations, eliminate government subsidies wherever possible, and encourage innovation and efficiency in the development and delivery of financial services.



# **SHADOW OPEN MARKET COMMITTEE**

**Jerry Jordan**

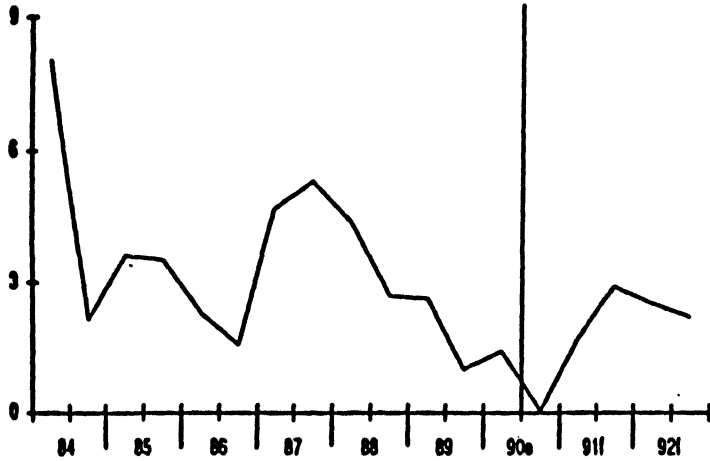
**Chief Economist & Senior Vice President**

**First Interstate Bancorp**

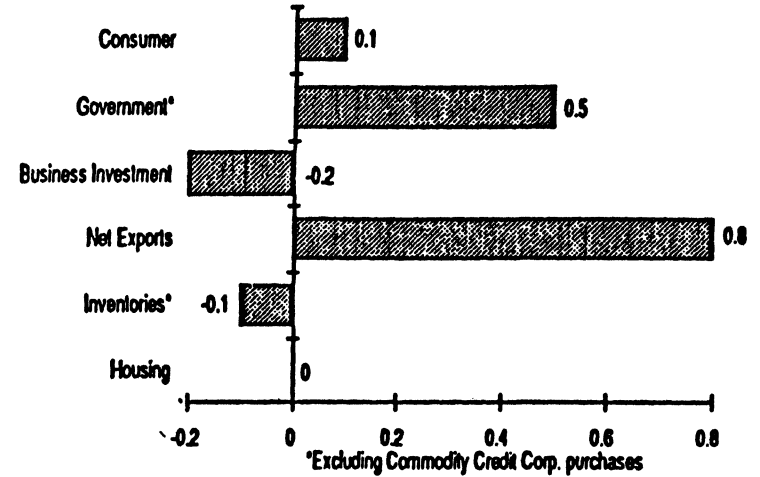
**September 30, 1990**



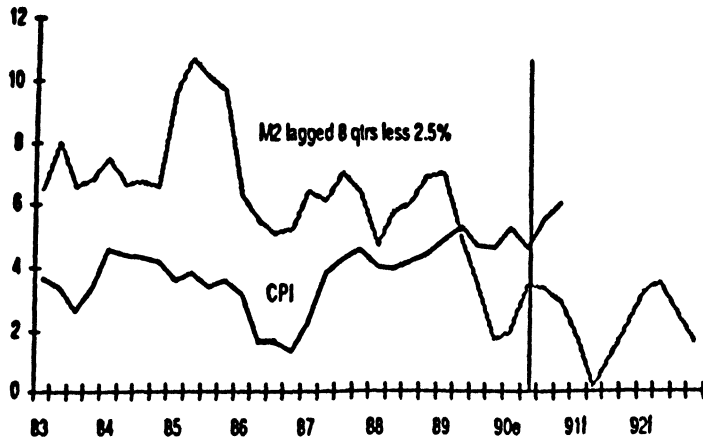
**REAL GNP GROWTH**  
(Percent change, annual rate, half-year average)



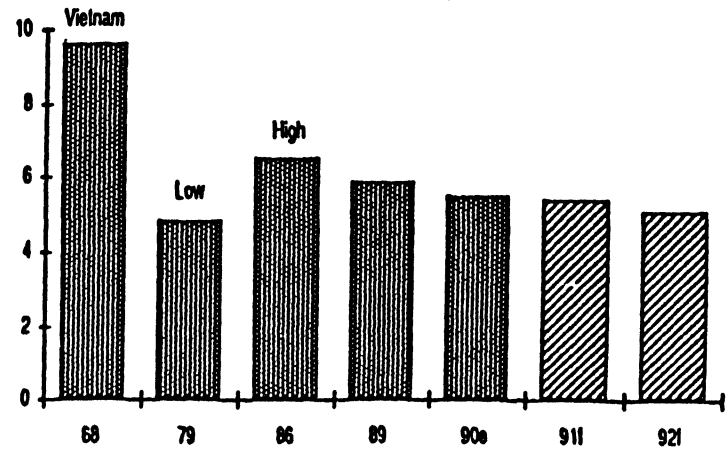
**SOURCES OF GNP GROWTH Q4/89 THROUGH Q2/90**  
(Distribution of 1.1% average real growth rate)



**MONEY AND PRICES**  
(Quarterly, percent change over year ago)



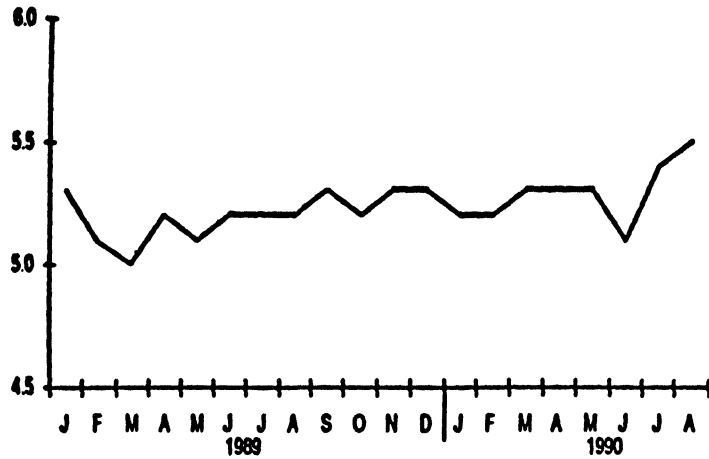
**DEFENSE SPENDING**  
(Percent of GNP, fiscal year)



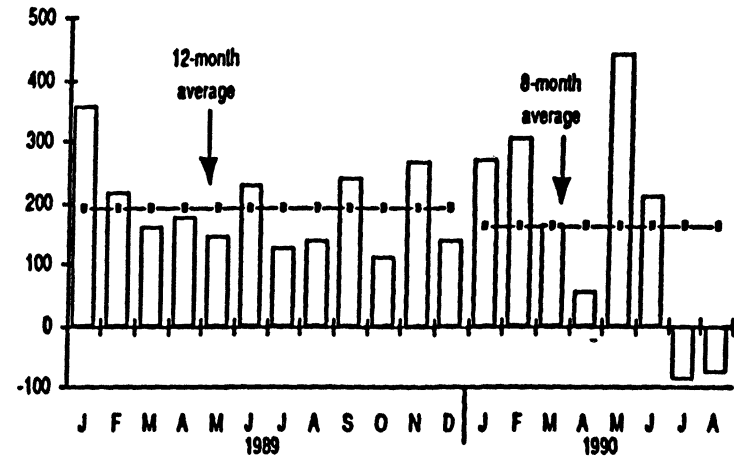
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September 30 - October 1, 1990

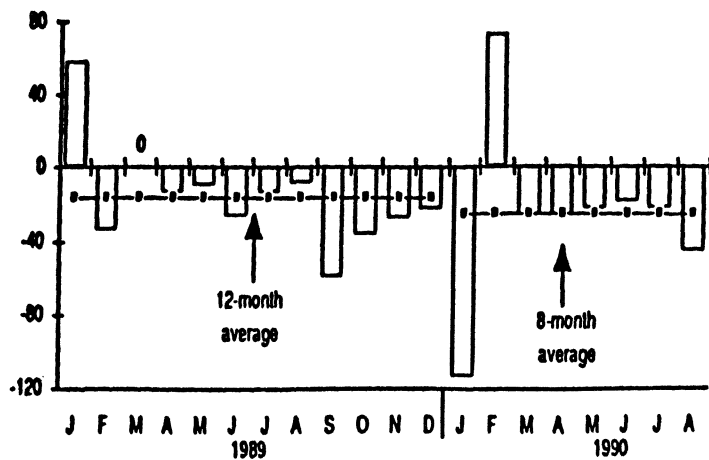
**UNEMPLOYMENT RATE**  
(All Workers, Percent)



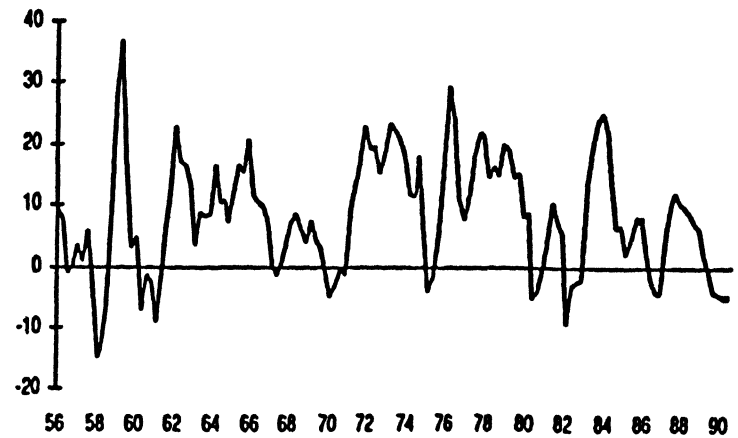
**NONFARM EMPLOYMENT GROWTH**  
(Change from prior month, in thousands)



**MANUFACTURING EMPLOYMENT**  
(Change from prior month, in thousands)



**CORPORATE CASH FLOW**  
(Quarterly, percent change over prior year)

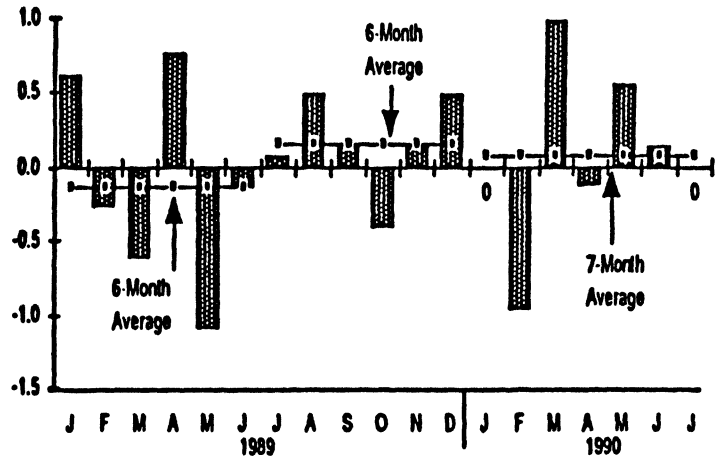


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Shadow Open Market Committee

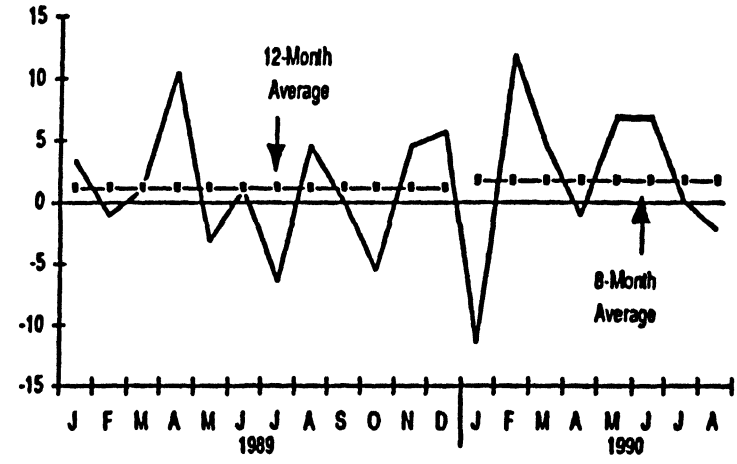
### INDEX OF LEADING ECONOMIC INDICATORS

(Percent change from prior month)



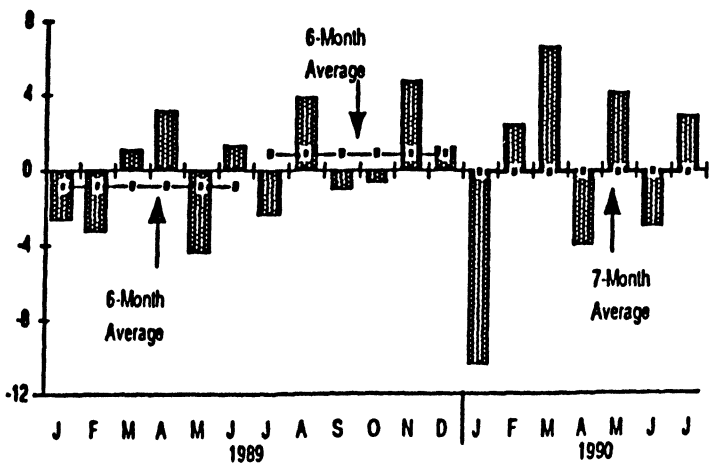
### INDUSTRIAL PRODUCTION

(Percent change from prior month, annual rate)



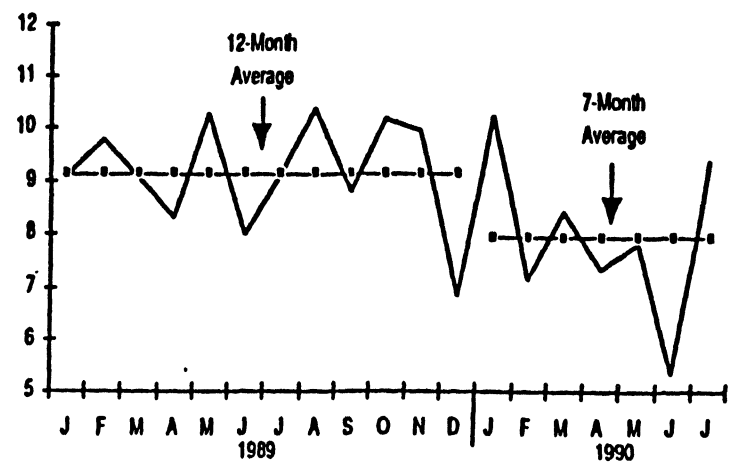
### DURABLE GOODS ORDERS

(Percent change from prior month)



### MERCHANDISE-TRADE DEFICIT

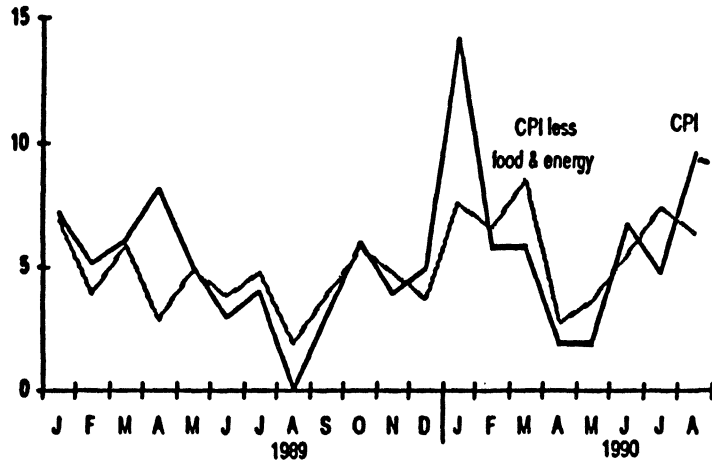
(Billions of dollars, seasonally adjusted)



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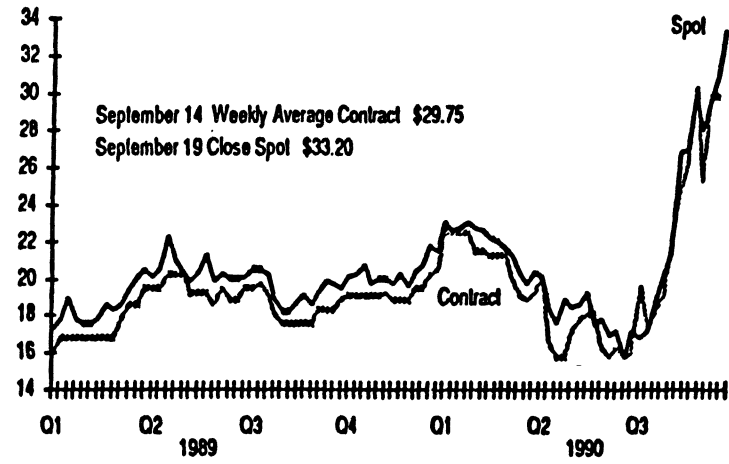
September 30 - October 1, 1990

**CONSUMER PRICE INDEX**  
(Monthly change, annual rate)

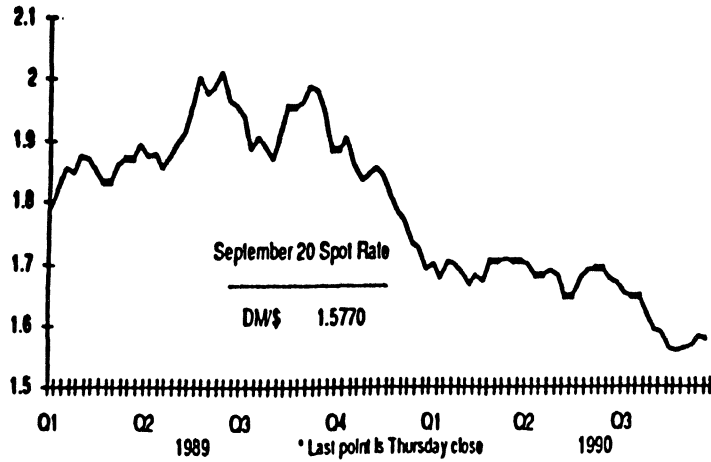


**CRUDE OIL PRICES**

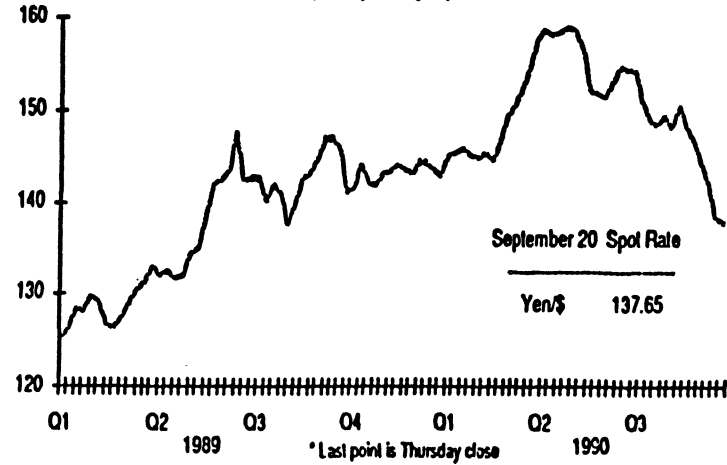
(West Texas Intermediate, dollars per barrel)



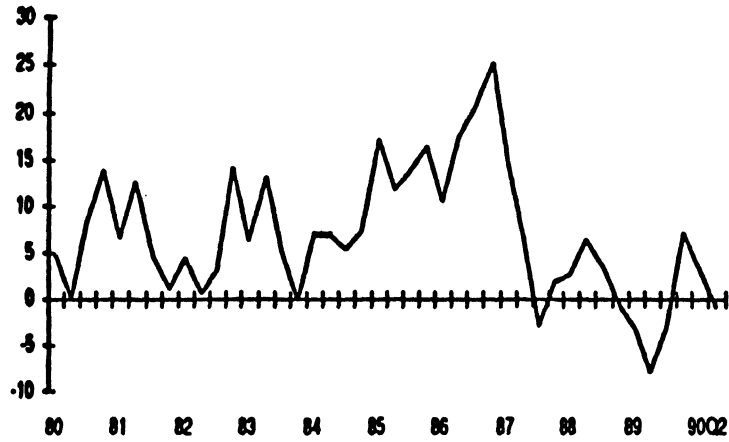
**EXCHANGE RATE - DM/\$**  
(Weekly averages\*)



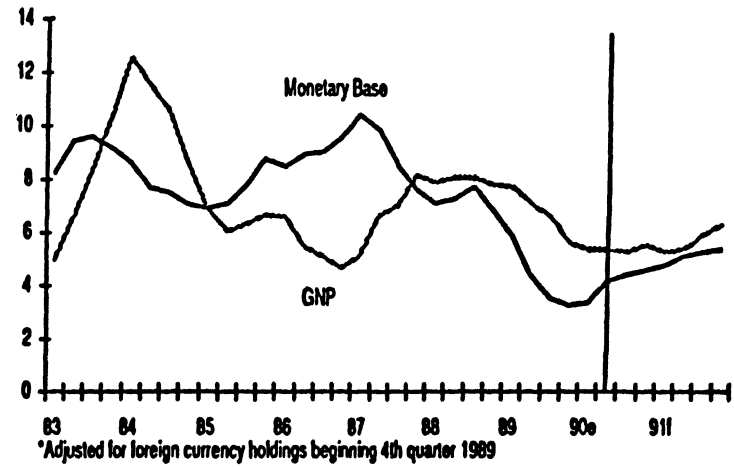
**EXCHANGE RATE - YEN/\$**  
(Weekly averages\*)



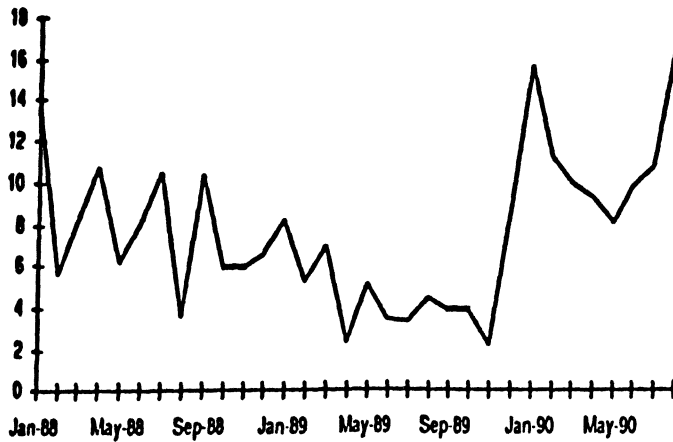
**TOTAL RESERVE GROWTH**  
(Percent change over prior quarter, annual rate)



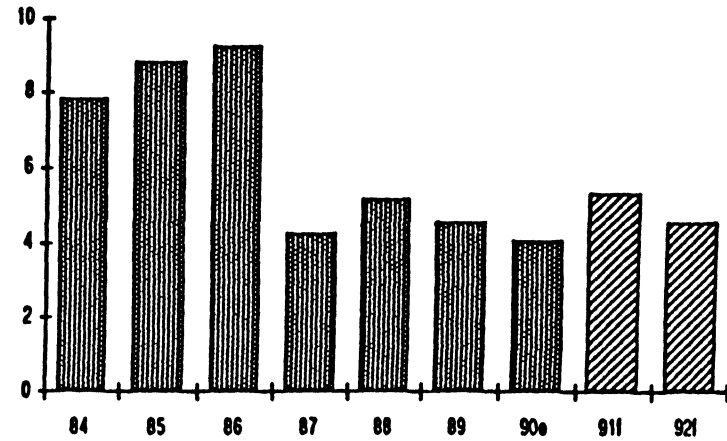
**MONETARY BASE\* AND GNP**  
(Quarterly, percent change over year ago)



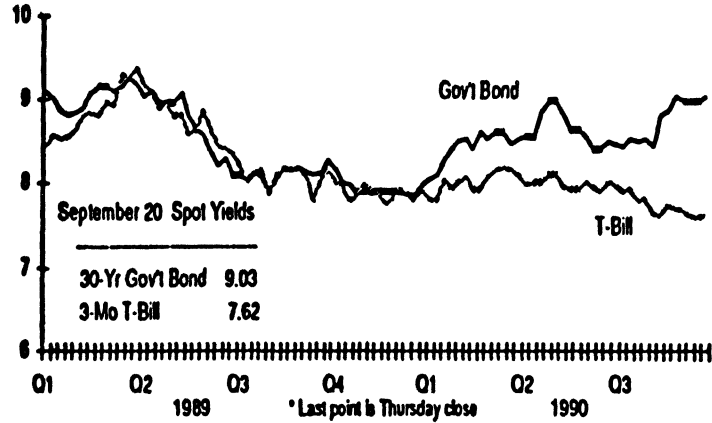
**CURRENCY GROWTH**  
(Percent change over prior month, annual rate)



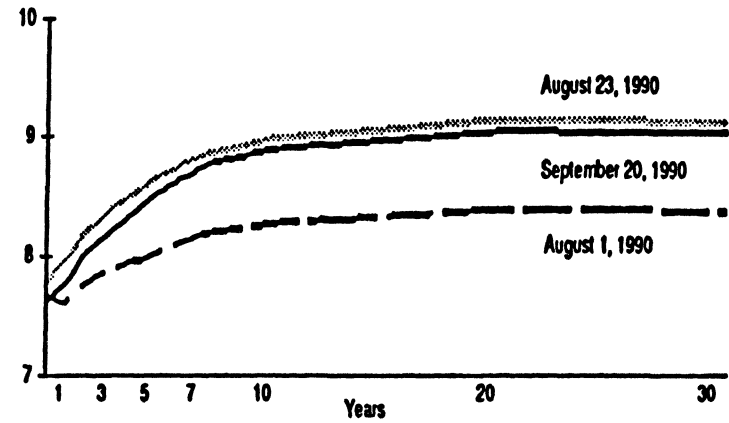
**M2 GROWTH**  
(Percent change, 4th quarter to 4th quarter)



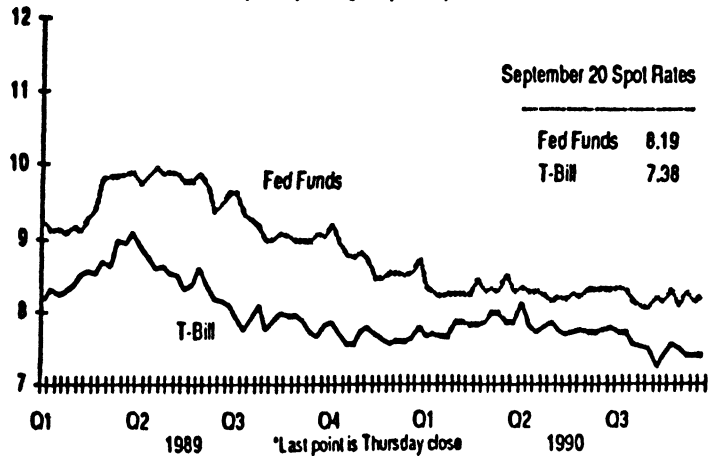
**3-MONTH T-BILL & 30-YEAR GOVERNMENT BOND-EQUIVALENT YIELDS**  
(Weekly averages\*, percent)



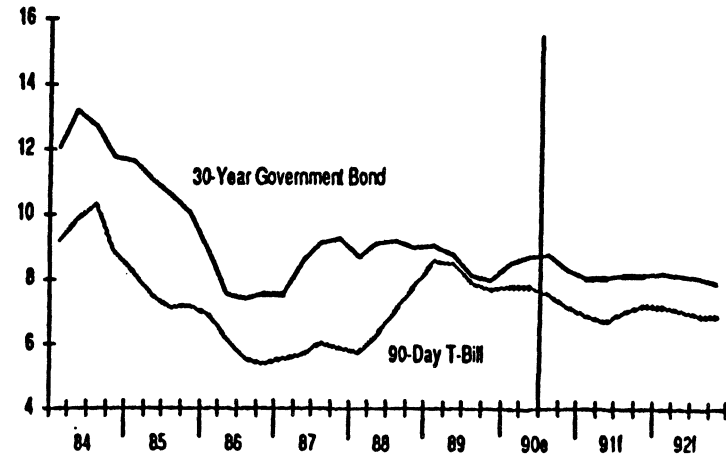
**YIELD CURVE, 3 MONTHS TO 30 YEARS**  
(Percent)



**FED FUNDS & 3-MONTH T-BILL QUOTED RATES**  
(Weekly averages\*, percent)



**INTEREST RATE FORECASTS**  
(Percent, quarterly averages, bond equivalent yields)



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Shadow Open Market Committee



## **FISCAL BACKPEDDLING**

**Mickey D. LEVY**  
**CRT Government Securities, Ltd.**

The deterioration in the budget outlook has been startling, and the response of policymakers has been equally disappointing. The deficit has zoomed; it will exceed \$200 billion in Fiscal Year 1990 and is estimated to be approximately \$270 billion in FY1991, \$200 billion excluding the additional working capital for the Resolution Trust Corporation's restructuring of the savings and loan industry. That represents a sharp reversal from the marked improvement between 1986 and 1989. While the budget numbers have changed for the worse, the real concern remains the same: the lack of budget discipline and the reluctance of policymakers to come to grips with what is needed to achieve desired fiscal and economic objectives, confusion about the proper roles of fiscal and monetary policies, and a faltering budget process that continues to rely on Gramm-Rudman-Hollings (GRH), whose flawed structure is as much a hindrance as a help to attempts to achieve sound fiscal policy.

During the last several decades, most of variability in the deficit trend has been due to trends in federal outlays, while tax revenues have not deviated significantly as a percent of GNP. The sharp rise in deficits through the mid-1980s occurred as rapid growth in the non-means-tested entitlement programs in the 1970s was joined by the early 1980s defense buildup to push spending from below 20 percent of GNP in the late 1960s to a peak 24.3 percent in 1983. From 1974 to 1983, spending grew 12.2 percent annually, 4.1 percent in real terms, while tax revenues changed little as a share of GNP. The "tax cuts" of the Economic Recovery Tax Act of 1981 merely prevented taxes from rising sharply as a share of GNP. From 1983 through 1989, deficits declined from 6.3 percent of GNP to 2.9 percent in 1989, as spending growth slowed sharply and outlays receded from 24.3 percent of GNP to 22.2 percent, despite the significant rise in net interest outlays. Under the GRH budget process, the bulk of the spending cuts have occurred in national defense and non-defense discretionary spending, while tax revenues have risen as a share of GNP.

The sharp jump in the deficit in FY1990 – over \$40 billion above the \$152 billion in 1989 – has been due approximately equally to the shortfall in tax revenues and the spurt in spending. Tax revenues are expected to grow only 5.4 percent, less than two-thirds the Administration's earlier estimate. This has resulted from economic weakness and an unanticipated decline in receipts relative to national income. Sizeable spending increases have occurred in social security and Medicare, deposit insurance, net interest, and several means-tested entitlement programs, including Supplemental Security Income (SSI),



unemployment insurance, family support payments and foodstamps, reflecting rising caseloads as the economy deteriorates.

While economic sluggishness will continue to suppress tax revenues and boost spending on means-tested entitlement programs in FY1991, the dramatic increases in projected deficits in 1991–1993 reflect largely the costs of the S&L restructuring and higher net interest outlays. The Congressional Budget Office estimates that with proper authorization, additional working capital for the RTC will cost approximately \$138 billion during 1991–1993 (\$39 billion in 1991, \$73 billion in 1992 and \$26 billion in 1993). Sadly, this explosion of outlays represents another episode in a long series of unanticipated jumps in non-means-tested entitlement spending: like other entitlement programs, the federal government's obligation to finance the S&L restructuring is an open checkbook whose total outlays will be determined by caseload. The beneficiaries of the government's largess have no income or wealth requirements.

Unlike other entitlements, however, these government obligations for the costs of the S&L restructuring have already been spent; they are merely a realization of prior obligations. These are a symptom of the unwillingness of elected officials to address deposit insurance and other sources of the savings and loan collapse. As such, they measure in large part the unnecessary and wasteful misallocation of resources of a bungled public policy.

Consequently, spending for non-means-tested entitlement programs, including deposit insurance, continues to rise as a share of total federal outlays and GNP. Spending for them will cost approximately \$580 billion in 1991, a 27.8 rise since 1989, including a 21.3 percent increase in Medicare. They will account for 42.8 percent of total federal outlays. In comparison, spending for means-tested entitlements will be approximately \$112 billion in 1991. This accounts for only 16.2 percent of all entitlement spending, and 8.3 percent of total federal outlays.

The renewed spurt in federal spending, over 9 percent annually in 1991–1992, will push outlays from 22.2 percent of GNP in 1989 to over 24 percent in 1991, retracing over half of the earlier decline. Consequently, deficits will rise above 4 percent of GNP and the federal debt-to-GNP ratio will continue to increase. Persistent economic weakness, a virtually ensured outcome, will raise spending, suppress tax revenues, and push deficits far above official estimates. Meanwhile, spending on investment-oriented programs, including education, infrastructure, and research, continue to lag.

## **The Misguided Budget Debate**

The debate about what to do about the soaring spending and deficits is not heartening. Even if a compromise package yields \$50 billion in deficit cuts in FY1991, which under current circumstances seems unlikely, the deficit is on a rising trend. Moreover, the top priority of reducing deficits by whatever means continues to dominate the debate, with scant attention paid to how the federal budget allocates national resources and how the economic and financial responses to a fiscal package depend crucially on the particular mix of tax and spending changes. In his July 1990 Humphrey Hawkins testimony, Federal Reserve Chairman Greenspan reiterated the need for large deficit cuts but stated his indifference between tax increases and spending cuts. This notion has carried into the mindset of the Congressional conferees.

GRH only reinforces this misguided bias. Its deficit targets divert attention away from important economic issues of the budget, and exclude from the sequestration process over half of all federal outlays, including social security and several other transfer programs. Thus, it steers the fiscal debate away from transfer and entitlement programs that in fact are at the core of the deficit problem and are sorely in need of restructuring. The fiscal debate must be refocussed, and a clearer understanding of the objectives of fiscal policy and the role taxes and spending play in achieving desired economic outcomes is required.

The policy debate is also being influenced by the misguided notion that any negative impact on the economy of a deficit cut may be offset by a shift toward monetary easing. This notion has been abetted by the Federal Reserve and the CBO, and condoned by the Administration. Alan Greenspan has stated on numerous occasions that the Fed would ease monetary policy in response to a budget compromise that involved significant deficit cuts (a "tightening" of fiscal policy). The CBO's baseline forecast (*The Economic and Budget Outlook: An Update*, July 1990) asserts that a sizeable cut in the deficit would *strengthen* the economy because of offsetting expansive monetary policy.

Attempts to adjust monetary policy in response to fiscal actions in order to achieve a desired fiscal-monetary policy mix are misguided because they assume incorrectly that monetary policy and fiscal policy are substitutes for achieving the objectives of long-run economic growth and stable prices. Such substitutability requires that a shift in fiscal policy is capable of generating a permanent shift in aggregate demand, while a shift toward monetary stimulus is capable of raising long-run output. Instead, excessively stimulative monetary policy generates inflation, but does not raise long-run potential output. Fiscal policy alters the allocation of national resources between the public and private sectors and

influences long-run potential output by altering incentives to consume, save and invest, but does not generate a permanent shift in aggregate demand.

Moreover, even the attempt to change the policy mix to achieve a desired short-run economic outcome requires that the magnitude and timing of the economic impacts of fiscal and monetary policies are understood; they are not. In light of the disarray of fiscal policy, the general lack of understanding about its impacts, and misperceptions about the substitutability of fiscal and monetary policy, efforts to adjust monetary policy to fiscal actions are counterproductive, and using the carrot of easier monetary policy as an inducement to achieve a budget compromise is potentially dangerous.

### **Fiscal Disappointment**

Since last Spring, as the chances of a significant breakthrough on the budget and fiscal policy have faded with the slumping economy, skyrocketing federal costs of the S&L restructuring, and the higher interest rates and defense requirements associated with the Mid-East crisis, the budget process has emerged without substance or direction. Budget recommendations that are rational economically are deemed unacceptable politically; political squabbles take precedence over economic common sense. Both political parties are guilty; they concentrate on incremental changes that fit into their short-term political puzzle rather than the broader changes in resource allocation necessary to achieve their long-run economic goals. They expend energy on placing political blame for the S&L debacle, rather than addressing the failed policies that are the true source of the problem. Lessons from past mistakes go unlearned. The Administration and to a lesser extent the CBO continue to base budget projections on overly optimistic assumptions, without sufficient contingency planning. In particular, the Administration continues to assume sustained healthy real GNP growth (driven primarily by rapid improvement in productivity) and significant declines in real interest rates, which lowers projected deficits, but is seemingly inconsistent. GRH has failed as an effective discipline on the budget process, and it has not encouraged the type of policy changes that are necessary to avoid fiscal calamities. Yet, GRH continues to command center stage because, sadly, the policymakers seem out of ideas. Until the flaws in the budget process are recognized and corrected, fiscal policy will remain disappointing.

**Table 1**  
**SELECTED BUDGET PROJECTIONS\***  
**(Fiscal Year)**

	Actual 1989	1990	1991	1992	1993	1994
<b>Receipts</b>						
President's Baseline	990.7	1044.0	1121.7	1194.5	1278.7	1363.1
CBO Baseline	990.7	1044.0	1123.0	1188.0	1260.0	1337.0
<b>Outlays</b>						
President's Baseline	1142.6	1262.5	1353.1	1399.5	1413.9	1442.7
CBO Baseline**	1142.6	1238.0	1355.0	1426.0	1455.0	1483.0
<b>Deficits</b>						
President's Baseline	152.0	218.5	231.4	205.0	135.0	79.6
President's Baseline (excluding RTC)	152.0	161.3	168.8	163.7	140.6	121.3
CBO Baseline	152.0	195.0	232.0	239.0	194.0	146.0
CBO excluding RTC	159.0	156.0	162.0	179.0	181.0	176.0
<b>Amended GRH Targets (1987)</b>	136.0	100.0	64.0	28.0	0.0	----
<b>Receipts, % Change</b>						
President's Budget	9.0	5.4	7.4	6.5	7.0	6.6
CBO Baseline	9.0	5.4	7.6	5.8	6.1	6.1
<b>Outlays, % Change</b>						
President's Budget	7.4	10.5	7.2	3.4	1.1	2.0
CBO Baseline	7.4	8.3	9.4	5.2	2.0	1.9
<b>As a percentage of GNP:</b>						
<b>Revenues</b>						
President's Budget	19.2	19.1	19.2	19.0	19.0	19.0
CBO Baseline	19.6	19.1	19.3	19.1	19.0	19.0
<b>Outlays</b>						
President's Budget	22.2	23.1	23.1	22.0	21.0	20.1
CBO Baseline	22.1	22.6	23.2	23.0	22.0	21.0
<b>Deficit</b>						
President's Budget	2.9	4.0	4.0	3.3	2.0	1.1
CBO Baseline	2.9	3.6	4.0	3.8	2.9	2.1
<b>Publicly-held debt</b>						
President's Budget	42.5	----	----	----	----	----
CBO Baseline	42.5	43.5	44.7	45.8	45.9	45.1

\*Sources: Executive Office of the President, *Mid-Session Review of the Budget*, July 1990, and Congressional Budget Office, *The Economic and Budget Outlook: An Update*, July 1990.

\*\*Includes necessary resources beyond current law for savings and loan restructuring.

**Table 2**  
**CBO, ADMINISTRATION, AND BLUE CHIP ECONOMIC PROJECTIONS**  
**(Calendar Years 1989–1995)**

	Estimated 1989	Forecast		Projected			
		1990	1991	1992	1993	1994	1995
<b>National GNP</b> (Billions of dollars)							
CBO	5,236	5,534	5,893	6,279	6,688	7,121	7,579
Administration	5,236	5,583	6,002	6,439	6,881	7,324	7,771
<b>Real GNP (Percentage) change, year-over-year)</b>							
CBO	2.9	2.0	2.5	2.6	2.6	2.6	2.6
Administration	3.0	2.8	3.2	3.2	3.1	3.0	3.0
Blue Chip	2.9	1.9	2.3	2.8	2.7	2.4	2.6
<b>Consumer Price Index</b> (Percentage change, year-over-year)							
CBO	4.8	4.8	4.2	4.2	4.0	4.0	4.0
Administration	4.8	4.8	4.1	4.0	3.7	3.4	3.0
Blue Chip	4.8	4.8	4.3	4.0	4.1	4.0	4.0
<b>Implicit GNP Deflator</b> (Percentage change, year-over-year)							
CBO	4.2	4.1	3.9	3.8	3.8	3.8	3.8
Administration	4.2	4.2	4.2	4.0	3.7	3.4	3.1
Blue Chip	4.2	4.2	4.1	3.8	3.9	3.8	3.8
<b>Three-Month Treasury Bill Rate (Percent)</b>							
CBO	8.1	7.6	6.9	6.7	6.2	5.6	5.4
Administration	8.1	7.7	6.8	5.8	5.1	4.8	4.4
Blue Chip	8.1	7.7	7.5	7.0	7.0	6.9	6.7
<b>Ten-Year Government Note Rate (Percent)</b>							
CBO	8.5	8.5	7.8	7.4	7.2	6.9	6.8
Administration	8.5	8.5	7.9	7.0	6.1	5.8	5.4
Blue Chip	8.5	8.5	8.3	8.0	7.8	7.8	7.8
<b>Inflation-Adjusted Three-Month Treasury Bill Rate</b>							
CBO	3.3	2.8	2.7	2.7	2.6	1.6	1.4
Administration	3.3	2.9	2.7	1.8	1.4	1.4	1.4
Blue Chip	3.3	2.9	3.2	3.0	2.9	2.9	2.7

Sources: *Executive Office of the President, Mid-Session Review of the Budget, July 16, 1990*; Congressional Budget Office, *The Economic and Budget Outlook: An Update, July 1990*; and Eggert Economic Enterprises, Inc., *Blue Chip Economic Indicators, June 10, 1990*.

## HEINEMANN ECONOMIC RESEARCH

H. Erich HEINEMANN  
Ladenburg Thalmann & Co., Inc.

Federal Reserve actions have resulted in a prolonged drop in monetary growth. Total reserves held by U.S. banks have shown almost no change since 1987. This was an unusually long period for such "high-powered" money to be frozen.

The increase in total reserves has been below the level consistent with continued economic expansion. Business activity has stalled and is now starting to decline. The surge in energy prices this summer is likely to make the slump more severe. However, higher oil prices were not the proximate cause of the downturn.

In September 1989, we reported to the SOMC that our Baseline Forecast indicated "a recession during the first half of 1990." While this projection was premature, its thrust was correct. Hopes that the slow economic growth of late 1989 and early 1990 would set the stage for a more sustainable pace of expansion have proved unfounded.

Present patterns indicate that the recession will continue at least until spring 1991. Our current Baseline Forecast shows a moderate rebound beginning in the second quarter of next year (see attached tables).

Despite the spike in producer and consumer prices caused by the oil shock, chances for price stability have improved. Federal Reserve policy – which we have characterized as a "preemptive strike against inflation" – has created a climate of disinflation. Asset prices – especially for real estate – have tumbled. Corporate profits have declined because business managers have been unable to pass higher costs to final purchasers.

In a climate of sustained monetary restraint, increases in the relative price of energy should be disinflationary. Higher consumer outlays for energy will absorb income otherwise available for purchase of other goods and services.

We concur with other members of the SOMC that the core rate of inflation peaked during the first half of 1989. Owing to the long lag between monetary actions and the subsequent impact on price behavior, core inflation should continue to decline in the years immediately ahead.

As the underlying pattern of disinflation becomes clearer to market participants, interest rates should decline. The yield on long-term Treasury bonds, currently hovering around 9 percent, should drop at least a full percentage point by next spring. The Federal funds rate, the target for day-to-day Fed operations, is likely to decline from about 8

percent at present to a range of 6.5 percent to 7 percent. These developments should be associated with an acceleration in monetary growth.

Negotiations over the Federal budget, which have been occupying center stage in Washington, seem unlikely to result in fundamental fiscal reforms. Instead, we expect a grab bag of miscellaneous tax increases and spending cuts designed to force the Federal Reserve to reduce interest rates. How much the federal deficit actually declines (if, indeed it declines at all) will be more a function of economic performance than of political decisions about particular revenues and expenditure programs.

The Treasury's red ink seems unlikely to pose a significant barrier to lower interest rates. Granted the deficit will likely rise close to 5 percent of GNP in 1991 (far above our comfort level), interest payments will represent the vast bulk of this shortfall. Interest payments, of course, are a very special kind of transfer payment. As the SOMC has pointed out previously, the Treasury is simply a conduit for these funds. It takes them in and pays them out, sometimes to the same people.

In fact, the basic Federal budget – revenues less outlays other than interest – is currently in surplus, as it usually is at the end of an expansion. That probably won't be true next year. Even so, the basic federal deficit should be modest.

Keep in mind that private demand for credit has been exceptionally weak. The increase in non-financial, non-federal debt was 7.6 percent of GNP in the second quarter, the lowest for a period of purported economic expansion in more than 20 years. The collapse in consumer borrowing shows what has been happening in private credit markets. Rates normally decline during periods of recession despite increased Treasury needs. The 1990-91 recession should be no exception.

Incoming economic data highlight the pattern of recession. Non-farm employment, as measured by the Labor Department's household survey, declined 524,000 over the past three months, down at an annual rate of 1.8 percent. From June 1989 through August 1990, employment rose at a rate of less than one-tenth of one percent. Industrial production, up at a 5.25 percent rate during 1987 and 1988, has increased at a rate of less than 1 since April 1989.

Under pressure from the Fed, consumer spending is headed south. On the assumption that consumer prices rose no more than six-tenths of one percent in August (a conservative estimate), real retail sales last month declined at a rate of more than 13 percent, and were unchanged from August 1988. That sort of decline is consistent with the onset of recession.

New orders for non-defense capital goods averaged \$37.4 billion per month in the three months ended July, down at an annual rate of 15 percent from the average of \$40.5

billion in January. In longer perspective, capital goods orders have hardly changed since the summer of 1988.

Business outlays for structures (the "plant" side of plant and equipment spending) were lower in the second quarter of 1990 than in 1988. Spending for producers' durable equipment dropped at an annual rate of almost 5 percent in the second quarter. Each of these indicators – plus a host of other measures – point toward an economic contraction.

Federal Reserve actions over the past six months have increased the likelihood that the next recession will be more severe than was likely at the time of our meeting in mid-March. Policymakers have been reluctant to allow short-term interest rates to decline, even though demand for credit is weak. During the three months ended in July (the most recent period for which data are available) domestic non-financial debt rose at a rate of less than 7 percent, its slowest growth in the past 15 years – including the bottom of the severe 1981-82 recession.

In this environment, the Federal Reserve has had to drain reserves from the banking system to prevent rates from declining. Total bank reserves averaged \$59.8 billion in August. Over the past 18 months, total bank reserves have declined by an average of \$33 million per month, one of the longest periods of reserve contraction in the postwar period.

This pattern of go-stop monetary policy has placed the Federal Reserve in jeopardy. More than a year ago, Federal Reserve chairman Alan Greenspan conceded that he could not "rule out a policy mistake as the trigger for a downturn." Mr. Greenspan told the House Subcommittee on Domestic Monetary Policy that "we at the Federal Reserve might fail to restrain a speculative surge in the economy or fail to recognize that we were holding reserves too tight for too long." He added that "what we seek to avoid is an unnecessary and destructive recession." Subsequent Fed actions have increased the probability that this will occur.

Senior policymakers are well aware that when real economic activity declines in earnest, the Fed finds itself under intense pressure to reverse course and reflate the economy. This is the message from the so-called summit negotiations over the federal budget. Mr. Greenspan is now in a position where he will have to ratify whatever political deal that comes out of the summit with easy money. Thus, there is a clear risk that go-stop-go monetary policy – the Fed's traditional trademark – will be perpetuated. If so, this would impose needless costs on the economy. It would also raise the long-run expected rate of inflation.

At this point, the Fed's challenge is to devise a strategy to consolidate its gains in the battle against inflation. The danger, as an anonymous member of the Federal Open Market Committee warned recently, is that "a substantial weakening of the economy would



be followed by rapid monetary growth and a marked rebound in activity – a pattern that would be unlikely to foster the objective of price stability over time."

A year ago, we predicted that the real return on dollar assets would decline in the months ahead. "In that case," we said, "the dollar will weaken and continue to decline through much of 1990." This was a good forecast. The Federal Reserve's trade-weighted dollar index was above 102 in September 1989, up more than 10 percent from its low in November 1988. It is now about 85.

The deficit in U.S. international payments has improved steadily since 1986. Real "net exports," as defined in the national income accounts, were at a negative \$39.9 billion annual rate in the second quarter of 1988, a gain of more than \$10 billion from a year earlier. Even though the growth rate of U.S. merchandise exports has dropped considerably, further gains in U.S. trade are likely as domestic demand slumps.

Imports, which have already slowed substantially, should grow even less rapidly as consumer demand continues to decline. Hopefully, exports should pick up as domestic capacity is freed to service markets overseas. We believe that the U.S. "surplus" in international service transactions is significantly overstated. Apart from this problem, however, the officially-reported deficit on goods and services should continue to dwindle. We expect trade to play a major role in limiting the downturn.

When the Federal Reserve adheres to a policy of moderate, stable expansion in the money supply, the economy prospers. When the authorities deviate from this path – either by freezing the money supply or by bringing it to a boil – the economy suffers. The Federal Reserve has made a major gain against inflation over the past two years. This advantage must not be frittered away with erratic policy.

Meanwhile, analysis of the U.S. economy is complicated by apparently identical, but conflicting measures of activity. Consider the following example: In the past three months, non-farm employment (A) rose 48,000 or (B) fell 524,000? In the spring quarter, business investment rose (A) 3.1 percent or (B) dropped 5.2 percent? In both cases, the answers are **BOTH A AND B**, depending on which statistics you choose.

Partly, this is simply an arcane problem in economic numerology. Economists get paid to explain such anomalies. At present, however, the question has broad meaning – for the economy, for financial markets and for the election in November. If business activity has simply slowed, which is implied by the "A" answers, then the economy will likely keep growing. Interest rates will stay high.

By contrast, if business has stalled – that's the message from answer "B" – then a recession is probable. Rates will come down. Democrats may boost their already lopsided

majorities in Congress. Backlash from the downturn could force Alan Greenspan to resign.

We believe the preponderance of economic evidence shows a recession already underway. Put differently, the drop of 524,000 non-farm jobs from May to August reported by the Labor Department's monthly survey of the nation's households appears closer to reality than the increase of 48,000 reported by its tabulation of business and government payrolls.

Similarly, we think the report by the Bureau of Economic Analysis that business investment in plant and equipment declined at an annual rate of 5.2 percent in the second quarter was accurate. By contrast, the Census Bureau's latest survey of capital spending plans produced a parallel estimated that outlays rose at a rate of 3.1 percent.

Many economists, perhaps a majority, have been focusing on the numbers that indicate continued growth. However, we think these analysts have been looking at phantom jobs and phantom factories. It is obvious that the Fed's three and one-half year campaign of tight money has succeeded all too well. Not only has business activity slowed down – that is no longer a matter of debate – but, as already noted, telltale signs of a cumulative contraction are now easy to see.

The fact that the federal government publishes alternative measures of the same phenomenon is an old story. The Labor Department's household survey, for example, is a measure of the number of people who have jobs. The Bureau of Labor Statistics uses this tabulation to determine total employment and unemployment as well as the unemployment rate.

By contrast, the so-called payroll survey is a count of the number of jobs. Because self-employed individuals are excluded from this tally, payroll employment is less than total employment. On the other hand, if a person holds more than one job, then he or she is counted for each job.

Despite such differences, changes in the household and payroll employment measures are normally quite similar on average. However, this is not true at present. According to the BLS, the number of payroll jobs rose by more than 2 million in the year ended August 1990, while the number of people with jobs increased by less than 250,000.

The discrepancy between the rates of change in these two basic measures was almost 1.8 million, roughly equal to records posted in June 1990 and June 1985. A divergence of this sort should have prompted inquiries by journalists and financial analysts eager to gain insights into the probable direction of the economy. In fact, it was ignored. The BLS has had little to say about the discrepancies in its data. However, our analysis

shows that the payroll employment measure systematically overstates economic growth during periods of weakness or decline in GNP.

In part, this may be the result of difficulties with the model government statisticians use to estimate hiring by newly formed businesses. The BLS has been routinely adding about 80,000 jobs a month to its payroll tabulation to account for employment at new firms.

The Census Bureau's survey of intended capital spending appears to suffer from an analogous distortion. Historically, changes in this series have correlated closely with changes in non-residential fixed investment reported by the Bureau of Economic Analysis in the GNP accounts. Closely, that is, until 1989, when a huge disparity developed.

Economists at the Census Bureau are frank to say they have no idea what caused this discrepancy. They add that they intend to try to offset the overstatement in 1989 with an understatement in 1990. Even so, the figures for 1990 capital spending that the Census Bureau reported last week were far stronger than those in the latest GNP report. In the circumstance, my advice would be to ignore the survey data. Instead, concentrate on the GNP numbers, which in our view show an economy slowly sliding into recession.

Until recently, we were in a small minority warning of an impending downturn in the economy. Since the Gulf crisis erupted last month, of course, the consensus has begun to shift. Now, establishment economists are starting to tell their clients, as the Morgan Bank put it recently, that the U.S. "appears likely to move into recession."

"Higher oil prices and falling construction will cause the economy to stall over the next few months," the bank added. "The likelihood that this initial weakening will have secondary effects on business and consumer spending points to an outright recession, commencing within the next month or two and continuing into the first half of next year."

It's time to forget about fantasies of rising employment and capital spending, and focus instead on the fact of a falling economy.

HEINEMANN ECONOMIC RESEARCH

Baseline Forecast - September 1990

	IV'89A	I'90A	II'90A	III'90F	IV'90E	I'91E	II'91E	III'91E	IV'91E	1989A	1990F	1991E
<b>THE ECONOMY:</b>												
Gross National Product (\$82)	\$4,133.3	\$4,150.5	\$4,162.7	\$4,151.4	\$4,126.2	\$4,088.2	\$4,120.4	\$4,177.3	\$4,235.5	\$4,117.7	\$4,148.2	\$4,155.3
Pct Chg	0.3%	1.7%	1.2%	-1.1%	-2.2%	-3.8%	3.2%	5.8%	6.7%	2.5%	0.7%	0.2%
Personal Consumption (\$82)	\$2,669.9	\$2,877.3	\$2,679.3	\$2,668.0	\$2,654.0	\$2,627.7	\$2,635.0	\$2,661.1	\$2,702.1	\$2,656.8	\$2,669.8	\$2,655.5
Pct Chg	-0.8%	1.1%	0.3%	-1.7%	-2.1%	-3.9%	1.1%	4.0%	6.3%	1.9%	0.5%	-0.5%
Business Investment (\$82)	\$508.4	\$514.6	\$507.8	\$504.8	\$495.3	\$485.9	\$491.8	\$498.7	\$518.1	\$508.1	\$505.8	\$498.8
Pct Chg	-3.8%	5.0%	-5.2%	-2.3%	-7.3%	-7.4%	4.9%	5.7%	18.5%	3.9%	-0.1%	-1.4%
Prod. Dur. Equip. (\$82)	\$385.4	\$390.8	\$386.2	\$381.2	\$373.6	\$365.4	\$372.3	\$379.7	\$398.1	\$383.7	\$383.0	\$378.4
Pct Chg	-5.2%	5.7%	-4.6%	-5.1%	-7.8%	-8.5%	7.8%	8.2%	18.3%	5.2%	-0.2%	-1.2%
Residential Invest. (\$82)	\$181.8	\$188.3	\$183.0	\$175.9	\$172.4	\$172.4	\$176.0	\$183.0	\$199.3	\$187.0	\$179.9	\$182.7
Pct Chg	-5.5%	15.1%	-10.8%	-14.7%	-7.7%	-0.0%	8.6%	18.9%	40.6%	-4.0%	-3.8%	1.5%
Change in Inventory (\$82)*	\$13.9	(\$9.2)	\$12.7	\$16.8	\$10.9	(\$7.0)	\$2.9	\$21.2	\$13.3	\$19.1	\$7.8	\$7.8
Net Exports (\$82)	(\$47.0)	(\$35.4)	(\$39.9)	(\$40.5)	(\$37.8)	(\$32.5)	(\$34.5)	(\$42.0)	(\$55.5)	(\$54.1)	(\$38.4)	(\$41.1)
Government Purchases (\$82)*	\$807.2	\$814.9	\$819.8	\$826.4	\$833.4	\$841.7	\$849.2	\$855.2	\$859.1	\$802.9	\$823.8	\$851.1
Pct Chg	0.6%	3.9%	2.4%	3.3%	3.4%	4.1%	3.6%	2.9%	1.4%	0.8%	2.6%	3.3%
Final Domestic Sales (\$82)	\$4,187.3	\$4,195.1	\$4,189.9	\$4,175.1	\$4,155.1	\$4,127.7	\$4,152.0	\$4,198.0	\$4,277.6	\$4,152.8	\$4,178.8	\$4,188.8
Pct Chg	-1.1%	2.7%	-0.5%	-1.4%	-1.9%	-2.6%	2.4%	4.5%	7.8%	1.7%	0.6%	0.2%
Gross Nat'l Prod. (\$ Current)	\$5,289.3	\$5,375.4	\$5,451.9	\$5,553.9	\$5,592.0	\$5,602.7	\$5,714.0	\$5,823.7	\$5,939.7	\$5,200.8	\$5,493.3	\$5,770.0
Pct Chg	3.9%	6.7%	5.8%	7.7%	2.8%	0.8%	8.2%	7.9%	8.2%	6.7%	5.6%	5.0%
Disposable Income (\$82)	\$2,883.2	\$2,900.9	\$2,907.0	\$2,910.2	\$2,895.1	\$2,888.8	\$2,911.8	\$2,948.8	\$2,987.9	\$2,869.0	\$2,903.3	\$2,933.7
Pct Chg	1.2%	2.5%	0.8%	0.4%	-2.1%	-0.9%	3.2%	4.9%	5.7%	2.4%	1.2%	1.0%
Savings Rate (Percent)	4.6%	4.9%	5.1%	5.2%	5.3%	5.5%	5.1%	4.8%	4.7%	4.6%	5.1%	5.0%
Operating Profits (\$ Current)	\$290.9	\$298.8	\$306.5	\$299.3	\$288.8	\$283.0	\$294.9	\$327.1	\$340.9	\$311.8	\$297.8	\$311.5
Pct Chg	-19.1%	8.4%	13.7%	-9.1%	-13.6%	-7.5%	17.9%	51.5%	17.9%	-7.7%	-4.4%	4.6%
Industrial Prod. (1987=100)	108.1	108.3	109.5	109.9	107.9	106.8	107.6	109.8	112.3	108.1	108.9	109.1
Pct Chg	0.2%	0.7%	4.3%	1.6%	-7.0%	-4.3%	3.2%	8.2%	9.7%	2.6%	0.8%	0.2%
Housing Starts (Mill. Units)	1,347.7	1,454.3	1,199.3	1,175.7	1,185.8	1,229.7	1,318.1	1,447.3	1,486.7	1,389.2	1,253.7	1,370.5
Pct Chg	3.1%	35.8%	-53.6%	-7.9%	3.4%	15.7%	32.0%	45.4%	11.3%	-7.1%	-9.7%	9.3%
Auto Sales (Million Units)	8.744	9.734	9.581	9.3	8.9	9.3	9.5	9.8	10.0	9.920	9.4	9.7
Pct Chg	-58.8%	53.8%	-8.1%	-11.3%	-14.8%	18.5%	11.3%	9.8%	12.1%	-8.8%	-5.4%	2.8%
Total Employment (Millions)	117.8	118.1	118.3	117.7	118.9	118.7	117.3	118.1	119.0	117.3	117.7	117.8
Pct Chg	1.0%	1.0%	0.7%	-2.0%	-2.5%	-0.9%	1.9%	2.8%	3.2%	2.0%	0.4%	0.0%
Unemployment Rate (Percent)	5.3%	5.3%	5.3%	5.8%	6.0%	6.4%	6.3%	6.0%	5.8%	5.3%	5.5%	6.1%
Comp. Per Hour Non-Farm Bus**	133.4	134.4	136.3	137.6	139.7	139.8	140.8	142.0	143.1	132.3	136.8	141.4
Pct Chg	2.7%	3.0%	5.8%	4.0%	3.2%	3.3%	2.7%	3.5%	3.2%	2.9%	3.4%	3.4%
Productivity Non-Farm Bus**	111.4	110.8	111.2	111.0	110.2	109.5	110.6	112.2	113.3	112.0	110.8	111.4
Pct Chg	-2.1%	-2.1%	1.5%	-0.7%	-2.8%	-2.5%	4.0%	5.7%	3.9%	-0.3%	-1.1%	0.5%
Unit Labor Cost Non-Farm Bus**	119.8	121.3	122.6	124.0	125.8	127.7	127.3	128.8	128.4	118.1	123.4	127.0
Pct Chg	5.2%	5.1%	4.4%	4.6%	6.1%	5.9%	-1.2%	-2.1%	-0.8%	3.3%	4.5%	2.9%
GNP Deflator (1982=100)	128.0	129.5	131.0	133.8	135.5	137.0	138.7	139.4	140.2	128.3	132.4	138.8
Pct Chg	3.6%	4.9%	4.6%	8.9%	5.1%	4.8%	4.8%	2.1%	2.4%	4.1%	4.9%	4.8%
CPI Less Energy (1982=100)	130.3	132.6	134.0	135.2	136.1	137.0	137.7	138.6	139.6	128.3	134.5	138.2
Pct Chg	4.6%	7.1%	4.4%	3.6%	2.6%	2.6%	2.1%	2.6%	3.0%	4.8%	4.8%	2.8%
Federal Deficit (\$ Current)	(\$150.1)	(\$168.3)	(\$184.0)	(\$198.5)	(\$207.9)	(\$215.4)	(\$236.8)	(\$245.3)	(\$235.5)	(\$134.3)	(\$189.2)	(\$233.2)
<b>FINANCIAL MARKETS:</b>												
Federal Funds Rate	8.81%	8.25%	8.24%	8.1%	7.7%	7.0%	6.7%	7.0%	7.4%	9.22%	8.1%	7.0%
Three-month Bills (Discount)	7.65%	7.76%	7.75%	7.5%	6.9%	6.2%	5.9%	6.2%	6.6%	8.11%	7.5%	6.2%
Prime Rate, Major Banks	10.50%	10.04%	10.00%	9.8%	9.3%	8.5%	8.1%	8.3%	8.7%	10.87%	9.8%	8.4%
30-Year Treasury Bonds	7.93%	8.44%	8.65%	9.1%	8.5%	8.3%	7.7%	8.1%	8.2%	8.45%	8.7%	8.1%
Money Supply (M-1, \$ Current)	\$790.8	\$800.2	\$807.4	\$815.4	\$830.2	\$846.6	\$859.2	\$867.6	\$874.2	\$783.7	\$813.3	\$861.9
Pct Chg	5.2%	4.8%	3.6%	4.1%	7.4%	8.2%	6.1%	4.0%	3.1%	1.0%	3.8%	6.0%
Velocity (Ratio: GNP TO M-1)	6.689	6.718	6.753	6.811	6.738	6.618	6.650	6.712	6.794	6.638	6.754	6.694
Pct Chg	-1.2%	1.7%	2.1%	3.5%	-4.3%	-6.8%	2.0%	3.8%	5.0%	5.8%	1.8%	-0.9%
Trade-Weighted \$ (1973=100)	97.3	93.1	92.7	85.7	82.3	81.5	79.5	82.7	83.5	98.7	88.4	81.8
Memo: CCC Purchases	(\$5.0)	(\$7.0)	\$1.1	\$2.3	(\$3.0)	(\$7.9)	\$5.9	\$3.3	(\$5.9)	(\$4.7)	(\$1.9)	(\$1.1)

A=Actual F=Forecast Billions of dollars unless noted.

\*Adjusted for Commodity Credit Corp. purchases. \*\*Compensation, productivity and unit labor costs are index numbers, 1982=100.

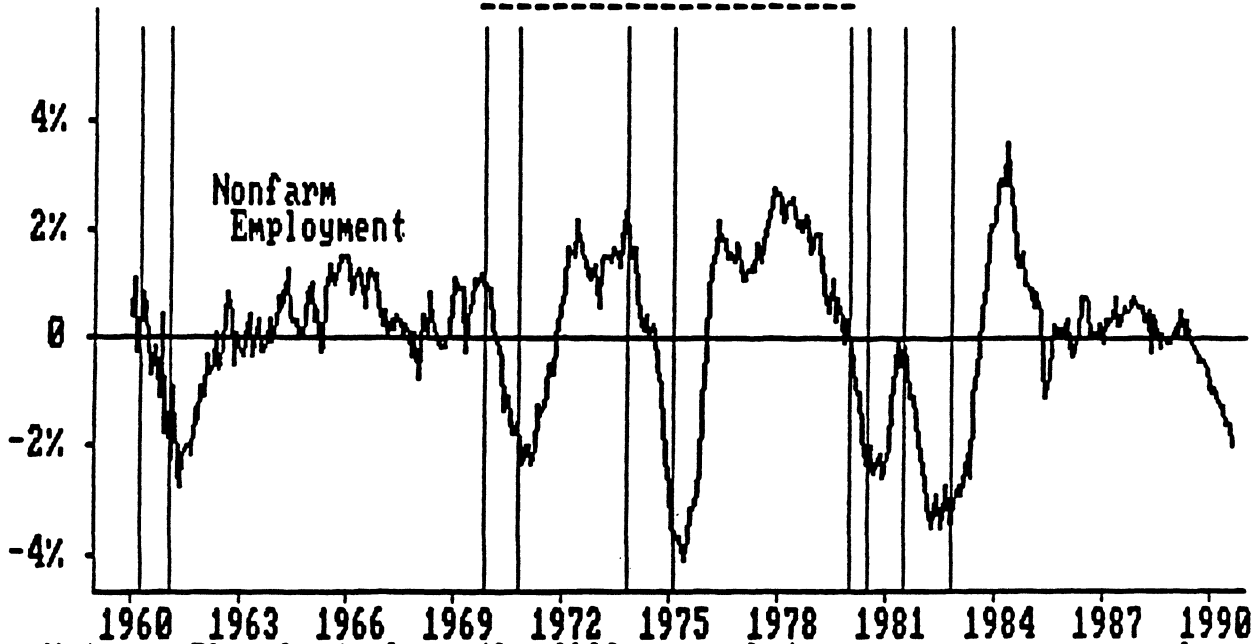
Source: Citibase; Heinemann Economic Research

September 30 – October 1, 1990

	<u>I'89 A</u>		<u>II'89 A</u>		<u>III'89 A</u>		<u>IV'89 A</u>		<u>1989 A</u>	
THE ECONOMY:	\$ Change	Pct Chg	\$ Change	Pct Chg	\$ Change	Pct Chg	\$ Change	Pct Chg	\$ Change	Pct Chg
Gross National Product (\$82)	\$36.6	3.6%	\$16.3	1.6%	\$17.6	1.8%	\$3.6	0.4%	\$100.9	2.6%
Personal Consumption (\$82)	(\$2.1)	-0.2%	\$8.6	0.8%	\$30.0	3.0%	(\$5.4)	-0.5%	\$50.3	1.3%
Business Investment (\$82)	\$10.5	1.0%	\$8.4	0.8%	\$7.8	0.8%	(\$4.9)	-0.5%	\$18.9	0.5%
Prod. Dur. Equip. (\$82)	\$8.4	0.8%	\$10.9	1.1%	\$5.7	0.6%	(\$5.2)	-0.5%	\$18.9	0.5%
Residential Invest. (\$82)	(\$1.8)	-0.2%	(\$5.7)	-0.6%	(\$3.7)	-0.4%	(\$2.6)	-0.3%	(\$7.8)	-0.2%
Change in Inventory (\$82)*	\$10.9	1.1%	\$3.0	0.3%	(\$10.6)	-1.0%	(\$0.8)	-0.1%	\$11.1	0.3%
Net Exports (\$82)	\$24.6	2.4%	(\$2.2)	-0.2%	(\$10.8)	-1.0%	\$18.2	1.6%	\$21.8	0.5%
Government Purchases (\$82)*	(\$5.6)	-0.5%	\$4.2	0.4%	\$4.9	0.5%	\$1.1	0.1%	\$6.7	0.2%
Final Domestic Sales (\$82)	\$1.1	0.1%	\$15.5	1.5%	\$39.0	3.8%	(\$11.8)	-1.1%	\$68.0	1.7%
GNP (\$82) Four qtr chg (%)		3.2%		2.7%		2.4%		1.8%		
	<u>I'90 A</u>		<u>II'90 A</u>		<u>III'90 F</u>		<u>IV'90 F</u>		<u>1990 F</u>	
THE ECONOMY:	\$ Change	Pct Chg	\$ Change	Pct Chg	\$ Change	Pct Chg	\$ Change	Pct Chg	\$ Change	Pct Chg
Gross National Product (\$82)	\$17.2	1.7%	\$12.2	1.2%	(\$11.3)	-1.1%	(\$23.2)	-2.2%	\$30.5	0.7%
Personal Consumption (\$82)	\$7.4	0.7%	\$2.0	0.2%	(\$11.3)	-1.1%	(\$13.9)	-1.3%	\$12.8	0.3%
Business Investment (\$82)	\$6.2	0.6%	(\$6.8)	-0.7%	(\$3.0)	-0.3%	(\$9.5)	-0.9%	(\$0.4)	-0.0%
Prod. Dur. Equip. (\$82)	\$5.4	0.5%	(\$4.6)	-0.4%	(\$5.0)	-0.5%	(\$7.6)	-0.7%	(\$0.8)	-0.0%
Residential Invest. (\$82)	\$6.5	0.6%	(\$5.3)	-0.5%	(\$7.1)	-0.7%	(\$3.5)	-0.3%	(\$7.1)	-0.2%
Change in Inventory (\$82)*	(\$23.1)	-2.2%	\$21.9	2.1%	\$4.1	0.4%	(\$5.9)	-0.6%	(\$11.3)	-0.3%
Net Exports (\$82)	\$12.5	1.2%	(\$4.5)	-0.4%	(\$0.6)	-0.1%	\$2.6	0.3%	\$15.7	0.4%
Government Purchases (\$82)*	\$7.7	0.7%	\$4.9	0.5%	\$6.6	0.6%	\$6.9	0.7%	\$20.8	0.5%
Final Domestic Sales (\$82)	\$27.8	2.7%	(\$5.2)	-0.5%	(\$14.8)	-1.4%	(\$20.0)	-1.9%	\$26.0	0.6%
GNP (\$82) Four qtr chg (%)		1.3%		1.2%		0.5%		-0.1%		
	<u>I'91 F</u>		<u>II'91 F</u>		<u>III'91 E</u>		<u>IV'91 E</u>		<u>1991 F</u>	
Gross National Product (\$82)	(\$40.0)	-3.8%	\$32.2	3.1%	\$56.9	5.5%	\$8.2	5.7%	7.1	0.2%
Personal Consumption (\$82)	(\$26.3)	-2.5%	\$7.3	0.7%	\$26.1	2.5%	41.0	4.0%	-13.2	-0.3%
Business Investment (\$82)	(\$9.4)	-0.9%	\$5.9	0.6%	\$6.9	0.7%	19.4	1.9%	-7.0	-0.2%
Prod. Dur. Equip. (\$82)	(\$8.2)	-0.8%	\$6.9	0.7%	\$7.4	0.7%	16.3	1.6%	-4.6	-0.1%
Residential Invest. (\$82)	(\$0.0)	-0.0%	\$3.6	0.3%	\$7.0	0.7%	16.3	1.6%	2.8	0.1%
Change in Inventory (\$82)*	(\$17.9)	-1.7%	\$9.9	1.0%	\$18.3	1.8%	-7.9	-0.8%	-0.2	-0.0%
Net Exports (\$82)	\$5.3	0.5%	(\$2.0)	-0.2%	(\$7.4)	-0.7%	-13.5	-1.3%	-2.7	-0.1%
Government Purchases (\$82)*	\$8.3	0.8%	\$7.5	0.7%	\$6.1	0.6%	2.9	0.3%	27.4	0.7%
Final Domestic Sales (\$82)	(\$27.4)	-2.6%	\$24.3	2.4%	\$46.1	4.5%	79.6	7.9%	10.0	0.2%
GNP (\$82) Four qtr chg (%)		-1.5%		-1.0%		0.6%		2.6%		

DIFFERENCE FROM NORMAL

### THE RECESSION OF 1990

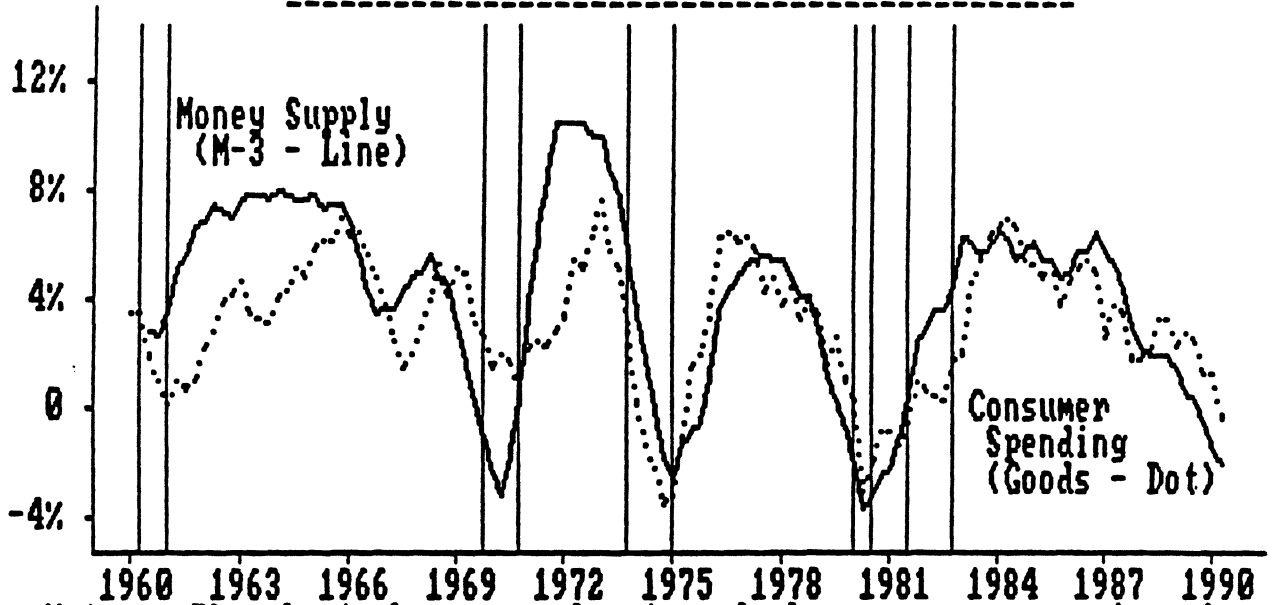


Notes: The chart shows the difference between year-over-year changes in nonfarm employment and the average change in nonfarm employment, 1960-1990. Household Survey. Data in percent, seasonally adjusted. The vertical lines show recessions.

Sources: Citibase; Heinemann Economic Research

SIX  
QUARTER  
CHANGE

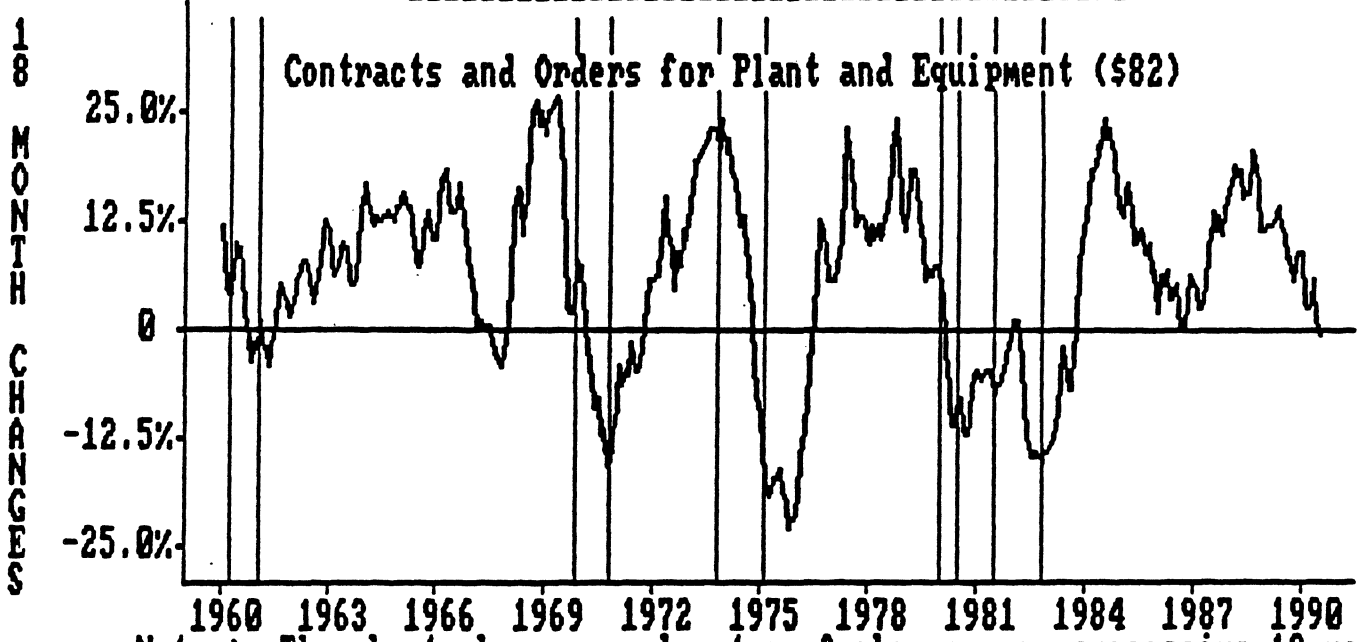
TIGHT MONEY PUT A CRIMP IN CONSUMER SPENDING



Notes: The chart shows annual rates of change over successive six-quarter periods in (1) real M-3 and (2) real personal consumption of durables and nondurables. Underlying data seasonally adjusted. The vertical lines show recessions.

Sources: Citibase; Heinemann Economic Research

**CAPITAL SPENDING IS HEADED FOR RECESSION**

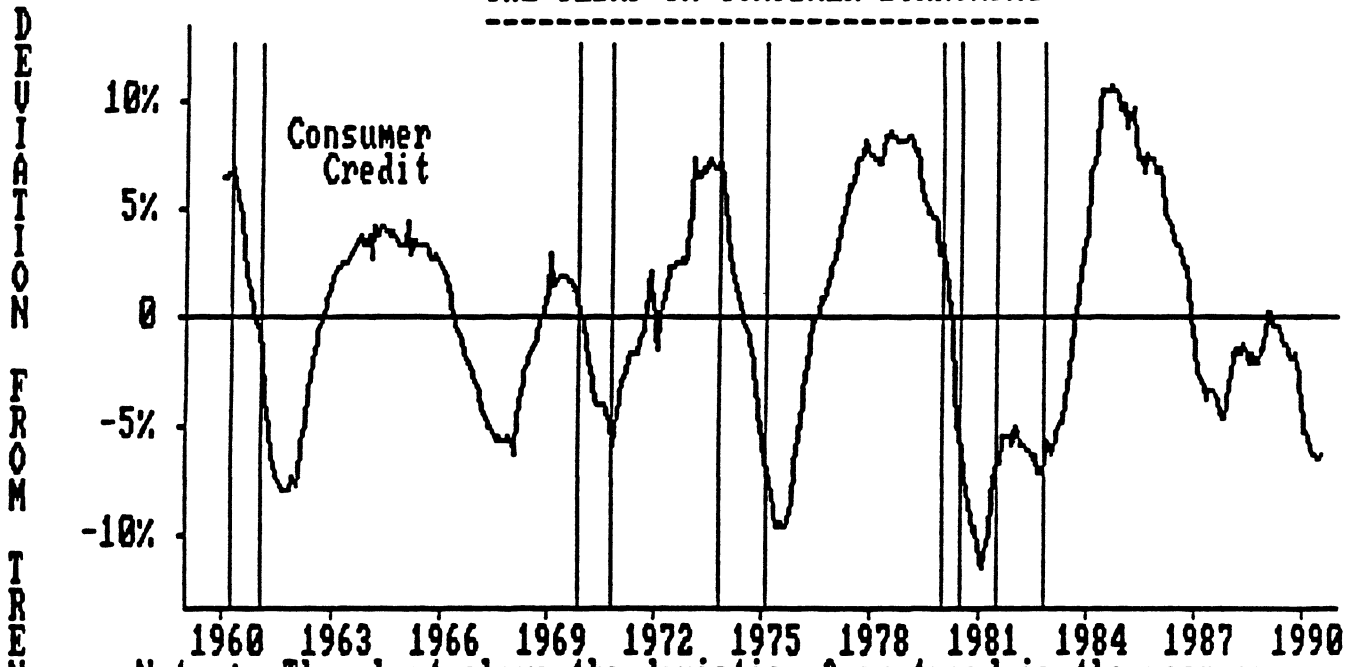


Notes: The chart shows annual rates of change over successive 18-month periods in real contracts and orders for plant and equipment (BCD Series # 20). Seasonally adjusted. Data smoothed with a 3-month moving average. Vertical lines show recessions.

Sources: Citibase; Heinemann Economic Research



THE SLUMP IN CONSUMER BORROWING



Notes: The chart shows the deviation from trend in the year-over-year rate of change in total consumer installment credit outstanding. Data in percent at seasonally adjusted annual rates. The vertical lines show recessions.

Sources: Citibase; Heinemann Economic Research

Table 1 - Part 1 (Federal Reserve Board Monetary Base)

Federal Reserve Action and Monetary Growth										
(\$ Billions)										
Date	(1) Monetary Base	(2) Currency	(3) Total Adjusted Bank Reserves	(4) Demand Deposits	(5) Savings & Small Time Deposits*	(6) Large Time Deposits	(7) Non- deposit Liabil.	(8) Foreign Deposits	(9) Treasury Deposits	(10) Total Deposits**
Jan 1988	260.5	198.1	62.4	552.2	1866.6	488.5	281.3	11.8	24.9	3225.3
Feb	261.9	199.3	62.6	552.8	1886.1	492.8	281.2	11.0	28.2	3252.1
Mar	263.2	200.7	62.5	555.0	1901.5	495.9	279.9	10.9	22.3	3265.5
Apr	265.2	202.2	63.0	560.7	1913.5	497.8	282.5	11.0	21.7	3287.2
May	266.7	203.4	63.3	562.3	1922.6	500.8	296.3	11.0	30.4	3323.4
Jun	268.4	204.8	63.6	566.8	1928.4	506.7	301.3	11.6	21.0	3335.8
Jul	270.1	206.1	64.0	570.0	1934.3	514.2	302.3	12.0	22.0	3354.8
Aug	271.2	207.3	63.9	569.8	1937.2	521.1	308.6	11.1	11.9	3359.7
Sep	272.4	208.7	63.7	568.8	1941.0	529.8	305.3	11.1	24.5	3380.5
Oct	273.4	209.7	63.7	568.8	1948.3	535.9	306.1	10.6	27.7	3396.6
Nov	274.5	210.7	63.8	567.8	1956.6	537.1	310.4	11.0	16.2	3399.1
Dec	275.2	211.8	63.4	568.3	1959.2	541.1	311.1	11.4	22.9	3414.0
Jan 1989	276.6	213.2	63.4	565.1	1959.6	546.7	310.1	11.1	25.0	3417.6
Feb	277.3	214.1	63.2	565.1	1960.7	553.3	310.1	11.2	25.9	3426.3
Mar	278.2	215.3	62.9	563.0	1964.2	560.1	316.6	10.5	18.1	3432.5
Apr	278.2	215.7	62.5	559.2	1969.3	568.3	305.1	10.5	20.2	3432.6
May	278.5	216.6	61.9	552.4	1971.6	573.1	302.5	10.5	34.3	3444.4
Jun	279.0	217.2	61.8	549.3	1978.4	574.9	301.4	11.7	26.2	3441.9
Jul	280.0	217.8	62.2	554.1	1989.7	574.7	296.9	11.7	23.0	3450.1
Aug	280.8	218.6	62.2	554.5	2002.2	570.5	285.8	10.5	15.9	3439.4
Sep	281.8	219.3	62.5	556.5	2009.8	565.6	274.6	11.1	24.9	3442.5
Oct	282.8	220.0	62.8	560.8	2017.4	562.7	265.5	11.6	20.7	3438.7
Nov	283.2	220.4	62.8	561.6	2027.1	561.0	263.8	10.9	14.7	3439.1
Dec	284.9	221.9	63.0	565.4	2035.0	558.3	255.7	11.2	19.6	3445.2
Jan 1990	287.5	224.6	62.9	562.7	2038.1	554.2	249.9	11.4	23.2	3439.5
Feb	289.7	226.6	63.1	567.2	2045.6	550.1	248.5	10.7	22.0	3444.1
Mar	291.8	228.4	63.4	568.8	2055.9	544.1	244.6	10.6	16.7	3440.7
Apr	293.5	230.1	63.4	569.6	2062.3	538.2	240.5	10.6	20.0	3441.2
May	294.4	231.6	62.8	566.0	2064.0	535.2	247.3	11.1	25.2	3448.8
Jun	296.3	233.4	62.9	568.3	2064.1	532.6	246.1	10.5	20.9	3442.5
Jul	297.9	235.4	62.5	566.1	2067.2	530.7	245.0	10.4	15.3	3434.7
Aug PE	301.2	238.0	63.2	569.5	2072.3	525.4	247.0	10.9	23.1	3448.3

\* Includes Money Market Deposit Accounts  
 \*\* (4+5+6+7+8+9)

Table 1 - Part 2

## Federal Reserve Action and Monetary Growth

Date	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
	Adjusted Reserve Ratio (3/10)	Currency Ratio (2/4)	Savings & Small Time Deposit Ratio (5/4)	Large Time Deposit Ratio (6/4)	Non- deposit Liabil. Ratio (7/4)	Foreign Deposit Ratio (8/4)	Treasury Deposit Ratio (9/4)	Money Multi- plier (24/1)
Jan 1988	0.0193	0.3587	3.3003	0.8846	0.5094	0.0214	0.0451	2.8803
Feb	0.0193	0.3605	3.4119	0.8915	0.5087	0.0199	0.0510	2.8717
Mar	0.0191	0.3616	3.4261	0.8935	0.5043	0.0196	0.0402	2.8709
Apr	0.0192	0.3606	3.4127	0.8878	0.5038	0.0196	0.0387	2.8762
May	0.0191	0.3617	3.4192	0.8906	0.5269	0.0196	0.0541	2.8709
Jun	0.0191	0.3613	3.4023	0.8940	0.5316	0.0205	0.0571	2.8752
Jul	0.0191	0.3616	3.3935	0.9021	0.5304	0.0211	0.0386	2.8729
Aug	0.0190	0.3638	3.3998	0.9145	0.5416	0.0195	0.0209	2.8657
Sep	0.0188	0.3669	3.4124	0.9314	0.5367	0.0195	0.0431	2.8547
Oct	0.0188	0.3692	3.4301	0.9435	0.5389	0.0187	0.0488	2.8442
Nov	0.0188	0.3711	3.4459	0.9459	0.5467	0.0194	0.0285	2.8364
Dec	0.0186	0.3727	3.4475	0.9521	0.5474	0.0201	0.0403	2.8343
Jan 1989	0.0185	0.3773	3.4677	0.9674	0.5488	0.0196	0.0442	2.8142
Feb	0.0184	0.3789	3.4697	0.9791	0.5488	0.0198	0.0458	2.8100
Mar	0.0183	0.3824	3.4888	0.9948	0.5623	0.0187	0.0321	2.7979
Apr	0.0182	0.3857	3.5216	1.0163	0.5456	0.0188	0.0361	2.7854
May	0.0180	0.3921	3.5692	1.0375	0.5476	0.0190	0.0621	2.7610
Jun	0.0180	0.3954	3.6017	1.0466	0.5487	0.0213	0.0477	2.7471
Jul	0.0180	0.3931	3.5909	1.0372	0.5358	0.0211	0.0415	2.7572
Aug	0.0181	0.3942	3.6108	1.0289	0.5154	0.0189	0.0287	2.7536
Sep	0.0182	0.3941	3.6115	1.0164	0.4934	0.0199	0.0447	2.7530
Oct	0.0183	0.3923	3.5974	1.0034	0.4734	0.0207	0.0369	2.7611
Nov	0.0183	0.3925	3.6095	0.9989	0.4697	0.0194	0.0262	2.7611
Dec	0.0183	0.3925	3.5992	0.9874	0.4522	0.0198	0.0347	2.7630
Jan 1990	0.0183	0.3991	3.6220	0.9849	0.4441	0.0203	0.0412	2.7383
Feb	0.0183	0.3995	3.6065	0.9699	0.4381	0.0189	0.0388	2.7399
Mar	0.0184	0.4015	3.6145	0.9566	0.4300	0.0186	0.0294	2.7318
Apr	0.0184	0.4040	3.6206	0.9449	0.4222	0.0186	0.0351	2.7243
May	0.0182	0.4092	3.6466	0.9456	0.4369	0.0196	0.0445	2.7092
Jun	0.0183	0.4107	3.6321	0.9372	0.4330	0.0185	0.0368	2.7059
Jul	0.0182	0.4158	3.6517	0.9375	0.4328	0.0184	0.0270	2.6909
Aug FE	0.0183	0.4180	3.6390	0.9226	0.4338	0.0191	0.0406	2.6808

Table 2

Federal Reserve Action and Monetary Growth

(Compound Annual Rates of Change)

This is accounted for by changes in the:

Date	Monetary Growth (M-1)	Federal Reserve Actions (Monetary Base Growth)	Contribution of the Money Multiplier	This is accounted for by changes in the:						
				Adjusted Reserve Ratio	Currency Ratio	Savings & Small Time Deposit Ratio	Large Time Deposit Ratio	Non-Deposit Liability Ratio	Foreign Deposit Ratio	Treasury Deposit Ratio
Jan 1988	11.72	11.94	-0.22	-5.15	3.00	1.29	0.79	0.27	-0.06	-0.36
Feb	2.92	6.70	-3.78	1.51	-3.10	-1.65	-0.36	0.04	0.08	-0.31
Mar	5.90	6.24	-0.34	1.81	-2.10	-0.81	-0.12	0.25	0.01	0.62
Apr	12.05	9.58	2.47	-0.49	1.83	0.72	0.30	0.03	0.00	0.08
May	4.49	6.85	-2.36	2.08	-1.95	-0.34	-0.15	-1.20	0.00	-0.80
Jun	9.65	7.69	1.96	-0.07	0.72	0.89	-0.17	-0.24	-0.05	0.89
Jul	7.23	8.29	-1.06	-0.59	-0.45	0.46	-0.42	0.06	-0.03	-0.08
Aug	1.56	4.64	-3.09	1.27	-3.02	-0.32	-0.63	-0.57	0.08	0.91
Sep	0.62	5.38	-4.76	2.91	-5.27	-0.65	-0.86	0.25	-0.00	-1.13
Oct	0.31	4.82	-4.51	1.07	-3.78	-0.87	-0.59	-0.11	0.04	-0.28
Nov	1.24	4.67	-3.43	0.02	-3.14	-0.77	-0.12	-0.38	-0.03	1.00
Dec	2.49	3.41	-0.91	3.03	-2.85	-0.08	-0.32	-0.04	-0.04	-0.61
Jan 1989	-2.73	5.93	-8.67	0.65	-7.37	-0.97	-0.74	-0.06	0.02	-0.19
Feb	1.40	3.25	-1.85	1.48	-2.60	-0.09	-0.55	0.00	-0.01	-0.08
Mar	-1.38	3.86	-5.24	2.00	-5.66	-0.90	-0.74	-0.64	0.06	0.65
Apr	-5.12	0.09	-5.21	1.66	-5.03	-1.46	-0.95	0.75	-0.01	-0.18
May	-8.76	1.42	-10.19	3.49	-9.40	-2.09	-0.94	-0.09	-0.01	-1.15
Jun	-3.83	2.15	-5.98	0.27	-4.93	-1.40	-0.40	-0.05	-0.10	0.63
Jul	8.79	4.11	4.68	-0.85	3.77	0.48	0.42	0.57	0.01	0.28
Aug	1.88	3.48	-1.60	-0.85	-1.82	-0.89	0.37	0.92	0.10	0.58
Sep	4.27	4.58	-0.31	-1.38	0.27	-0.03	0.59	1.05	-0.05	-0.76
Oct	8.01	4.25	3.76	-1.54	2.85	0.64	0.59	0.90	-0.03	0.35
Nov	1.86	1.87	-0.01	-0.27	-0.51	-1.16	0.43	0.35	0.12	1.03
Dec	8.44	7.55	0.89	-0.51	-0.03	0.48	0.54	0.82	-0.02	-0.39
Jan 1990	0.00	11.34	-11.34	0.15	-10.58	-1.09	0.12	0.39	-0.02	-0.32
Feb	10.37	9.60	0.77	-0.54	-0.58	0.73	0.71	0.28	0.07	0.11
Mar	5.26	9.08	-3.82	-1.64	-3.26	-0.37	0.63	0.38	0.01	0.44
Apr	3.83	7.31	-3.48	-0.05	-3.79	-0.29	0.54	0.36	0.00	-0.27
May	-3.11	3.58	-6.68	3.40	-7.75	-1.17	-0.03	-0.66	-0.05	-0.43
Jun	6.35	7.92	-1.57	-0.84	-2.38	0.67	0.39	0.18	0.05	0.36
Jul	-0.30	6.61	-6.91	1.19	-7.66	-0.88	-0.01	0.01	0.00	0.44
Aug PE	9.37	14.42	-5.05	-2.18	-3.44	0.60	0.70	-0.05	-0.04	-0.64
	1987	1987	1987	1987	1987	1987	1987	1987	1987	1987
	3.78	6.92	-3.14	1.08	-3.39	-0.20	-0.34	-0.26	0.00	-0.04
	1988	1988	1988	1988	1988	1988	1988	1988	1988	1988
	5.02	6.68	-1.67	0.62	-1.74	-0.18	-0.22	-0.14	0.00	-0.01
1989 -IH	1989 -IH	1989 -IH	1989 -IH	1989 -IH	1989 -IH	1989 -IH	1989 -IH	1989 -IH	1989 -IH	1989 -IH
	-3.40	2.78	-6.19	1.59	-5.83	-1.15	-0.72	-0.02	-0.01	-0.05
1989 -IHH	1989 -IHH	1989 -IHH	1989 -IHH	1989 -IHH	1989 -IHH	1989 -IHH	1989 -IHH	1989 -IHH	1989 -IHH	1989 -IHH
	5.54	4.31	1.24	-0.90	0.76	-0.08	0.49	0.77	0.02	0.18
1990 -IH	1990 -IH	1990 -IH	1990 -IH	1990 -IH	1990 -IH	1990 -IH	1990 -IH	1990 -IH	1990 -IH	1990 -IH
	3.97	8.73	-4.76	-0.06	-4.93	-0.23	0.38	0.11	0.00	-0.04
	-1.57	4.43	-6.00	0.84	-5.69	-0.15	-0.11	-0.66	-0.02	-0.22

Table 3

Federal Reserve Action and Monetary Growth  
(Compound Annual Rates of Change)

Date	THREE-MONTH MOVING AVERAGES									
	Monetary Growth (M-1)	Federal Reserve Actions (Monetary Base Growth)	Contribution of the Money Multiplier	Adjusted Reserve Ratio	Currency Ratio	Savings & Small Time Deposit Ratio	Large Time Deposit Ratio	Non-Deposit Liability Ratio	Foreign Deposit Ratio	Treasury Deposit Ratio
Jan 1988	0.31	8.20	-7.88	-0.31	-6.35	-1.15	-0.48	0.29	-0.02	0.13
Feb	2.85	7.94	-5.09	-0.55	-3.63	-0.93	-0.19	0.32	-0.00	-0.12
Mar	6.85	8.29	-1.45	-0.61	-0.73	-0.39	0.10	0.19	0.01	-0.01
Apr	6.96	7.51	-0.55	0.94	-1.12	-0.58	-0.06	0.11	0.03	0.13
May	7.48	7.56	-0.08	1.13	-0.74	-0.14	0.01	-0.31	0.01	-0.03
Jun	8.73	8.04	0.69	0.51	0.20	0.42	-0.01	-0.47	-0.01	0.06
Jul	7.12	7.61	-0.48	0.47	-0.56	0.34	-0.25	-0.46	-0.02	0.00
Aug	6.14	6.87	-0.73	0.20	-1.18	0.34	-0.41	-0.25	0.00	0.57
Sep	3.13	6.10	-2.97	1.19	-3.18	-0.17	-0.64	-0.09	0.02	-0.10
Oct	0.83	4.95	-4.12	1.75	-4.29	-0.61	-0.70	-0.14	0.04	-0.17
Nov	0.72	4.95	-4.23	1.33	-4.06	-0.76	-0.52	-0.08	0.00	-0.14
Dec	1.35	4.30	-2.95	1.37	-3.26	-0.57	-0.34	-0.18	-0.01	0.03
Jan 1989	0.33	4.67	-4.34	1.23	-4.45	-0.61	-0.39	-0.16	-0.02	0.06
Feb	0.39	4.19	-3.81	1.72	-4.27	-0.38	-0.54	-0.03	-0.01	-0.29
Mar	-0.90	4.35	-5.25	1.37	-5.21	-0.65	-0.68	-0.24	0.02	0.13
Apr	-1.70	2.40	-4.10	1.71	-4.43	-0.82	-0.75	0.04	0.01	0.13
May	-5.09	1.79	-6.88	2.38	-6.70	-1.48	-0.88	0.01	0.01	-0.23
Jun	-5.90	1.22	-7.13	1.81	-6.46	-1.65	-0.76	0.20	-0.04	-0.23
Jul	-1.27	2.56	-3.83	0.97	-3.52	-1.00	-0.30	0.15	-0.03	-0.08
Aug	2.28	3.24	-0.96	-0.48	-0.99	-0.60	0.13	0.48	0.00	0.49
Sep	4.98	4.06	0.93	-1.03	0.74	-0.15	0.46	0.85	0.02	0.03
Oct	4.72	4.10	0.62	-1.26	0.43	-0.09	0.52	0.96	0.01	0.06
Nov	4.72	3.57	1.15	-1.06	0.87	-0.18	0.54	0.77	0.01	0.21
Dec	6.11	4.56	1.55	-0.77	0.77	-0.01	0.52	0.69	0.02	0.33
Jan 1990	3.43	6.92	-3.49	-0.21	-3.71	-0.59	0.36	0.52	0.03	0.11
Feb	6.27	9.50	-3.23	-0.30	-3.73	0.04	0.46	0.50	0.01	-0.20
Mar	5.21	10.01	-4.80	-0.68	-4.81	-0.25	0.48	0.35	0.02	0.08
Apr	6.49	8.66	-2.18	-0.74	-2.54	0.02	0.63	0.34	0.03	0.10
May	2.00	6.65	-4.66	0.57	-4.93	-0.61	0.38	0.03	-0.01	-0.08
Jun	2.36	6.27	-3.91	0.84	-4.64	-0.26	0.30	-0.04	0.00	-0.11
Jul	0.98	6.03	-5.05	1.25	-5.93	-0.46	0.11	-0.16	0.00	0.12
Aug PE	5.14	9.65	-4.51	-0.61	-4.49	0.13	0.36	0.05	0.01	0.05

Table 4

Federal Reserve Action and Monetary Growth  
(Compound Annual Rates of Change)  
(Memo)

Date	Reserve Growth Rate Month to Month	Reserve Growth Rate Three-month Moving Average
Jan 1988	22.28	1.98
Feb	4.15	5.64
Mar	-1.45	8.33
Apr	10.34	4.35
May	5.24	4.71
Jun	4.86	6.82
Jul	9.57	6.56
Aug	-3.25	3.73
Sep	-3.95	0.79
Oct	1.33	-1.96
Nov	0.79	-0.61
Dec	-6.09	-1.32
Jan 1989	-1.41	-2.24
Feb	-3.04	-3.51
Mar	-5.96	-3.47
Apr	-7.00	-5.34
May	-10.45	-7.80
Jun	-2.05	-6.49
Jul	6.74	-1.91
Aug	-0.02	1.56
Sep	6.97	4.56
Oct	5.51	4.15
Nov	0.69	4.39
Dec	4.36	3.52
Jan 1990	-2.58	0.83
Feb	3.98	1.92
Mar	5.98	2.46
Apr	0.38	3.45
May	-11.44	-1.69
Jun	1.44	-3.21
Jul	-7.66	-5.88
Aug PE	15.04	2.94
	1987	
	1.24	
	1988	
	3.65	
	1989 -IH	
	-4.98	
	1989 -IIM	
	4.04	
	1990 -IH	
	8.64	
	-3.40	

Source: Federal Reserve Board; Heinemann Economic Research

NONFARM EMPLOYMENT - HOUSEHOLD SURVEY  
(Thousands of Persons)  
Compound Annual Rates of Change

07-Sep-90		Initial Month																								
Terminal	Aug 88	Sep	Oct	Nov	Dec	Jan 89	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 90	Feb	Mar	Apr	May	Jun	Jul	Aug	
Month	112183	112234	112425	112756	112949	113372	113561	113862	113940	113995	114404	114219	114275	114208	114388	114678	114691	114728	114957	115133	114983	115045	115041	114861	114521	
Sep 88	1.41																									
Oct	1.74	2.06																								
Nov	2.35	2.82	3.59																							
Dec	2.28	2.57	2.83	2.87																						
Jan 89	2.74	3.07	3.41	3.32	4.59																					
Feb	2.62	2.86	3.06	2.89	3.30	2.82																				
Mar	2.70	2.92	3.10	2.97	3.27	2.62	3.23																			
Apr	2.47	2.62	2.71	2.54	2.66	2.02	2.02	0.83																		
May	2.26	2.36	2.41	2.21	2.24	1.66	1.54	0.70	0.58																	
Jun	2.47	2.59	2.65	2.52	2.59	2.20	2.24	1.92	2.47	4.39																
Jul	2.06	2.13	2.13	1.95	1.94	1.50	1.40	0.94	0.98	1.18	-1.92															
Aug	1.94	1.99	1.98	1.80	1.77	1.37	1.26	0.87	0.88	0.99	-0.67	0.59														
Sep	1.73	1.75	1.72	1.54	1.48	1.10	0.97	0.59	0.55	0.54	-0.71	-0.10	-0.78													
Oct	1.74	1.77	1.75	1.58	1.53	1.20	1.09	0.79	0.79	0.83	-0.04	0.59	0.59	1.99												
Nov	1.83	1.86	1.85	1.70	1.67	1.38	1.31	1.07	1.11	1.20	0.57	1.21	1.41	2.53	3.06											
Dec	1.73	1.75	1.73	1.58	1.54	1.27	1.20	0.97	0.99	1.05	0.50	0.99	1.10	1.73	1.80	0.18										
Jan 90	1.65	1.66	1.64	1.50	1.45	1.20	1.12	0.91	0.92	0.97	0.49	0.88	0.85	1.38	1.19	0.27	0.39									
Feb	1.69	1.71	1.68	1.56	1.52	1.29	1.23	1.05	1.07	1.13	0.73	1.11	1.20	1.60	1.50	0.98	1.40	2.42								
Mar	1.70	1.71	1.69	1.58	1.54	1.33	1.28	1.12	1.14	1.28	0.85	1.20	1.29	1.64	1.57	1.20	1.55	2.14	1.85							
Apr	1.53	1.54	1.51	1.39	1.35	1.14	1.07	0.91	0.92	0.95	0.61	0.89	0.93	1.18	1.04	0.64	0.77	0.89	1.14	-1.55						
May	1.49	1.50	1.47	1.35	1.31	1.10	1.04	0.89	0.89	0.92	0.61	0.87	0.90	1.11	0.99	0.64	0.74	0.83	0.31	-0.46	0.65					
Jun	1.42	1.42	1.39	1.28	1.23	1.04	0.98	0.83	0.83	0.85	0.56	0.79	0.88	0.98	0.86	0.55	0.61	0.66	0.22	-0.32	0.38	-0.04				
Jul	1.28	1.27	1.24	1.12	1.07	0.88	0.81	0.66	0.65	0.66	0.37	0.57	0.57	0.70	0.56	0.25	0.26	0.24	-0.19	-0.69	-0.40	-0.92	-1.08			
Aug	1.07	1.06	1.01	0.89	0.83	0.64	0.56	0.41	0.38	0.37	0.09	0.24	0.22	0.31	0.14	-0.18	-0.22	-0.31	-0.76	-1.27	-1.20	-1.81	-2.88	-3.56		

September 30 - October 1, 1990

**NONFARM EMPLOYMENT - PAYROLL SURVEY**  
 (Thousands of Persons)  
 Compound Annual Rates of Change

07-Sep-90		Initial Month																								
Terminal	Aug 88	Sep	Oct	Nov	Dec	Jan 89	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 90	Feb	Mar	Apr	May	Jun	Jul	Aug	
Month	105902	106170	106450	106760	107071	107430	107640	107811	107980	108135	108364	108490	108620	108860	108980	109245	109383	109654	109950	110122	110177	110617	110820	110740	110665	
Sep 88	3.17																									
Oct	3.19	3.21																								
Nov	3.31	3.30	3.55																							
Dec	3.35	3.41	3.51	3.46																						
Jan 89	3.50	3.50	3.70	3.70	4.10																					
Feb	3.32	3.35	3.39	3.34	3.20	2.46																				
Mar	3.11	3.10	3.00	2.96	2.79	2.15	1.03																			
Apr	2.97	2.94	2.90	2.76	2.59	2.09	1.91	1.99																		
May	2.82	2.78	2.72	2.58	2.40	1.98	1.82	1.82	1.65																	
Jun	2.80	2.75	2.70	2.58	2.43	2.10	2.01	2.07	2.11	2.57																
Jul	2.67	2.62	2.55	2.43	2.28	1.98	1.89	1.90	1.87	1.99	1.40															
Aug	2.57	2.52	2.45	2.33	2.19	1.92	1.83	1.83	1.79	1.84	1.47	1.54														
Sep	2.50	2.53	2.47	2.36	2.24	2.01	1.95	1.97	1.97	2.05	1.87	2.11	2.60													
Oct	2.49	2.43	2.37	2.26	2.14	1.93	1.86	1.87	1.85	1.89	1.72	1.82	1.96	1.24												
Nov	2.52	2.47	2.41	2.32	2.22	2.03	1.90	2.00	2.00	2.06	1.96	2.10	2.20	2.10	2.96											
Dec	2.46	2.41	2.35	2.26	2.16	1.98	1.94	1.95	1.94	1.99	1.89	1.99	2.10	1.91	2.24	1.53										
Jan 90	2.49	2.45	2.39	2.31	2.22	2.07	2.03	2.05	2.06	2.11	2.05	2.16	2.20	2.10	2.50	2.27	3.01									
Feb	2.54	2.50	2.46	2.38	2.31	2.17	2.15	2.17	2.19	2.25	2.21	2.33	2.46	2.42	2.72	2.64	3.20	3.30								
Mar	2.50	2.46	2.42	2.35	2.27	2.14	2.12	2.14	2.16	2.21	2.17	2.26	2.37	2.32	2.53	2.43	2.73	2.59	1.80							
Apr	2.40	2.36	2.32	2.24	2.17	2.04	2.01	2.02	2.03	2.06	2.01	2.08	2.15	2.07	2.21	2.06	2.19	1.92	1.20	0.60						
May	2.52	2.49	2.45	2.39	2.33	2.22	2.20	2.23	2.25	2.30	2.27	2.36	2.45	2.42	2.59	2.53	2.73	2.66	2.42	2.73	4.90					
Jun	2.51	2.48	2.44	2.39	2.33	2.22	2.21	2.23	2.25	2.30	2.27	2.35	2.44	2.41	2.56	2.50	2.66	2.59	2.40	2.59	3.60	2.32				
Jul	2.36	2.32	2.28	2.22	2.15	2.04	2.02	2.03	2.03	2.06	2.02	2.07	2.12	2.07	2.16	2.06	2.14	1.99	1.72	1.69	2.06	0.67	-0.96			
Aug	2.22	2.18	2.14	2.07	2.00	1.89	1.86	1.86	1.85	1.87	1.82	1.85	1.80	1.80	1.86	1.74	1.76	1.59	1.29	1.19	1.33	0.17	-0.88	-0.81		

Source: Heinemann Economic Research



REAL RETAIL SALES  
(Millions of 1982 Dollars)  
Compound Annual Rates of Change

14-Sep-90		Initial Month																								
Terminal Month	Aug 88	Sep	Oct	Nov	Dec	Jan 89	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 90	Feb	Mar	Apr	May	Jun	Jul	Aug	
14-Sep-90	119407	118727	120057	121984	121587	121462	120627	119919	120031	121080	120757	121080	123178	123322	121035	121492	120896	122332	121584	120664	118002	110400	120292	120710	119300	
Sep 88	-6.63																									
Oct	7.51	23.79																								
Nov	8.92	17.63	11.70																							
Dec	5.58	9.99	3.68	-3.84																						
Jan 89	4.18	7.07	2.02	-2.54	-1.22																					
Feb	2.85	3.89	-0.57	-4.38	-4.64	-7.95																				
Mar	0.74	2.82	-1.85	-4.99	-5.38	-7.39	-6.83																			
Apr	1.79	3.06	-0.84	-2.25	-1.85	-2.86	1.02	9.82																		
May	1.87	2.99	0.32	-1.48	-1.00	-0.94	1.51	5.95	2.51																	
Jun	1.36	2.29	-0.12	-1.72	-1.36	-1.39	0.32	2.83	-0.37	-3.16																
Jul	2.07	2.98	0.80	-0.39	0.12	0.34	2.00	4.44	2.81	2.95	9.45															
Aug	3.16	4.18	2.31	1.31	1.97	2.43	4.27	8.85	5.94	7.11	12.65	15.93														
Sep	3.82	3.87	2.23	1.32	1.91	2.31	3.88	5.78	5.82	5.88	8.77	8.43	1.42													
Oct	1.17	1.79	0.15	-0.85	-0.54	-0.47	0.51	1.88	0.34	-0.89	0.69	-2.87	-0.89	-20.12												
Nov	1.39	1.99	0.49	-0.40	-0.88	0.83	0.96	1.97	0.94	0.88	1.47	-0.44	-5.36	-8.58	4.62											
Dec	0.93	1.46	0.83	-0.82	-0.57	-0.51	0.27	1.09	0.88	-0.26	0.23	-1.52	-5.46	-7.64	-8.89	-5.73										
Jan 90	1.72	2.27	0.98	0.24	0.57	0.72	1.54	2.42	1.66	1.55	2.25	1.89	-1.64	-2.39	4.36	4.22	15.23									
Feb	1.21	1.89	0.45	-0.26	-0.80	0.89	0.79	1.52	0.75	0.56	1.83	-0.12	-2.57	-3.35	1.37	0.30	3.47	-7.89								
Mar	0.86	1.88	-0.11	-0.81	-0.81	-0.56	0.83	0.82	-0.15	-0.41	-0.18	-1.24	-3.47	-4.26	-0.73	-2.83	-0.76	-7.91	-8.71							
Apr	0.18	0.47	-0.69	-1.38	-1.23	-1.23	-0.73	-0.24	-1.82	-1.33	-1.15	-2.26	-4.32	-5.12	-2.35	-3.69	-3.18	-8.63	-9.38	-10.87						
May	-0.80	0.34	-0.76	-1.42	-1.27	-1.28	-0.82	-0.37	-1.89	-1.39	-1.23	-2.23	-4.07	-4.73	-2.31	-3.42	-2.94	-7.82	-7.88	-8.13	-2.81					
Jun	0.40	0.75	-0.28	-0.88	-0.71	-0.88	-0.21	0.25	-0.38	-0.88	-0.39	-1.23	-2.88	-3.26	-8.92	-1.89	-1.88	-3.96	-3.18	-1.23	3.51	9.35				
Jul	0.57	0.91	-0.87	-0.63	-0.46	-0.41	0.05	0.49	-0.88	-0.26	-0.84	-0.79	-2.18	-2.54	-8.36	-8.86	-8.28	-2.83	-1.72	0.11	3.76	6.77	4.25			
Aug	-0.84	0.26	-0.70	-1.26	-1.13	-1.12	-0.73	-0.36	-0.95	-1.17	-1.83	-1.78	-3.14	-3.54	-1.71	-2.38	-1.86	-4.28	-3.71	-2.87	-8.73	-8.38	-4.88	-13.87		

September 30 - October 1, 1990

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Source: Heinemann Economic Research

**NONDEFENSE CAPITAL GOODS ORDERS**  
 (Millions of Dollars - Three-month Moving Average)  
 Compound Annual Rates of Change

23-Aug-90																										
														Initial Month												
Terminal	Month	Jul 88	Aug	Sep	Oct	Nov	Dec	Jan 89	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 90	Feb	Mar	Apr	May	Jun	Jul
	Month	34398	36826	36626	36096	35102	36627	38536	38991	38559	38572	38605	38942	39294	39240	37972	36149	38739	39755	40546	39610	38443	37852	37797	36224	37384
	Aug 88	126.75																								
	Sep	45.74	-6.33																							
	Oct	21.27	-11.32	-16.05																						
	Nov	6.27	-17.45	-22.51	-20.48																					
	Dec	16.26	-1.62	0.00	9.15	66.57																				
	Jan 89	25.51	11.51	16.47	29.91	75.08	84.02																			
	Feb	23.97	12.10	16.20	26.04	52.24	45.55	15.11																		
	Mar	18.69	8.20	10.83	17.17	32.55	22.84	8.36	-12.51																	
	Apr	16.50	7.19	9.20	14.19	25.39	16.79	0.37	-6.28	0.30																
	May	14.05	6.49	8.21	12.21	20.96	13.46	0.54	-3.90	0.72	1.05															
	Jun	14.49	8.93	8.52	12.05	19.48	13.04	2.54	-0.30	4.03	5.90	10.97														
	Jul	14.23	7.33	8.80	11.98	18.44	12.81	3.97	1.87	5.82	7.70	11.19	11.40													
	Aug	12.93	6.56	7.81	10.54	16.02	10.89	3.15	1.28	4.28	5.29	6.74	4.69	-1.82												
	Sep	8.84	2.87	3.87	5.68	9.89	4.93	-2.19	-4.44	-3.82	-3.68	-4.84	-9.59	-10.56	-32.58											
	Oct	4.05	-1.58	-1.20	0.14	3.26	-1.56	-8.17	-10.73	-10.48	-12.17	-14.68	-20.01	-20.37	-38.88	-44.60										
	Nov	5.06	-0.19	0.26	1.64	4.66	0.33	-5.57	-7.63	-7.00	-8.01	-9.44	-13.04	-18.26	-23.16	-17.97	21.46									
	Dec	10.76	5.91	6.78	8.63	12.18	8.54	3.45	2.38	4.16	4.64	5.16	4.22	2.84	3.89	20.15	76.93	157.73								
	Jan 90	11.59	7.03	7.92	9.75	13.15	9.84	5.21	4.36	6.21	6.88	7.63	7.16	6.47	8.17	21.74	58.27	88.68	26.66							
	Feb	9.32	4.98	5.88	7.22	10.15	6.94	2.57	1.59	2.98	3.24	3.48	2.59	1.38	1.89	10.67	31.58	35.12	-2.17	-24.43						
	Mar	6.90	2.75	3.28	4.55	7.06	3.95	-0.21	-1.30	-0.30	-0.36	-0.50	-1.70	-3.23	-3.46	2.50	15.82	14.57	-12.58	-27.35	-30.15					
	Apr	5.62	1.66	2.18	3.22	5.47	2.50	-1.42	-2.51	-1.89	-1.87	-2.13	-3.35	-4.86	-5.26	-0.54	9.65	7.43	-13.68	-24.04	-23.84	-16.97				
	May	5.27	1.50	1.91	2.95	5.05	2.24	-1.44	-2.46	-1.78	-1.86	-2.89	-3.20	-4.55	-4.88	-8.69	7.94	5.84	-11.42	-18.99	-17.89	-9.68	-1.74			
	Jun	2.74	-0.90	-0.63	0.21	2.01	-0.73	-4.27	-5.37	-4.88	-5.24	-5.71	-6.98	-8.49	-9.15	-6.89	0.31	-2.39	-16.97	-23.70	-23.52	-21.17	-23.19	-30.95		
	Jul	4.25	0.79	1.12	2.02	3.85	1.30	-2.00	-2.93	-2.29	-2.47	-2.72	-3.70	-4.86	-5.15	-1.85	4.50	2.65	-10.00	-14.99	-12.96	-8.04	-4.85	-6.37	45.90	

Shadow Open Market Committee

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Source: Weinmann Economic Research



## MONETARY POLICY AFTER OIL SHOCK III

William POOLE  
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The Federal Reserve must again cope with difficult conditions arising from an oil shock. Fortunately, the Fed is in far better shape to deal with this shock than it was when facing the two earlier shocks. The oil market is not distorted by price controls, which means that the economy can more easily make the real adjustments required. Although uncertainty over federal policy on oil market intervention is not entirely absent this time, the situation is completely different from that in 1973–74 and 1979–80, when speculation on the government's next move was unavoidably rampant.

The state of the macroeconomy in 1990 is also far more favorable for dealing with the oil shock than it was in 1973–74 and 1979–80. In the earlier episodes, the economy was under powerful inflationary pressure when the shock hit. This time, inflation was reasonably stable in the months before the shock and the economy was growing very slowly, although at a level close to capacity output. The one negative this time compared with the two previous shocks is that the potential for serious physical damage to oil production facilities is far greater now than before. The price of oil is high today not because the world's production of oil has fallen substantially but because oil traders know that the probability of a serious decline in production is far from negligible. The oil markets are working exactly as they should – bidding up the price of oil now promotes immediate reductions in oil usage, conserving inventories against the probability of future shortfalls if Saudi production facilities are damaged.

What can and should the Federal Reserve do in these circumstances? The most important thing is for the Federal Reserve and those looking over its shoulder to recognize that printing money or manipulating the federal funds rate does not produce oil. The Fed's job is to avoid adding a monetary disturbance to the real disturbance of a threatened Persian Gulf war.

If the Fed can't produce oil, can it attack the inflation caused by escalation of oil prices? The answer is affirmative in the sense that a tighter policy could offset some of the aggregate price surge from oil price increases. However, the Fed ought not to pursue such an effort. The increase in oil prices will at most cause a one-shot increase in the price level. Indeed, if the Fed keeps money growth on an unchanged path, a permanent increase in the relative price of oil will, as a first approximation, have no permanent effect on the general price level. In the long run, given unchanged monetary policy, an increase in the relative price of oil will take the form of a substantial increase in the dollar price of oil and a slight

reduction in the prices of all other goods taken together relative to what their prices otherwise would have been. The net result will be to leave the aggregate price level largely unaffected.

Some might argue that the Fed should, if faced with a permanent increase in the relative price of oil, follow an accommodative policy designed to prevent the oil price increase from forcing the money prices of other goods below the paths they would otherwise have followed. That argument, however, is mostly beside the point. We do not *know* that we are faced with a permanent increase in the relative price of oil. In fact, I argue later that there is a significant probability that oil prices are only temporarily high. We can all assign different probabilities to various outcomes, but ought to accept the fact that monetary policy has to play the odds.

### Market Responses to the Persian Gulf Crisis

Figures 1 and 2 (end of memo) provide some detail on financial market responses to the crisis. Treasury yields were falling a bit over the ten days or so prior to Iraq's invasion of Kuwait on 2 August. In the days immediately following the invasion, yields fanned out, with long yields rising and bill yields falling. Three-month bill yields have remained in a range from  $7\frac{1}{2}$  to  $7\frac{3}{4}$  percent (bond yield equivalent basis). The Federal Reserve has kept the fed funds rate in a tight range from 8 to  $8\frac{1}{4}$  percent, except for some fairly typical spikes on Wednesday settlement days. The dollar has been weak since the invasion, but it was declining before the invasion, too. The stock market has also been weak, as we are reminded almost every evening on the TV news.

I have put the stock market and exchange rate indexes together in Figure 2 not to suggest that they are directly connected but merely as a convenient place to plot both series. The two are responding to the same news and not to each other. I have been a bit surprised that the dollar has responded to the crisis by depreciating; in the past, the dollar has often strengthened during heightened international tensions as investors sought a safe refuge for their funds. Perhaps the weakness of the dollar reflects investor concerns that substantial amounts of Kuwaiti and Saudi assets invested in the United States will be withdrawn to help pay for the military buildup and for assistance to heavily impacted economies of Arab countries supporting the effort to force Iraq out of Kuwait. Investors may also be expecting that the United States will bear a far larger financial burden than will other major economies and that this burden will tend to depreciate the dollar.

The price of oil has, of course, been a regular topic of the evening news, often in the form of sound bites from the president and members of Congress beating up on the oil

companies, "price gougers," and "speculators." However, I have not seen any mention on the TV news or in financial columns of major newspapers of the oil market's view on how long high oil prices might last. Figure 3 shows the bets that oil futures traders are placing on the price of oil over the next 18 months. In early July, the market was predicting a gentle rise in the price of oil. In mid-August, oil futures were much higher, but gently declining from near to distant futures. Compared with mid-August, at the end of September near futures were much higher but futures prices were steeply declining from near to distant futures. (Note, by the way, that Figure 3 exaggerates the increase in oil prices, which is large enough without exaggeration, by not starting the vertical axis at zero.)

Clearly, the oil market is betting that oil prices will be significantly higher for at least the next 18 months than the average over the last several years. Still, it is important to recognize that the market does not today anticipate that the price will remain at \$40 per barrel. This expectation seems to me to be fully justified. The long-run elasticity of demand for oil is in the neighborhood of  $-1.0$ , and the short-run elasticity is in the neighborhood of  $-0.3$ . The price of oil has more than doubled since July; if this increase were to be permanent, the quantity of oil demanded would be cut in half in the long run. Of course, many of the adjustments behind this elasticity would be painful. Still, considering the elasticity of demand provides a check on some of the wild oil price forecasts floating around. Just considering demand, without taking account of the elasticity of supply, world oil usage would in time fall short of production at a price of \$40 per barrel even if all Saudi production were lost as well as all Kuwaiti and Iraqi production. At a doubled price of oil, the United States, for example, would become largely self-sufficient in oil.

If this argument is correct, why is the price of oil so high today? The reason is that the adjustments lying behind the demand elasticity take time. Costly investments to economize on oil are not justified if the oil price shock is expected to be transitory. Many supply responses also take time and require additional investment. Some supply responses also require congressional actions to open up additional drilling land, and we all know that Congress rarely sets speed records.

There is much discussion in the press of the inflationary dangers of the oil price shock. Unfortunately, this discussion usually does not make the distinction between a one-shot increase in the price level and an on-going inflation. The oil price shock will cause at most a one-shot increase in the price level provided the Fed does not add a monetary shock to the oil shock.

The common interpretation in the press of the increase in long-term interest rates following the Iraqi invasion is that long rates are reflecting higher inflation expectations. I suspect that this interpretation is incorrect. The largest effect on the general price level from the oil price increase will appear over the next six months. Yet, what we see in the term structure of interest rates in Figure 1 is that short rates have declined while long rates have risen. If interest rates in August and September were driven primarily by inflation expectations, the largest increases in rates should have been at the short end of the market. In the absence of a change in Fed policy – and I see no signs of a change – the average inflation rate over the next 30 years will not differ much from what it would have been without the Iraqi invasion. My reading of Figure 1 is that the term structure has pivoted around one- to two-year maturities, roughly, with longer rates rising and shorter rates falling. I think a better explanation of the long end of the market is that investors have tried to shorten maturities to reduce risk. In the aggregate, of course, investors have to hold the stock of bonds that is outstanding; their efforts to go short bid up long yields and bid down short yields.

### **Monetary Policy**

Given these considerations, monetary policy should be based on the expectation that the long-run price of oil will be substantially below \$40 per barrel in 1990 dollars. However, policy should be robust with respect to a variety of possible short-run outcomes. In the near term, the price of oil may go substantially higher – if war breaks out – or may fall substantially – if the crisis is resolved. Or, the price of oil may remain in the neighborhood of \$40 for a time. Given these short-run uncertainties, along with the high probability that the price of oil in the long run will be substantially below current levels, monetary policy should steer a middle course.

What does "middle course" mean? Money growth should be consistent with trend growth in nominal GNP next year of about 5 percent annual rate, and that means M2 growth at about the same rate. The Federal Reserve should continue with its long-run plan to gradually chip away at inflation by gradually reducing money growth. Maintaining that plan will provide assurance to the markets that the Fed will not add its own inflationary disturbance to that already at hand from the Persian Gulf crisis.

A sensible way to implement the "chipping away" policy under current circumstances would be to maintain M2 growth in the neighborhood of this year's target range midpoint of 5 percent until the economy has worked its way through its current difficulties. If the economy is in a recession at the end of this year, the Fed may find it politically awkward to reduce its target range for money growth, and in my opinion there

would be no reason for it to do so under recession conditions. What is important is that the Fed not overreact to the recession by pumping up money growth. Nor should the Fed let money growth sag in a futile effort to hold interest rates up, as has so often occurred during the early stages of business contractions. A steady policy is what we need to provide a stable base for adjustments in private markets to cope with the oil shock and recession, if one occurs.

### Money Growth

Figures 4 and 5 provide a perspective on money growth. As shown in Figure 4, the Fed has brought M2 growth down over the course of the 1980s. M2 growth over the 12 months ending August 1990 was about 5 percent, which is just where it should have been. However, M2 growth over the six months ending in August, at annual rate of 2.8 percent, was on the low side. Money growth should not remain this low at this time.

Figure 5 shows weekly data on the levels of M1 and M2 – I report both measures because both can be useful in tracking very short-run developments. Both M1 and M2 have been growing since the invasion. M2 growth over the eight weeks ending 17 September has been about 7 percent at an annual rate. This growth suggests that monetary policy is not excessively tight at this time, as some have argued. In fact, we might have expected money growth to be very low over recent weeks given that the Fed is holding the federal funds rate well above the 3-month bill rate.

### Banking and real Estate Ills

Some have argued that the Fed ought to ease policy given the high risk of recession and problems in the banking and real estate industries. Real estate problems are typical of the late stages of economic expansion. However, I suspect that some of the current problems in this industry reflect the Tax Reform Act of 1986 (TRA). Lower marginal tax rates reduce the value of the mortgage interest deduction. Also, TRA reduced the attractiveness of real estate as a tax shelter. Many provisions in TRA are clearly beneficial to economic efficiency; part of what we are now seeing in real estate probably reflects a gradual reallocation of resources in the economy reflecting changed incentives in the TRA. Monetary policy could affect this situation only temporarily; as long as the changed fiscal incentives remain in force, the economy will continue to reallocate resources until a new equilibrium is established with a smaller stock of structures than would otherwise be the case.

Problems in the banking industry do not call for a changed monetary policy either. Bank capital is a concern but monetary policy cannot create bank capital. The Fed, of



course, will provide necessary liquidity to calm the markets should major bank failures occur, but banking problems will not affect the aggregate supply of credit. U.S. credit markets are extraordinarily fluid and efficient. Firms with profitable opportunities will not have a problem in raising funds through sources other than banks. In fact, one of the reasons banks are having difficulty is that intense competition has pushed them toward riskier loans as they have seen, for example, commercial lending opportunities shrink as firms tapped the commercial paper market directly.

### The Budget Accord

One way or another, the federal government will resolve the current budget problem in some temporary way or another, probably by the time of our meeting but certainly within a week or two. I emphasize "temporary" because no permanent solution is on the table. The present negotiations do not contemplate a change in the incentives that have created our budget problem. For the foreseeable future, the political system will operate with an incentive system in which votes are gained, net, by increasing spending and lost, net, by raising taxes. Whatever is the projected size of the deficit reduction for FY1991 and following years, I am willing to bet that the actual reduction will be smaller. The effect of an accord in reducing the total stock of bonds (government and private) outstanding below what it otherwise would have been will be extremely small. For this reason, we should not expect that a budget accord will have much effect on interest rates for a given rate of money growth. The danger is that the Federal Reserve will be pressured into pursuing an easier policy to "offset" fiscal stringency. The Fed has taken the correct position here – let the markets judge the significance of the budget action and bid long-term interest rates up or down appropriately. If a lower federal funds rate is required to maintain money growth after this market reaction, then the Fed should reduce the funds rate.

Taking account of all these considerations, given that money growth is on target, and given all the uncertainties that are pushing the markets around, I think the Fed is doing the right thing at this time in holding the federal funds rate in an unchanged range. (However, the size of the range is too small, as I'll discuss shortly.) We know that monetary policy affects the economy with a lag, and so the Fed has to be looking ahead. If data come in showing that aggregate output is falling, it seem safe to assume that the oil price increase and uncertainty over the war have something to do with the decline. As I emphasized at the beginning of this memo, the Fed cannot produce oil and it cannot affect the probability of war. Given these fact, the Fed cannot do anything about declining output over the next few months, assuming that output does decline. What monetary policy can do, if all goes well, and what the Fed should try to do, is to prevent the initial disturbance

from causing a cumulative decline in economic activity. The key to that effort is to keep money growth on track, and to permit interest rates to fall, and fall rapidly if necessary to maintain money growth, if the economy weakens.

### Fed Funds Rate

The problem the Fed faces in keeping money growth on track is one of its own making – its policy of maintaining the federal funds rate in a very narrow band. Monetary policymakers are well known for maintaining ambiguity about what they are doing, and the Fed certainly follows this practice in its public statements. However, its policy in the credit markets is anything but ambiguous; the market knows within a few basis points where the Fed is maintaining the funds rate. The only ambiguity is whether and when the Fed will change the rate.

The narrow fed funds band has both economic and political disadvantages. The economic problem is that when economic conditions change the Fed sometimes has difficulty in adjusting the rate quickly enough to keep money growth from becoming procyclical. The problem is not that the Fed is inherently sluggish; that problem would be correctable if it were a problem. The problem is that the Fed cannot easily reverse direction without upsetting market expectations. If, for example, the Fed lowers the funds rate one week but then receives new information indicating that the rate should be higher, a reversal tends to confuse the market about the direction of policy. Many firms, and especially securities dealers, have highly leveraged positions; they are justifiably annoyed or worse when the Fed creates surprises for them. The only way to change this situation is to force dealers and other highly leveraged firms to concentrate on processing information about market forces rather than to concentrate so heavily on Federal Reserve actions. A wider band for the federal funds rate would reduce the problem the Fed faces in avoiding creating surprises for dealers. The Fed should reduce its overall scale of open market operations and let the funds rate fluctuate freely in a range at least  $1\frac{1}{2}$  percentage points wide.

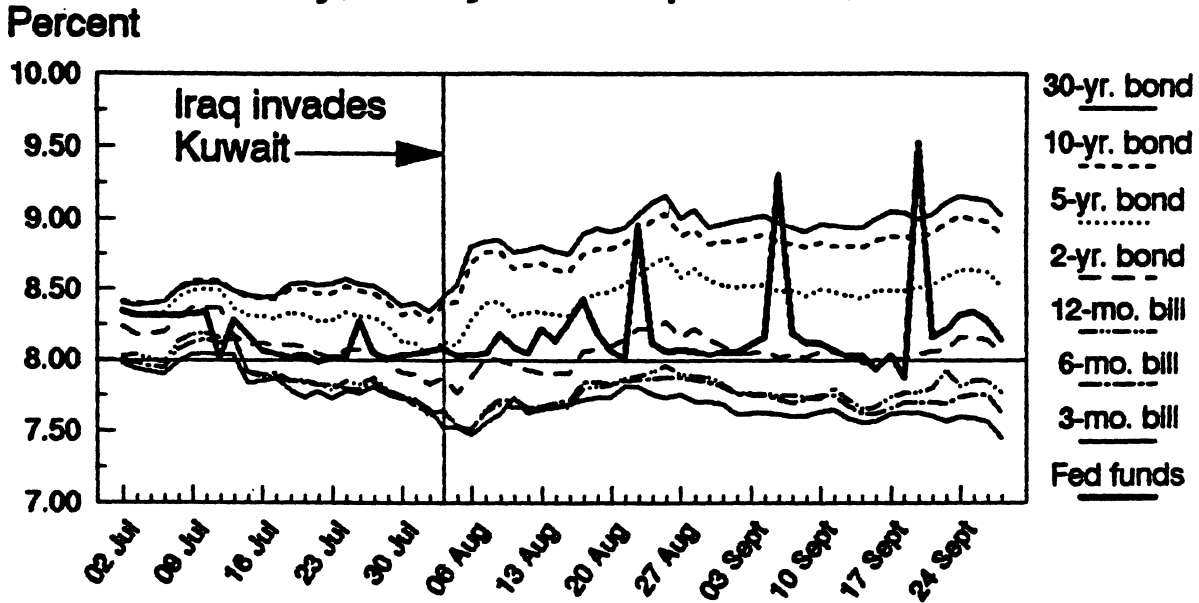
The political problem from the narrow funds rate range is that everyone knows that the Fed is directly and immediately responsible for changes in the federal funds rate and almost as directly responsible for money market rates tied closely to the funds rate. There is no perfect time to change rates; someone has always just closed a deal that is either favored or hurt by the change. People damaged by a rate change have a perfectly natural reaction = "why me?" "Why didn't the Fed change the rate a few days earlier, or a few days later." The Fed has no way to answer such a question because the timing of the Fed's rate changes is inherently arbitrary.

*September 30 – October 1, 1990*

A wider fed funds band would do more than simply provide political cover for the Fed. A wider band would create a genuine reduction in the fraction of the variance of the funds rate attributable to Fed action. The reduction of the Fed's share of the variance would mostly reflect an increase in the market "noise" a wider band would permit. Some argue that this noise is a cost to the economy, but the cost if it exists must surely be small.

### Figure 1

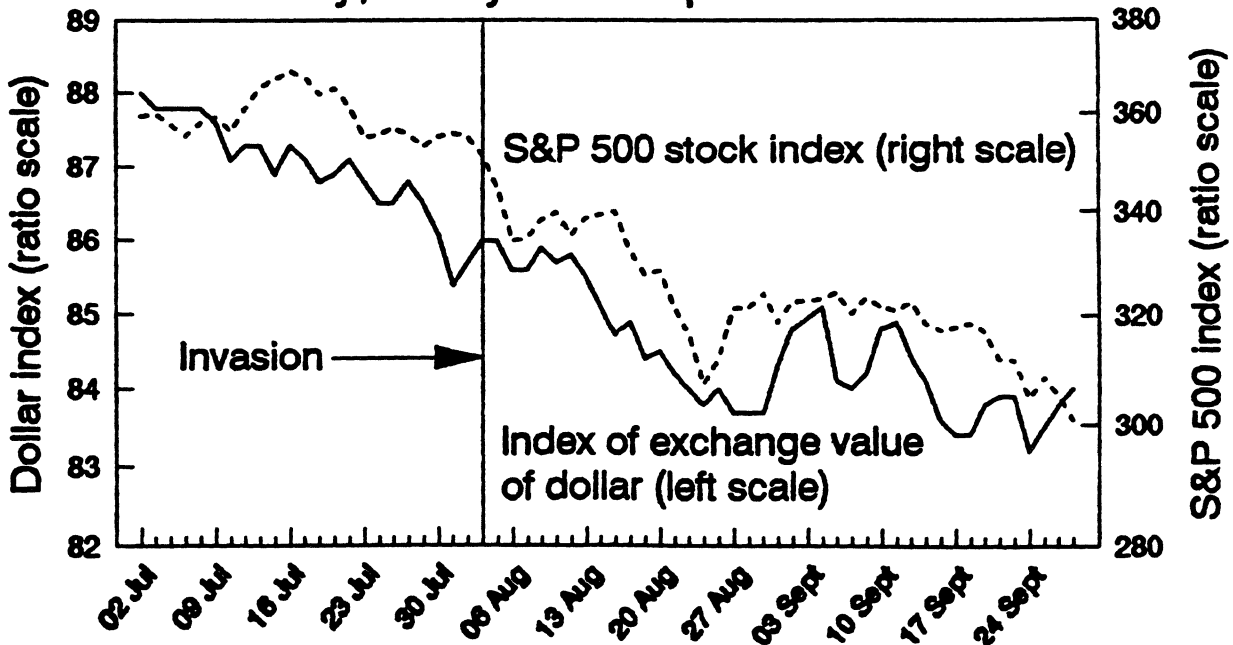
**Yields on U.S. Treasury Securities and Fed Funds  
Daily, 2 July – 27 September, 1990**



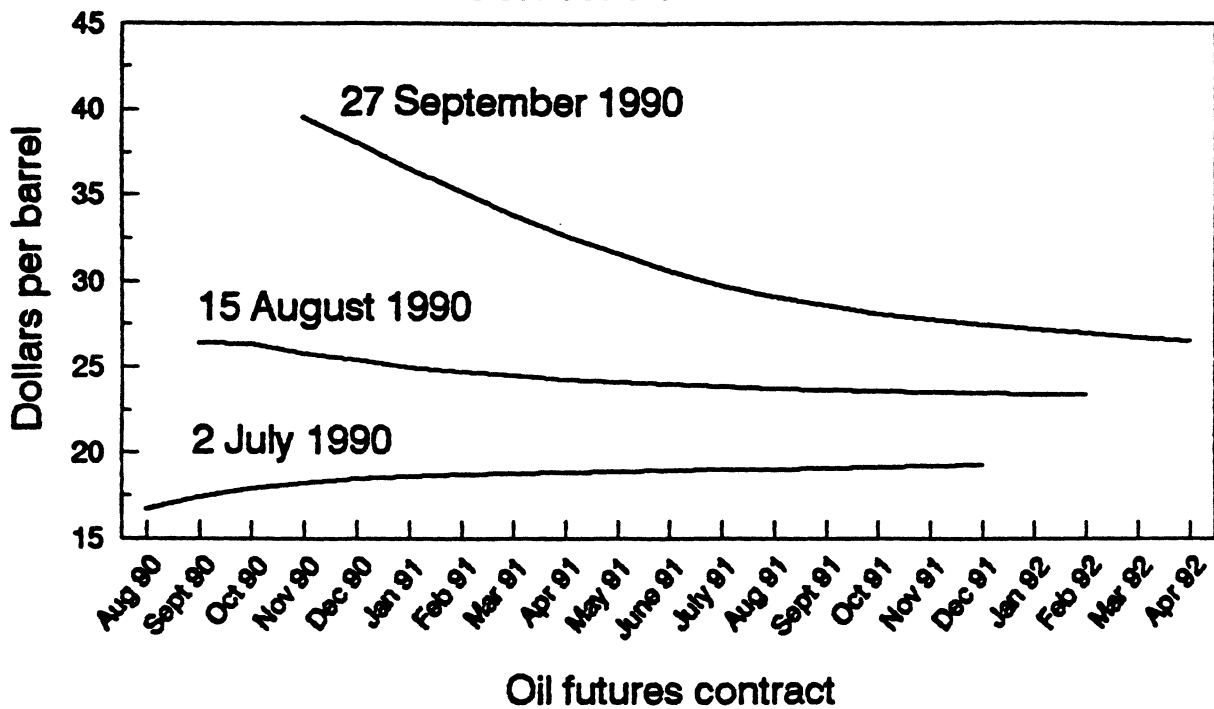
Note: T-bill yields on bond yield equivalent basis

### Figure 2

**Stock Prices and Exchange Rate  
Daily, 2 July -- 27 September 1990**

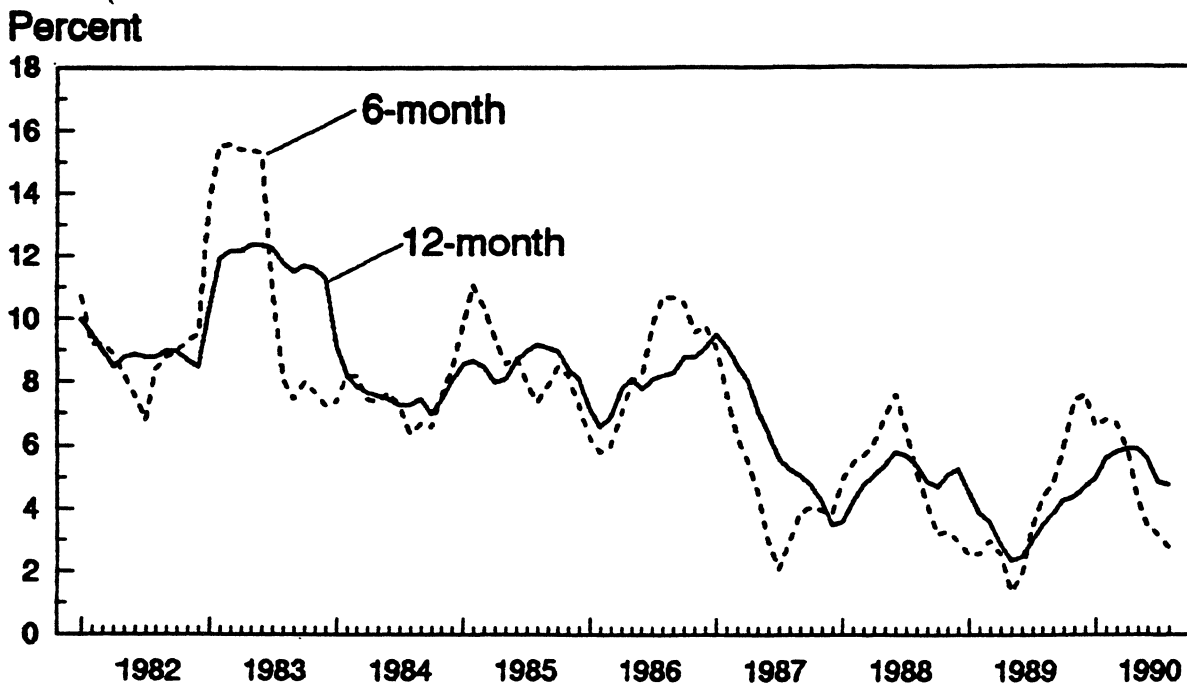


**Figure 3**  
**Term Structure of Oil Futures**  
**Selected Dates**



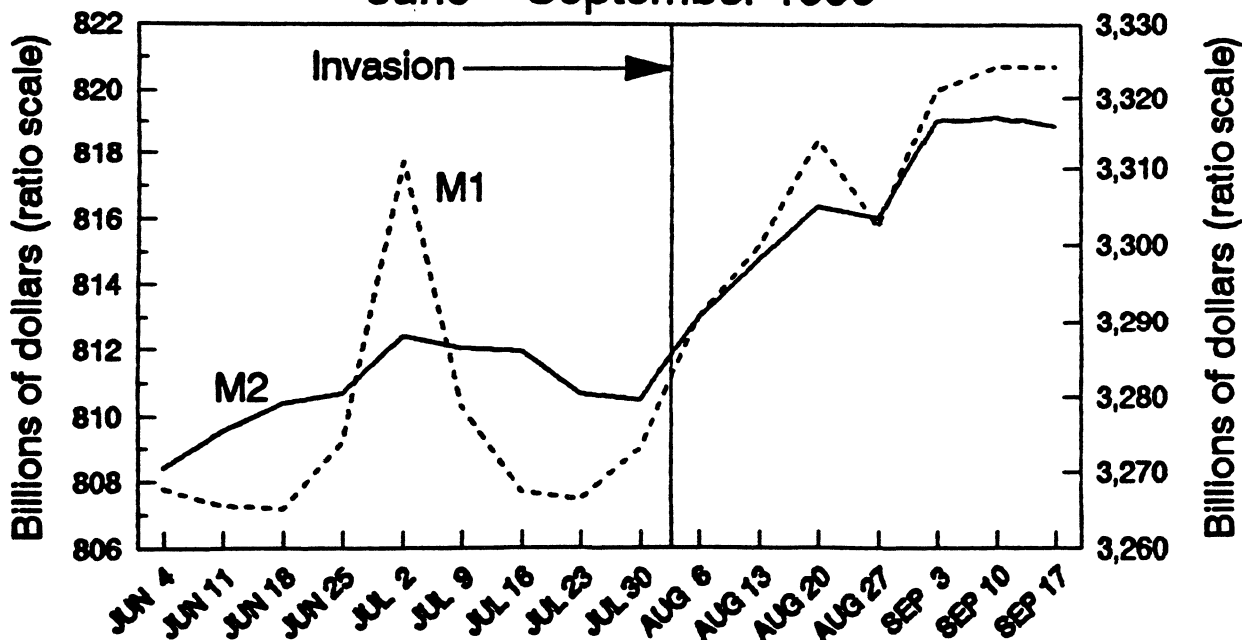
### Figure 4

M2 Growth, Monthly, January 1982 – August 1990  
 6-Month and 12-Month Percentage Changes, Annual Rate



### Figure 5

M1 and M2 Levels, Weekly  
 June – September 1990





## **FOREIGN EXCHANGE MARKET INTERVENTION**

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As of June 1990, foreign currency holdings of the Federal Reserve and the Treasury amounted to \$47.29 billion, 50 percent greater than their holdings a year earlier.

During the three month period ending April 1990, the most up-to-date reporting period for Treasury-Federal Reserve foreign exchange operations, intervention operations totaled \$1.78 billion, of which \$1.58 billion was used to buy yen, the Federal Reserve's share amounting to \$375 million. The balance of \$1.2 billion yen and \$200 million marks was financed by the warehousing arrangement between the Federal Reserve and the Treasury's Exchange Stabilization Fund.

### **Growing Concern in the FOMC**

The report for the period ending April 1990 notes that before March 5, "several officials within the Federal Reserve had expressed concern that the size of the intervention operations might contribute to uncertainty about the Federal Reserve's priority toward achieving price stability. . . . At the time, Federal Reserve holdings of foreign currencies, taking into account anticipated further interest earnings, were approaching the limit of \$21 billion authorized by the Federal Open Market Committee (FOMC). Under these circumstances, the decision was made not to seek authorization from the FOMC for continued Federal Reserve operations pending a review of Federal Reserve currency operations at the FOMC's March 27 meeting. Thus, from March 5 through March 27, all U.S. intervention operations, . . . were financed solely by the U.S. Treasury through the ESF. At the March 27 meeting, the FOMC voted to approve an increase in the authorized limit on Federal Reserve holdings of foreign currencies from \$21 billion to \$25 billion." Purchases of yen thereafter were shared equally between the Federal Reserve and the Treasury.

The record of policy actions of the FOMC on March 27, 1990, reports that three governors dissented on the action to increase the authorized limit.

### **Limits on Warehousing Increased**

The Treasury warehoused not only the \$1.4 billion in yen and marks it acquired in the three months ending April 1990, but also an additional \$600 million of other currencies, for a total of \$2 billion.



At the March 27 FOMC meeting the limit on warehousing was also raised, in this case to \$15 billion. The same three governors again dissented, indicating "that in light of the significant policy issues raised by the duration and scale of the intervention policy they were unable to concur, as a matter of policy, with the Committee's decisions to increase further the authorization for warehousing currencies. . . . substantial increases in the authorized limits on holdings of foreign currencies by the Federal Reserve System for the U.S. Treasury and the ESF under the warehousing authority were inappropriate in the absence of a definitive indication of congressional intent in this area. The transactions in question, which are repurchase agreements that have the characteristics of a loan to the Treasury, could be viewed as avoiding the congressional appropriations process called for under the Constitution."

Despite these dissents, a decision to increase warehousing to \$25 billion was taken between the March 27 and July 2–3 meetings of the FOMC.

### **"Realized Profit" for the Treasury?**

For the quarterly period ending April 1990, the Treasury reported \$292.4 million realized profit, "reflecting the difference between the rate at which the warehoused funds had originally been acquired in the market and the rate at which they were exchanged with the Federal Reserve." Realized profits for the ESF in this case are offset by an equivalent loss the Federal Reserve shows in its Suspense Account on the exchange value of the dollars restored to it under the warehousing arrangement. At the end of the year, the Federal Reserve deducts losses on foreign exchange shown in the Suspense Account from the amounts it rebates to the Treasury. Accordingly, the Treasury's "realized profit" was illusory.

### **Record of Policy Actions of the FOMC July 2–3 Meeting**

The record released on August 24, 1990, reports only the domestic policy directive. Normally the report also covers the directive for foreign currency operations. The explanation for the omission appears to be that no transactions occurred during the May–July period that will be covered in the next issue of the *Quarterly Bulletin* of the Federal Reserve Bank of New York. The August issue of *International Financial Statistics* shows an increase in U.S. foreign currency holdings of \$860 million between end of April and end of June. The increase may reflect interest earnings on foreign currency holdings rather than outright acquisitions.

## **Banking Committee Hearings on August 14**

Congressional attention has finally been directed to the matter of the large increase in foreign currency holdings by the Treasury and the Federal Reserve and the warehousing arrangement. On August 14, Chairman Henry Gonzalez of the House Banking Committee, with no other member present, held hearings at which Under Secretary of the Treasury David Mulford testified not only on foreign exchange market intervention but also on the price at which the Treasury sold zero coupon 30-year U.S. Treasury bonds to Mexico as part of the Brady international debt strategy plan. The issue was whether the sale provided Mexico a \$200 million subsidy. Much of the three and three-quarter hours the hearings lasted was given over to Mulford's denial that a subsidy had been provided, and the testimony of a witness from the General Accounting Office, who supported the chairman's challenge to Mulford's version of the sale.

It seemed ironical to me that so much time was devoted to a possible loss by taxpayers of \$200 million instead of devoting the hearings exclusively to the much greater potential loss on \$46 billion and more in U.S. foreign currency holdings. No representative of the Federal Reserve appeared. I wondered whether the decision to leave it to the Treasury to defend the authorities' foreign currency operations reflected the Federal Reserve's subordinate position in the arrangement or lack of enthusiasm for intervention activities.

The four witnesses on a panel who discussed intervention (Allan H. Meltzer, Anna J. Schwartz, Martin May, and Christopher Whelan) at the hearings were in general agreement that it was ineffective and potentially harmful to domestic monetary policy. It remains to be seen whether Chairman Gonzalez will pursue his initiative further.

The basic issue is that intervention has no economic rationale. As Allan Meltzer testified, Congress should abolish the Exchange Stabilization Fund and end the Federal Reserve's self-authorized right to intervene.



## RECENT GROWTH OF THE MONETARY AGGREGATES

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Since the beginning of 1990 growth of all three monetary aggregates, M1, M2, and M3 has been relatively slow compared to both historical growth in the 1980s and the contemporaneous growth of the monetary base. The Federal Reserve Board has commented on the slow growth of the aggregates in its 1990 Mid Year Review:

The weakness in the monetary aggregates mainly, though not wholly, reflected a rechannelling of credit flows away from depository institutions. . . . the proportion of lending accounted for by depository institutions was down substantially, much of the decrease related to the shrinkage of savings and loan associations. Meanwhile, concerns about credit quality and pressures on capital positions led banks to adopt more cautious lending postures and to hold down deposit growth.

With depository credit damped, not only were managed liabilities weak, but banks and thrifts did not bid aggressively for retail funds – thereby contributing to reduced growth for M2. In addition, increases in expected returns on stocks and bonds may have restrained expansion of this aggregate, although some proportion of the slowdown in M2 remains unexplained by changes in relative yields or income.<sup>1</sup>

The S&L crisis is certainly a major factor in the very slow growth of M3 that has been observed over the past year. Large-denomination time deposits at thrift institutions, those issued in amounts of \$100,000 or more and hence at least partially uninsured, peaked in June 1989 at \$177.8 billion. By December 1989 the stock of these deposits outstanding had declined by 12.6 percent to \$156.8 billion. By July 1990 the stock declined by an additional 18.1 percent to \$130.8 billion. During the same time period large-denomination time deposits at commercial banks remained virtually unchanged, fluctuating in a range of \$397.0 to \$402.0 billion. The impact of the disintermediation of large time deposits at thrift institutions shows up clearly in the behavior of the  $t_2$  multiplier component ratio tabulated in Table 1.<sup>2</sup> From June 1989 through August 1990, this ratio declines by 15.3 percent from a maximum of 1.6082 to 1.3804. Until very recently this disintermediation appears to be concentrated among potentially uninsured depositors who have little if any reliable information on which to judge the soundness of particular thrift institutions. Transactions deposits at thrift institutions are virtually unchanged from a year ago, as are

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<sup>1</sup> Board of Governors of the Federal Reserve System, *1990 Monetary Policy Objectives*, July 18, 1990.

<sup>2</sup> For the definitions of  $t_2$  and other component ratios of various money multipliers see R.H. Rasche and J.M. Johannes, *Controlling the Growth of Monetary Aggregates*, Kluwer Academic Publishers, 1987.

saving deposits. Small-denomination time deposits at thrifts remained quite stable until late spring 1990, but have dropped almost five percent in the past four months. It is possible that this represents a switch of institutions, since the decline in small-denomination time deposits at thrifts has been almost exactly offset by an increase in small-denomination time deposits at commercial banks over the recent months.

The question remains how significant this disintermediation effect is for the narrower monetary aggregates, M1 and M2. This is investigated in Tables 1–5. In Table 1, the component ratios of the money multipliers are presented for both the Board of Governors Monetary Base (part A) and the Adjusted Monetary Base from the Federal Reserve Bank of St. Louis (part B). For simplicity, the currency ratio tabulated here is the ratio of currency plus travelers checks to transactions deposits. The only differences in components is between the reserve ratios,  $r$ . The M1-monetary base multipliers are tabulated in the right hand column of Table 1. A quick glance confirms that there are no significant differences in the behavior of the two base concepts over this period.

Tables 2 and 3 show the elasticities of the M1 and M2 monetary base multipliers with respect to the  $k$ ,  $t_1$ ,  $t_2$  and  $r$  ratios. The elasticities with respect to the  $t_2$  and  $r$  ratios are identical for both money concepts. This is because the denominators of all the money multipliers are identical, and the  $r$  and  $t_2$  ratios only appear in the denominators of the M1 and M2 multipliers. The important information in these elasticities is that the response in either the M1 or M2 multiplier that is generated by fluctuations in the  $t_2$  ratio is unlikely to be of major significance for the observed behavior of these monetary aggregates because the multiplier elasticities are so small.

Tables 4 and 5 show a decomposition of the month-to-month percentage changes (at annual rates) in both M1 and M2 over the period September 1988 through August 1990. The allocation of the percentage change in the multipliers is the product of the respective multiplier elasticity in Table 2 or 3 and the percentage change in the corresponding component ratio. The %unalloc column indicates the residual percentage change in the multiplier, which is attributable to fluctuations in the government deposit ratio, in the foreign official deposit ratio, and to interactions among the various component ratios. With the exception of M2 in January 1989 and January 1990, the unallocated variation in the M1 and M2 measures is extremely small. (I haven't been able to track down what is happening in January; I suspect that there may be some strange behavior arising out of seasonal adjustment factors.)

One important point to note from these tables is that the dramatic decline in large time deposits at thrift institutions is not a major factor affecting the behavior of either M1 or M2. On average over the first eight months M1 and M2 growth have been *increased* .35

percent (annual rates) because of the decline in  $t_2$ . The most important factors driving M1 and M2 growth are the growth of the monetary base and fluctuations in the currency/deposit ratio. To a minor extent M1 and M2 growth have been affected by fluctuations in the small time deposit ratio,  $t_1$ . Month-to-month fluctuations, particularly in M2, attributable to  $t_1$  are sometimes sizable, but on average since the beginning of 1990 the effect of this component has been very small (.5 percent for average M2 growth and -.1 percent for average M1 growth at annual rates since the beginning of 1990). It is not clear what is driving the large increase in the currency/deposit ratio shown in Table 1. It does not seem plausible that there is significant disintermediation out of thrift institutions into cash in mattresses or safe deposit boxes, particularly among agents who were holding time deposits larger than \$100,000 in thrifts.

Any effect of binding capital requirements would appear in the tables in the form of marginal money multipliers that are lower than the average money multiplier because of increases in the reserve ratio. However, reserve ratios for both monetary base concepts have declined slightly over the past two years and been almost unchanged over the past year. While individual depository institutions may be experiencing binding capital requirements, there is no evidence that this is so pervasive that it has any impact on the banking system as a whole.

Table I  
Money Multiplier Component Ratios  
Monthly, Seasonally Adjusted

A. Board of Governors Monetary Base									
	k	t1	t2	r	z	g	mult		
88::8	.3766	3.9545	1.4398	.0154	.0267	.0209	2.8926		
88::9	.3800	3.9675	1.4526	.0152	.0266	.0431	2.8815		
88::10	.3822	3.9854	1.4701	.0152	.0257	.0488	2.8713		
88::11	.3843	4.0122	1.4783	.0151	.0264	.0285	2.8637		
88::12	.3860	4.0213	1.4889	.0150	.0269	.0403	2.8612		
89::1	.3906	4.0485	1.5086	.0149	.0267	.0442	2.8413		
89::2	.3921	4.0549	1.5197	.0148	.0271	.0458	2.8370		
89::3	.3955	4.0885	1.5450	.0148	.0261	.0322	2.8237		
89::4	.3989	4.1268	1.5663	.0146	.0263	.0361	2.8113		
89::5	.4054	4.1809	1.5939	.0144	.0259	.0616	2.7868		
89::6	.4085	4.2373	1.6082	.0144	.0282	.0477	2.7729		
89::7	.4061	4.2379	1.5892	.0144	.0278	.0415	2.7829		
89::8	.4071	4.2670	1.5617	.0144	.0256	.0287	2.7796		
89::9	.4071	4.2788	1.5277	.0145	.0266	.0439	2.7782		
89::10	.4053	4.2685	1.4913	.0145	.0273	.0369	2.7869		
89::11	.4056	4.2941	1.4777	.0145	.0260	.0262	2.7872		
89::12	.4055	4.2914	1.4553	.0145	.0262	.0347	2.7893		
90::1	.4125	4.3302	1.4535	.0144	.0267	.0412	2.7644		
90::2	.4129	4.3278	1.4265	.0144	.0252	.0388	2.7662		
90::3	.4149	4.3367	1.4035	.0144	.0250	.0294	2.7579		
90::4	.4173	4.3374	1.3971	.0144	.0249	.0351	2.7502		
90::5	.4227	4.3456	1.4028	.0143	.0260	.0445	2.7357		
90::6	.4242	4.3356	1.3912	.0143	.0248	.0354	2.7319		
90::7	.4294	4.3717	1.3934	.0142	.0246	.0270	2.7167		
90::8	.4324	4.3618	1.3811	.0141	.0253	.0412	2.7100		

B. St. Louis Fed Adjusted Monetary Base

88::8	.3766	3.9545	1.4398	.0183	.0267	.0209	2.7855		
88::9	.3800	3.9675	1.4526	.0180	.0266	.0431	2.7761		
88::10	.3822	3.9854	1.4701	.0180	.0257	.0488	2.7664		
88::11	.3843	4.0122	1.4783	.0179	.0264	.0285	2.7589		
88::12	.3860	4.0213	1.4889	.0177	.0269	.0403	2.7603		
89::1	.3906	4.0485	1.5086	.0177	.0267	.0442	2.7370		
89::2	.3921	4.0549	1.5197	.0176	.0271	.0458	2.7335		
89::3	.3955	4.0885	1.5450	.0177	.0261	.0322	2.7142		
89::4	.3989	4.1268	1.5663	.0174	.0263	.0361	2.7081		
89::5	.4054	4.1809	1.5939	.0172	.0259	.0616	2.6849		
89::6	.4085	4.2373	1.6082	.0172	.0282	.0477	2.6698		
89::7	.4061	4.2379	1.5892	.0171	.0278	.0415	2.6698		
89::8	.4071	4.2670	1.5617	.0171	.0256	.0287	2.6819		
89::9	.4071	4.2788	1.5277	.0172	.0266	.0439	2.6766		
89::10	.4053	4.2685	1.4913	.0172	.0273	.0369	2.6870		
89::11	.4056	4.2941	1.4777	.0172	.0260	.0262	2.6859		
89::12	.4055	4.2914	1.4553	.0172	.0262	.0347	2.6888		
90::1	.4125	4.3302	1.4535	.0171	.0267	.0412	2.6653		
90::2	.4129	4.3278	1.4265	.0170	.0252	.0388	2.6704		
90::3	.4149	4.3367	1.4035	.0174	.0250	.0294	2.6535		
90::4	.4173	4.3374	1.3971	.0173	.0249	.0351	2.6486		
90::5	.4227	4.3456	1.4028	.0172	.0260	.0445	2.6346		
90::6	.4242	4.3356	1.3912	.0173	.0248	.0354	2.6271		
90::7	.4294	4.3717	1.3934	.0171	.0246	.0270	2.6171		
90::8	.4324	4.3618	1.3811	.0170	.0253	.0412	2.6122		

Table 2

**M1-Monetary Base Multiplier Elasticities  
Monthly, Seasonally Adjusted**

**A. Board of Governors Monetary Base**

	e1(k)	e1(t1)	e1(t2)	e1(r)
88:8	-.48849	-.14606	-.05318	-.23793
88:9	-.48906	-.14402	-.05273	-.23559
88:10	-.48845	-.14344	-.05291	-.23502
88:11	-.48827	-.14351	-.05288	-.23412
88:12	-.49019	-.14143	-.05237	-.23134
89:1	-.48786	-.14127	-.05264	-.23128
89:2	-.48830	-.14031	-.05259	-.23002
89:3	-.48579	-.14103	-.05329	-.23082
89:4	-.48703	-.13918	-.05282	-.22784
89:5	-.48602	-.13741	-.05238	-.22553
89:6	-.48429	-.13816	-.05243	-.22567
89:7	-.48573	-.13855	-.05196	-.22547
89:8	-.48661	-.13890	-.05084	-.22405
89:9	-.48505	-.14039	-.05013	-.22564
89:10	-.48656	-.14076	-.04918	-.22503
89:11	-.48652	-.14153	-.04870	-.22491
89:12	-.48721	-.14139	-.04795	-.22429
90:1	-.48631	-.14009	-.04702	-.22166
90:2	-.48817	-.13938	-.04594	-.21959
90:3	-.48487	-.14163	-.04583	-.22189
90:4	-.48542	-.14053	-.04527	-.22014
90:5	-.48567	-.13855	-.04461	-.21721
90:6	-.48466	-.13903	-.04451	-.21746
90:7	-.48580	-.13710	-.04370	-.21378
90:8	-.48663	-.13549	-.04290	-.21152

**B. St. Louis Fed Monetary Base**

88:8	-.51779	-.12807	-.04663	-.20862
88:9	-.51808	-.12628	-.04624	-.20656
88:10	-.51747	-.12573	-.04638	-.20601
88:11	-.51738	-.12567	-.04630	-.20502
88:12	-.51829	-.12425	-.04601	-.20324
89:1	-.51715	-.12338	-.04597	-.20199
89:2	-.51745	-.12252	-.04592	-.20087
89:3	-.51682	-.12207	-.04613	-.19979
89:4	-.51646	-.12121	-.04600	-.19841
89:5	-.51542	-.11949	-.04555	-.19613
89:6	-.51421	-.11985	-.04548	-.19576
89:7	-.51490	-.12062	-.04524	-.19631
89:8	-.51492	-.12135	-.04441	-.19574
89:9	-.51444	-.12211	-.04360	-.19626
89:10	-.51537	-.12273	-.04288	-.19621
89:11	-.51574	-.12314	-.04237	-.19568
89:12	-.51621	-.12311	-.04175	-.19529
90:1	-.51526	-.12180	-.04088	-.19272
90:2	-.51614	-.12163	-.04009	-.19162
90:3	-.51548	-.12209	-.03951	-.19128
90:4	-.51533	-.12144	-.03912	-.19023
90:5	-.51572	-.11939	-.03844	-.18716
90:6	-.51589	-.11907	-.03812	-.18623
90:7	-.51574	-.11790	-.03758	-.18384
90:8	-.51615	-.11658	-.03691	-.18200



Table 3

**M2-Monetary Base Multiplier Elasticities  
Monthly, Seasonally Adjusted**

**A. Board of Governors Monetary Base**

	e2(k)	e2(t1)	e2(t2)	e2(r)
88:8	-.72073	.61371	-.04663	-.20862
88:9	-.72238	.61565	-.04624	-.20656
88:10	-.72278	.61676	-.04638	-.20601
88:11	-.72377	.61781	-.04630	-.20502
88:12	-.72539	.61943	-.04601	-.20324
89:1	-.72620	.62096	-.04597	-.20199
89:2	-.72714	.62190	-.04592	-.20087
89:3	-.72810	.62347	-.04613	-.19979
89:4	-.72941	.62564	-.04600	-.19841
89:5	-.73130	.62893	-.04555	-.19613
89:6	-.73189	.63070	-.04548	-.19576
89:7	-.73174	.63022	-.04524	-.19631
89:8	-.73250	.63066	-.04441	-.19574
89:9	-.73215	.63042	-.04360	-.19626
89:10	-.73235	.62958	-.04288	-.19621
89:11	-.73316	.63026	-.04237	-.19568
89:12	-.73354	.63018	-.04175	-.19529
90:1	-.73545	.63224	-.04088	-.19272
90:2	-.73646	.63225	-.04009	-.19162
90:3	-.73658	.63191	-.03951	-.19128
90:4	-.73725	.63228	-.03912	-.19023
90:5	-.73970	.63445	-.03844	-.18716
90:6	-.74024	.63409	-.03812	-.18623
90:7	-.74213	.63569	-.03758	-.18384
90:8	-.74338	.63621	-.03691	-.18200

**B. St. Louis Fed Adjusted Monetary Base**

88:8	-.69143	.59572	-.05318	-.23793
88:9	-.69335	.59791	-.05273	-.23559
88:10	-.69377	.59905	-.05291	-.23502
88:11	-.69467	.59997	-.05288	-.23412
88:12	-.69729	.60225	-.05237	-.23134
89:1	-.69692	.60307	-.05264	-.23128
89:2	-.69799	.60411	-.05259	-.23002
89:3	-.69707	.60451	-.05329	-.23082
89:4	-.69998	.60766	-.05282	-.22784
89:5	-.70190	.61101	-.05238	-.22553
89:6	-.70198	.61238	-.05243	-.22567
89:7	-.70257	.61230	-.05196	-.22547
89:8	-.70419	.61311	-.05084	-.22405
89:9	-.70276	.61214	-.05013	-.22564
89:10	-.70354	.61156	-.04918	-.22503
89:11	-.70393	.61187	-.04870	-.22491
89:12	-.70453	.61190	-.04795	-.22429
90:1	-.70651	.61395	-.04702	-.22166
90:2	-.70848	.61449	-.04594	-.21959
90:3	-.70597	.61237	-.04583	-.22189
90:4	-.70734	.61318	-.04527	-.22014
90:5	-.70965	.61528	-.04461	-.21721
90:6	-.70901	.61412	-.04451	-.21746
90:7	-.71220	.61649	-.04370	-.21378
90:8	-.71386	.61730	-.04290	-.21152

Table 4

**Decomposition of Growth Rate of M1  
Monthly, Seasonally Adjusted at Annual Rates  
(Percent)**

**A. Board of Governors Monetary Base**

	$\%m1$	$\%base$	$\%m-k$	$\%m-t1$	$\%m-t2$	$\%m-r$	$\%unalloc$
88:9	.61	5.24	-5.53	-.49	-.49	2.73	-.84
88:10	.46	4.71	-3.63	-.68	-.66	.92	-.19
88:11	1.37	4.56	-3.36	-1.01	-.31	.75	.74
88:12	2.29	3.35	-2.69	-.34	-.39	2.81	-.45
89:1	-2.59	5.76	-7.34	-1.94	-.72	.86	.80
89:2	1.37	3.19	-2.53	-.23	-.41	1.41	-.07
89:3	-1.83	3.79	-5.21	-1.21	-.91	1.19	.53
89:4	-5.21	.09	-5.31	-1.36	-.75	2.27	-.15
89:5	-9.09	1.41	-10.06	-1.87	-.96	3.26	-.88
89:6	-3.87	2.13	-4.74	-1.95	-.49	.79	.39
89:7	8.35	4.02	3.73	.02	.64	-.29	.22
89:8	2.00	3.42	-1.64	-1.02	.93	-.22	.52
89:9	3.84	4.48	.09	-.40	1.15	-.94	-.54
89:10	7.94	4.17	2.69	.35	1.24	-.73	.22
89:11	1.98	1.85	-.48	-.90	.46	.62	.42
89:12	8.18	7.28	.22	.11	.76	.10	-.29
90:1	.00	10.75	-10.57	.18	.06	1.33	-1.75
90:2	9.92	9.17	-.65	.08	.90	.27	.14
90:3	5.08	8.69	-2.99	-.30	.77	-1.42	.33
90:4	3.72	7.05	-3.57	-.03	.21	.24	-.19
90:5	-2.83	3.51	-7.97	-.64	-.19	2.78	-.33
90:6	5.95	7.62	-2.24	.37	.38	-.52	.34
90:7	-.30	6.40	-7.51	-.85	-.07	1.45	.28
90:8	10.48	13.47	-4.21	.32	.39	.98	-.47

**B. St. Louis Fed Adjusted Monetary Base**

88:9	.61	4.68	-5.22	-.56	-.56	3.24	-.96
88:10	.46	4.66	-3.43	-.78	-.76	.97	-.21
88:11	1.37	4.64	-3.17	-1.15	-.36	.57	.84
88:12	2.29	1.68	-2.54	-.39	-.45	4.48	-.50
89:1	-2.59	7.55	-6.93	-2.22	-.83	-1.07	.91
89:2	1.37	2.92	-2.38	-.26	-.46	1.64	-.08
89:3	-1.83	6.65	-4.90	-1.40	-1.06	-1.74	.61
89:4	-5.21	-2.49	-5.01	-1.56	-.87	4.86	-.15
89:5	-9.09	1.25	-9.49	-2.15	-1.10	3.41	-1.01
89:6	-3.87	2.90	-4.46	-2.25	-.56	.05	.45
89:7	8.35	2.90	3.51	.02	.74	.91	.26
89:8	2.00	2.06	-1.55	-1.16	1.07	.97	.61
89:9	3.84	6.17	.08	-.46	1.32	-2.66	-.61
89:10	7.94	3.28	2.54	.40	1.42	.04	.26
89:11	1.98	2.45	-.45	-1.03	.53	-.01	.48
89:12	8.18	6.92	.21	.12	.88	.39	-.34
90:1	.00	10.51	-9.98	.21	.07	1.20	-2.01
90:2	9.92	7.62	-.61	.09	1.04	1.61	.17
90:3	5.08	12.73	-2.82	-.35	.89	-5.78	.40
90:4	3.72	5.92	-3.36	-.03	.25	1.16	-.22
90:5	-2.83	3.54	-7.50	-.74	-.22	2.48	-.39
90:6	5.95	9.38	-2.10	.43	.44	-2.60	.39
90:7	-.30	4.28	-7.08	-.98	-.08	3.22	.36
90:8	10.48	12.74	-3.97	.37	.46	1.43	-.54

Table 5

**Decomposition of Growth Rate of M2  
Monthly, Seasonally Adjusted at Annual Rates  
(Percent)**

**A. Board of Governors Monetary Base**

	%M2	%base	%m-k	%m-t1	%m-t2	%m-r	%unalloc
88:9	1.34	5.24	-7.71	2.41	-.49	2.73	-.83
88:10	3.03	4.71	-5.07	3.33	-.66	.92	-.18
88:11	6.01	4.56	-4.70	4.96	-.31	.75	.74
88:12	3.25	3.35	-3.76	1.69	-.39	2.81	-.45
89:1	.47	5.76	-10.31	9.78	-.72	.86	-4.89
89:2	1.76	3.19	-3.55	1.17	-.41	1.41	-.07
89:3	3.43	3.79	-7.34	6.18	-.91	1.19	.53
89:4	.97	.09	-7.50	7.01	-.75	2.27	-.15
89:5	-1.59	1.41	-14.27	9.82	-.96	3.26	-.86
89:6	6.32	2.13	-6.74	10.26	-.49	.79	.38
89:7	9.79	4.02	5.30	-.11	.64	-.29	.23
89:8	7.61	3.42	-2.33	5.29	.93	-.22	.52
89:9	6.35	4.48	.13	2.07	1.15	-.94	-.54
89:10	6.92	4.17	3.82	-1.81	1.24	-.73	.22
89:11	7.26	1.85	-.68	4.59	.46	.62	.42
89:12	7.62	7.28	.31	-.54	.76	.10	-.29
90:1	3.64	10.75	-15.09	-.95	.06	1.33	7.55
90:2	9.14	9.17	-.92	-.43	.90	.27	.14
90:3	5.66	8.69	-4.28	1.56	.77	-1.42	.33
90:4	2.35	7.05	-5.11	.13	.21	.24	-.19
90:5	-2.24	3.51	-11.43	3.40	-.19	2.78	-.31
90:6	2.64	7.62	-3.21	-1.96	.38	-.52	.34
90:7	1.83	6.40	-10.81	4.56	-.07	1.45	.30
90:8	6.60	13.47	-6.06	-1.72	.39	.98	-.47

**B. St Louis Fed Adjusted Monetary Base**

88:9	1.34	4.68	-7.40	2.34	-.56	3.24	-.95
88:10	3.03	4.66	-4.87	3.24	-.76	.97	-.21
88:11	6.01	4.64	-4.51	4.82	-.36	.57	.84
88:12	3.25	1.68	-3.62	1.65	-.45	4.48	-.49
89:1	.47	7.55	-9.90	9.50	-.83	-1.07	-4.78
89:2	1.76	2.92	-3.41	1.14	-.46	1.64	-.08
89:3	3.43	6.65	-7.03	5.99	-1.06	-1.74	.61
89:4	.97	-2.49	-7.20	6.81	-.87	4.86	-.14
89:5	-1.59	1.25	-13.70	9.54	-1.10	3.41	-.99
89:6	6.32	2.90	-6.47	9.96	-.56	.05	.44
89:7	9.79	2.90	5.08	-.11	.74	.91	.26
89:8	7.61	2.06	-2.24	5.14	1.07	.97	.60
89:9	6.35	6.17	.12	2.01	1.32	-2.66	-.61
89:10	6.92	3.28	3.67	-1.75	1.42	.04	.26
89:11	7.26	2.45	-.65	4.45	.53	-.01	.48
89:12	7.62	6.92	.30	-.53	.88	.39	-.34
90:1	3.64	10.51	-14.50	-.92	.07	1.20	7.29
90:2	9.14	7.62	-.89	-.42	1.04	1.61	.17
90:3	5.66	12.73	-4.10	1.51	.89	-5.78	.40
90:4	2.35	5.92	-4.90	.13	.25	1.16	-.21
90:5	-2.24	3.54	-10.96	3.29	-.22	2.48	-.37
90:6	2.64	9.38	-3.08	-1.90	.44	-2.60	.39
90:7	1.83	4.28	-10.38	4.43	-.08	3.22	.37
90:8	6.60	12.74	-5.82	-1.67	.46	1.43	-.54