SHADOW OPEN MARKET COMMITTEE

Policy Statement and
Position Papers

September 21-22, 1986

PPS-86-6

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SHADOW OPEN MARKET COMMITTEE

The Committee met from 2:00 p.m. to 7:30 p.m. on Sunday, September 21, 1986.

Members of SOMC:

PROFESSOR KARL BRUNNER, Director of the Center for Research in Government Policy and Business, Graduate School of Management, University of Rochester, Rochester, New York.

PROFESSOR ALLAN H. MELTZER, Graduate School of Industrial Administration, Carnegie-Mellon University, Pittsburgh, Pennsylvania.

MR. H. ERICH HEINEMANN, Chief Economist, Ladenburg, Thalmann & Company, Inc., New York, New York.

DR. JERRY L. JORDAN, Senior Vice President and Economist, First Interstate Bancorp, Los Angeles, California.

DR. MICKEY D. LEVY, Chief Economist, Fidelity Bank, Philadelphia, Pennsylvania.

PROFESSOR ROBERT H. RASCHE, Department of Economics, Michigan State University, East Lansing, Michigan; and Department of Economics, Arizona State University, Tempe, Arizona.

DR. ANNA J. SCHWARTZ, National Bureau of Economic Research, New York, New York.

POLICY STATEMENT

Shadow Open Market Committee
September 21, 1986

Pessimism about the current economy and its near-term prospects is overstated. The economy has grown at a 2 1/2% rate for the last two years. This is slightly lower than the average for the last century, but the difference is small.

Concerns about near-term prospects have encouraged a return to the policies of fine-tuning that failed in the past and will fail again. The Treasury Department, Wall Street economists and various seers urge the Federal Reserve, the Bundesbank and the Bank of Japan to lower interest rates.

Efforts to force interest rates lower, to depreciate the dollar and to stimulate the economy to head off protectionist legislation are based on the mistaken belief that we have learned how to stimulate now and prevent inflation later. Efforts to get Germany, Japan and others to replace stable, noninflationary policies with additional stimulus are similarly short-sighted and wrong-headed.

The administration is repeating the mistakes of the Carter Administration. We have been playing "locomotive," and we are now urging others to play locomotive in turn.

A Long-Term Problem

The U.S. has a long-term problem. We spend more than we produce and finance the difference between spending and production by borrowing from the rest of the world. If more of the spending were for productive investments, there would be no problem. The returns from the productive investments would retire the debt and pay the interest as it

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came due. We would have more capital to work with, higher productivity and a higher standard of living as a result.   Living standards would rise.

If, instead, we borrow to maintain or increase current consumption, we will live better today but worse tomorrow.   To repay the increased debt, we must lower our standard of living in the future.

Our problem is NOT the twin deficits in the government budget and in the trade balance. Our problem is the way in which we use resources -- the fact that we are increasing consumption at a high rate but increasing investment in productive capital at a more modest rate. If, as a nation, we continue to borrow overseas between $50- and $150- billion annually for the next few years -- and do not invest more and consume less -- by the end of the decade our standard of living will fall in absolute terms and relative to other countries.

During the 35 years 1951-1986, the share of GNP used for personal consumption has remained between 61.6% and 65.6%. For 1985 and the two most recent quarters, the consumption share is close to the upper end of its range.   During the same period since 1951, the share of gross non-residential investment has remained between 9.0% and 12.1%.

Despite accelerated depreciation, the investment tax credit and other encouragements to investment -- measures that will be eliminated or curtailed in the new tax code -- the share of GNP invested has stayed near the middle of its postwar range.   For the most recent two quarters, the share of gross non-residential investment was 11%.   Net investment is much lower, only 2.2% of GNP in the second quarter (see the attached chart).

If we do not invest more and consume less now, we will have less from which to consume and invest in the future.   Each addition to our

foreign debt carries an obligation to pay interest. The longer we delay closing the gap between production and spending, the more interest we will have to pay and the larger the amount by which future production must exceed future spending. The reason is that, eventually, we have to close not just the deficit in the net exports but the current account deficit. The latter includes the net export deficit and the net interest payments which will be due to the rest of the world.

Choices

The current account deficit problem will not remain unaltered. If we do nothing to increase production, the dollar will fall. This will lower our standard of living, increase our exports and reduce our imports until households and firms around the world become willing to hold the available stock of dollars at a relatively stable exchange rate. To solve the problem by depreciating the dollar will require a reduction of about 4% in the U.S. standard of living by the end of this decade. This will amount to more than $400 per person. Of course, the loss will not be uniform. Some will lose much more, and some will not lose at all. Exchange rate intervention cannot prevent this loss.

The administration's current effort to depreciate the dollar is one way to reduce living standards. It is not the only way. We could restrict imports by protectionist measures, or by forming or joining cartels, as we have done with textiles, steel and microchips.

Protectionism would run the risk of retaliation, so that trade would shrink and everyone would be made worse off. Consumers everywhere would lose the opportunity to purchase higher quality foreign goods at competitive prices. Producers would be forced to use higher

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cost domestic inputs, thereby reducing their ability to compete by increasing costs and reducing efficiency. Retaliation would further lower our standard of living by reducing our exports and the benefits of trade for everyone.

The administration has recently added a cartel arrangement in microchips to the existing cartels in automobiles, steel, food and textiles. Cartels raise costs to consumers and producers. The benefits of trade are lost and standards of living are lowered. Although cartels are intended to maintain output and employment in the U.S., they will almost certainly have the opposite effect. Producers of products that use microchips will be at a competitive disadvantage. The administration also uses export subsidies to sell goods, particularly farm output, abroad. These subsidies will be paid for by taxing consumers and business, thereby lowering standards of living and raising costs at home.

The growth of dollar-denominated debt held by foreigners increases the temptation to inflate away part of our obligations. Current Federal Reserve and administration policy of raising money growth to lower interest rates temporarily -- and depreciate the dollar permanently -- carries high risks of inflation.

Inflation will raise the effective corporate tax rate. Much of the burden of this tax will fall on capital, so we will get less investment. Inflation, particularly if it is unanticipated, also will reduce the exchange rate. In addition, inflation will temporarily lower real wage payments and real costs of production. Output will expand, unemployment will fall and the trade deficit may decline. However, currency depreciation, achieved by inflation, will produce

little lasting benefit. As wages and costs of production rise to reflect the inflation, the trade balance will worsen once again and unemployment will rise.

Each of these measures -- currency depreciation, protection, export subsidies and inflationary policy -- has been tried in recent months. Each of them will work to lower the standard of living. To solve our current international imbalance while maintaining, or increasing, our standard of living, we must invest more to increase productivity.

This year's tax reform has many desirable features. It should be the first of a two-part reform to increase efficiency and productivity. The second step should be substitution of a broad-based consumption tax for the corporate income tax. This step would encourage investment and cause a temporary postponement of consumption. Increased investment will lead to higher productivity and a rising standard of living. Productive investment also would help to service the nation's debt owed to domestic and foreign lenders.

To increase our living standards in a world with low cost labor, we must have low-cost capital, without subsidies, to produce efficiently and increase productivity. Reductions in taxes on capital would reduce the cost of capital, and, by improving the capital stock would increase labor productivity. Elimination of the corporate income tax, and substitution of a broad-based consumption tax, would be the most useful step government could take to reduce our trade imbalance without reducing living standards.

Monetary Policy

Current Federal Reserve policy is irresponsible. After paying a high price to reduce inflation, the Federal Reserve, urged on by the administration, has returned to the short-sighted policies that produced the inflation of the 1970s.

For more than two years, the monetary base has increased at between an 8% and a 9% annual rate. Output has increased at a 2 1/2% annual rate. Base velocity has been little changed. This means that with the current growth rate of base money, inflation is likely to average 5% to 6% over the next several years. As the effect of dollar depreciation spreads through the economy, prices are likely to rise at more than a 5% to 6% rate for a time.

Supply-side incantations are not a substitute for rational policy. Encouraging Germany and Japan to expand demand does not solve the long-term trade problem. Nor does it avoid inflation.

To avoid the coming inflation, the growth rate of the monetary base should be reduced to a rate consistent with price stability. Research prepared for this committee suggests that that rate is in the neighborhood of 3% to 4%. This goal should be achieved by the end of the decade.

Policy Coordination

For the past year, there has been increased discussion of policy coordination. The meaning usually given to this term is that countries should act to dampen fluctuations in spending. In the most common formulation, nations are urged to adjust monetary and fiscal actions so
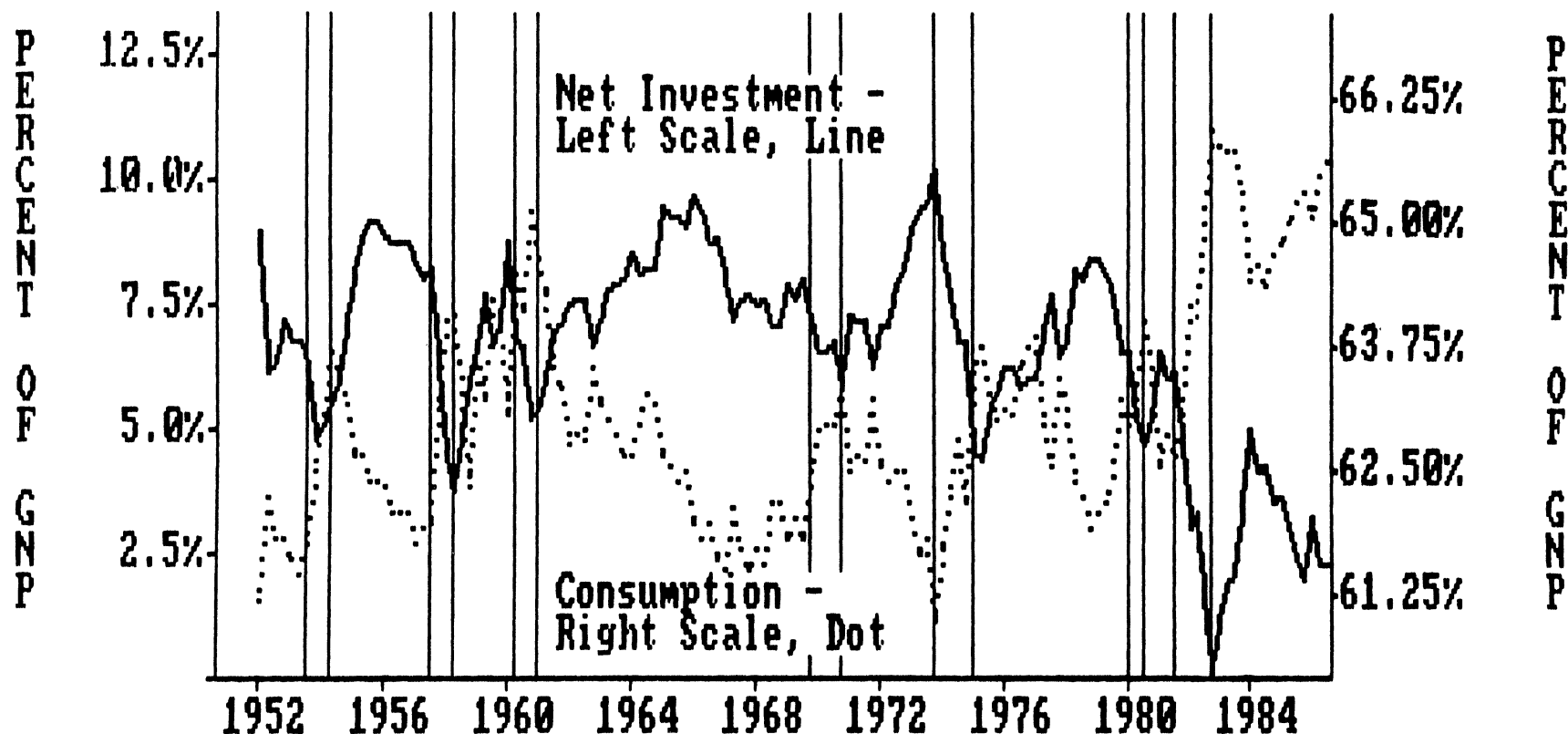
that world demand and its distribution among countries would be controlled. Proponents argue that exchange rate stability could be enhanced in this manner. This is coordination by concerted action.

There is no known way for central banks and governments to increase exchange stability this way. Most exchange rate variation is caused by shifts in policy actions and other unpredictable events. Speculation about monetary and other policies has been a main reason that interest rates, exchange rates and other asset prices have been extremely variable.

Greater certainty could be achieved by setting compatible policies. If all countries were to adopt credible policies to achieve price stability, one major source of variability -- unstable monetary actions -- would be removed. This is coordination by common objectives.

We urge the Federal Reserve, the Bundesbank and the Bank of Japan to adopt price stability as their common objective. Since the U.S. is the furthest from this objective, the burden of adjustment will fall mainly on the United States. But this burden would be lighter if all of the countries were to accept the same goal and announce credible strategies to achieve it.

INVESTMENT IS DOWN AND CONSUMPTION IS UP

P
E
R
C
E
N
T

O
F

G
N
P

P
E
R
C
E
N
T

O
F

G
N
P

12.5%-

10.0%-

7.5%-

5.0%-

2.5%-

66.25%

65.00%

63.75%

62.50%

61.25%

Net Investment –
Left Scale, Line

Consumption –
Right Scale, Dot

1952   1956   1960   1964   1968   1972   1976   1980   1984

Notes: Net investment equals business fixed investment plus
         residential investment plus inventory investment, less
         economic depreciation plus net foreign investment.
         Consumption equals personal consumption expenditures.
Sources: Wharton Econometrics; Heinemann Economic Research

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ECONOMIC OUTLOOK

Jerry L. JORDAN
First Interstate Bancorp

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QUARTERLY III 1986 ECONOMIC UPDATE

Policy Assumptions

• Monetary policy will continue expansive, with M1 growth of approximately 12% in both 1985 and 1986 and 8% in 1987.

• Federal deficit will remain large: $212 bil. in FY 85, $216 bil. in FY 86, and $175 bil. in FY 87.

• Impact of Gramm-Rudman still in question.

• Tax reform represents major structural change for U.S. economy. Nonresidential building, capital spending, housing, and consumer borrowing and expenditures on durables will be restrained by tax changes. Lower tax rates, however, will help many firms, especially in services and retailing, and raise disposable income and spending of many consumers.

Economic Growth

• There is no shortage of demand. Consumer spending has grown at an annual rate of 4% during the past 6 qtrs., 6% last quarter.

• Forces depressing growth should start to be mitigated:

    (1) Auto inventories -- now under control
    (2) Net exports--gradual improvement
    (3) Oil prices--$11-15/b in 86, $12-16/b in 87
    (4) Tax reform -- removal of uncertainty. Initial negative impact on investment, followed by higher consumer spending when tax rates are reduced.

• Real GNP growth, equal to 2.4% in first half of 86, should average 3.5% in second half, 3.9% in 1987.

Inflation

• Inflation should move higher in 1987 because of ending of oil price decline, impact of dollar's drop, and delayed affects of rapid money growth.

• Consumer prices up 3.5% in 85 (fourth qtr. to fourth qtr.), 1.5% in 86 and 4.8% in 87.

Interest Rates

• Tax reform implies lower real interest rates than would otherwise exist because of restraining impact on investment. Much of reduction may have already occurred.

• Interest rates are expected to remain relatively flat during third quarter. Fed uncertainty about economy and low inflation are likely to offset concern about foreign demand for U.S. securities and deficit.

• Interest rates should then move gradually higher in fourth qtr. and in 87 because of:

    (1) Faster economic growth
    (2) Continued concern over deficit
    (3) Weakness of the dollar
    (4) Firming of oil prices
    (5) Higher inflation.

• Short-term interest rates, flat in third qtr. of 86, should rise about 25 basis points in fourth qtr. and 100 basis points in 87. Similar pattern for long-term rates, depending on instrument. Some steepening of yield curve.
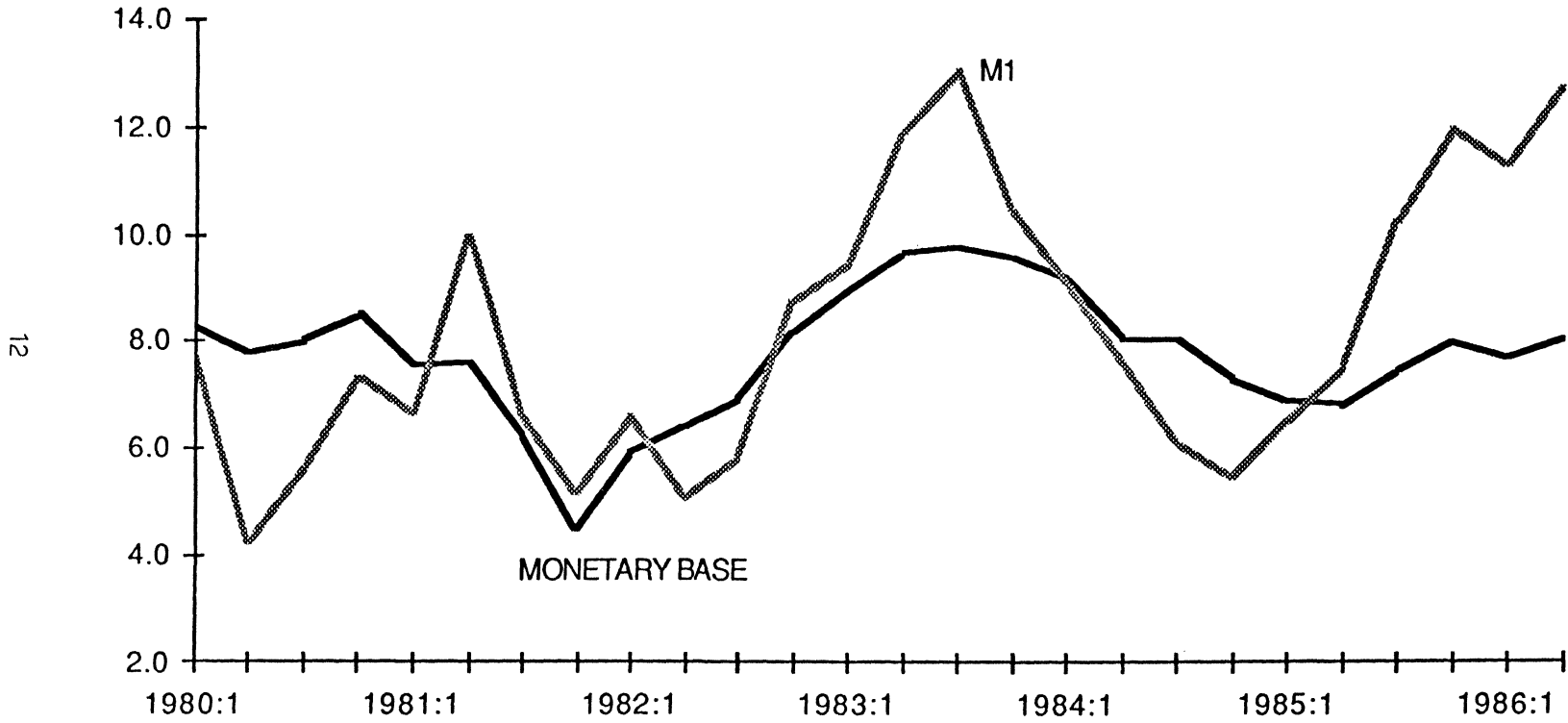

For further information contact Lynn Reaser at (213) 614-3486

MONETARY BASE AND M1 NET OF OTHER CHECKABLES
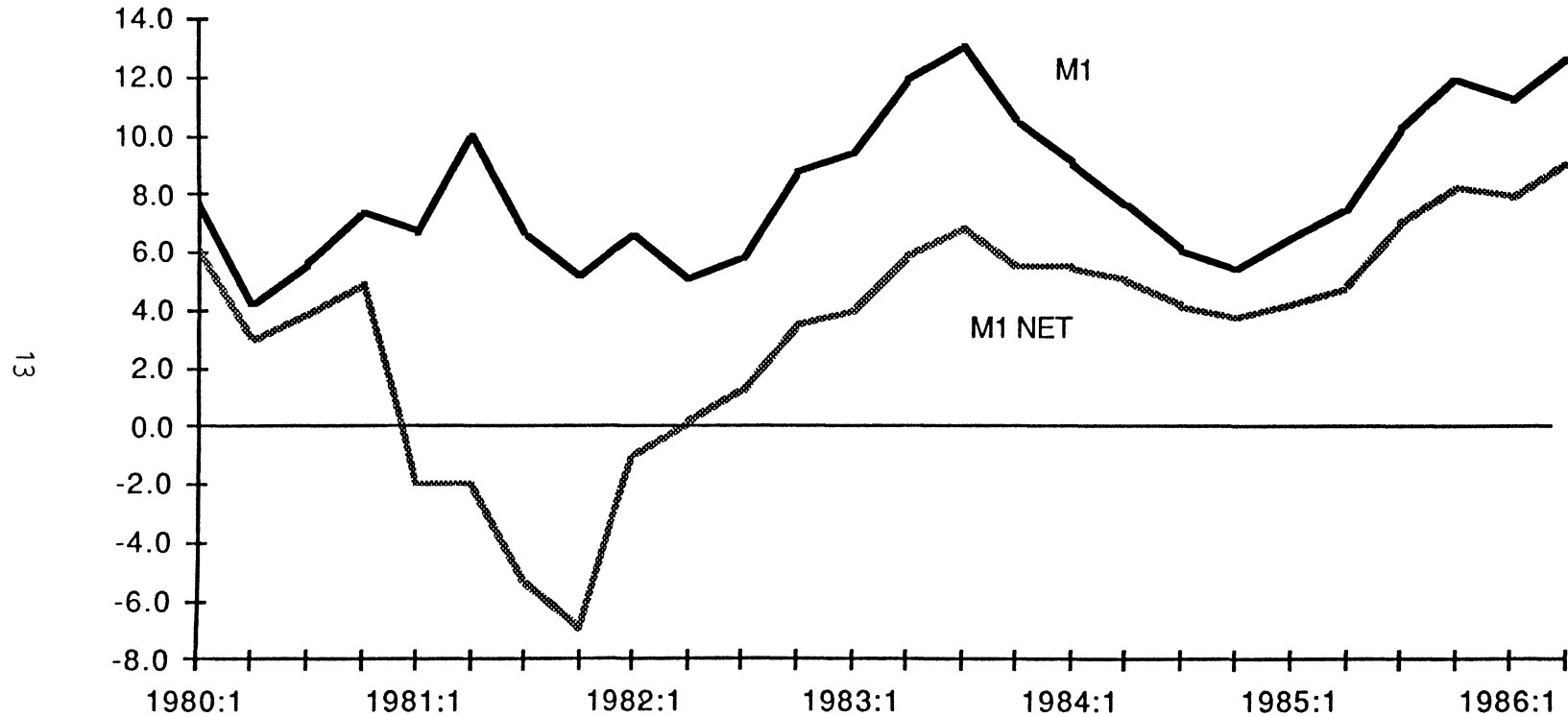## QUARTERLY PERCENT CHANGE OVER YEAR AGO

FIRST INTERSTATE ECONOMICS   SEPT. 4, 1986
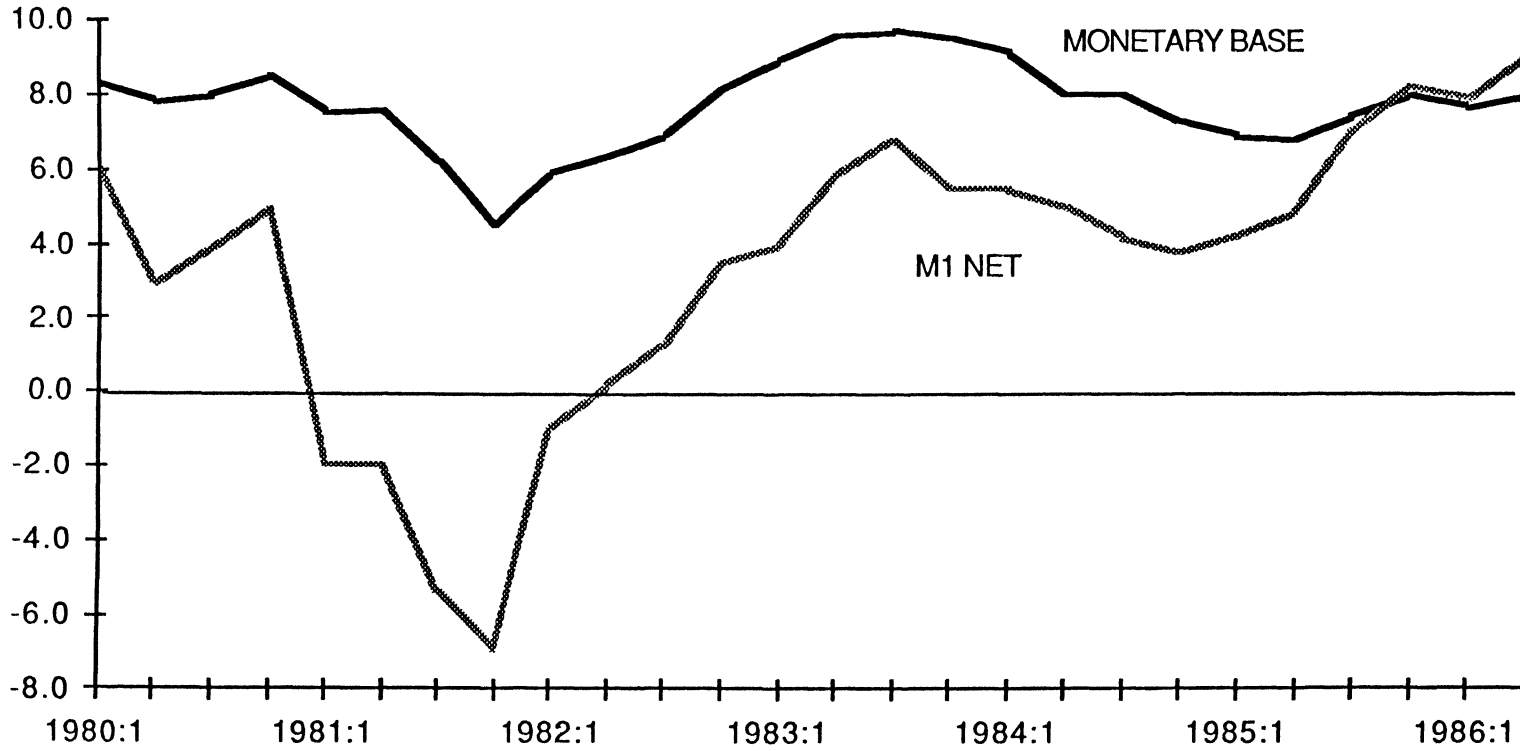
MONETARY BASE AND M1
QUARTERLY PERCENT CHANGE OVER YEAR AGO

M1 AND M1 NET OF OTHER CHECKABLES
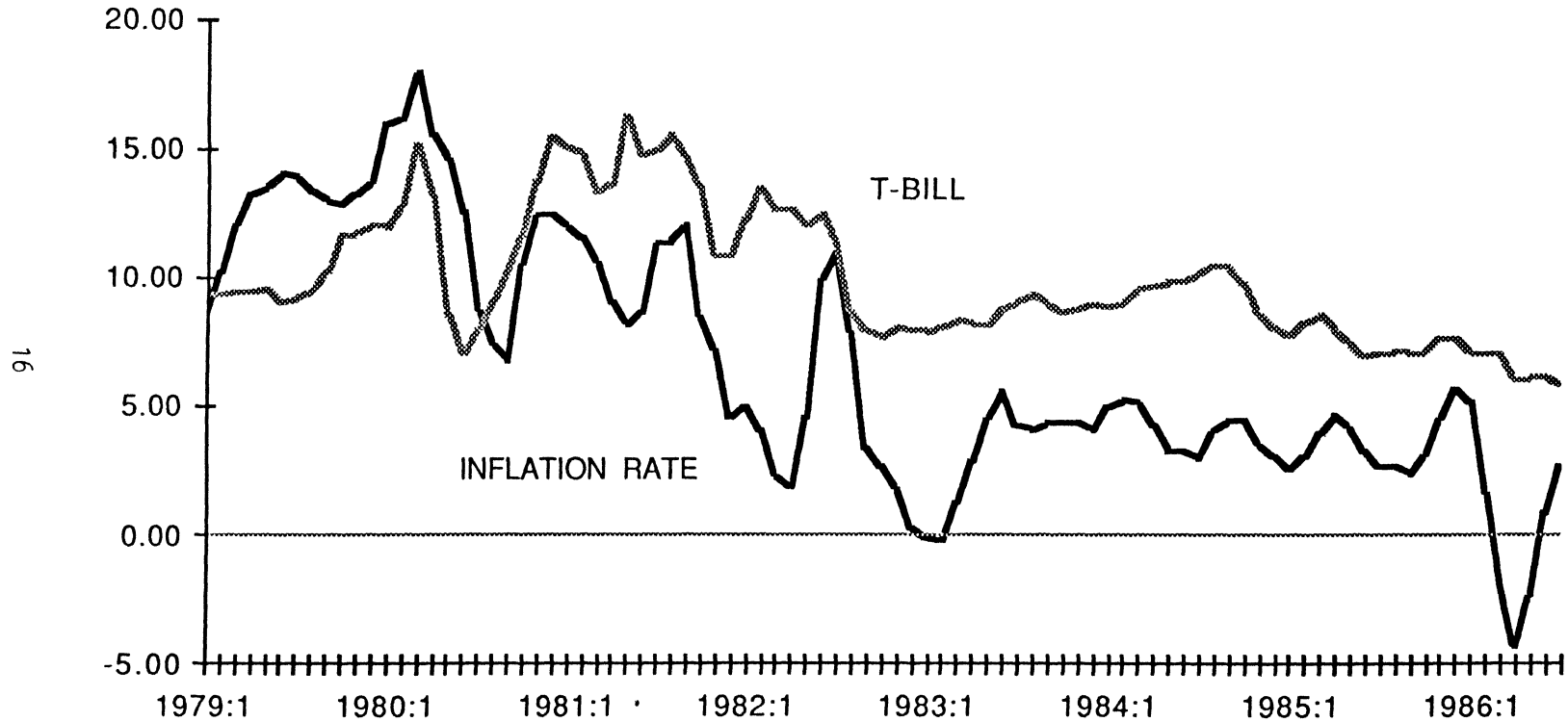## QUARTERLY PERCENT CHANGE OVER YEAR AGO

FIRST INTERSTATE ECONOMICS   SEPT. 4, 1986

ST. LOUIS AND BOARD ADJUSTED MONETARY BASE
QUARTERLY PERCENT CHANGE OVER YEAR AGO

FIRST INTERSTATE ECONOMICS   SEPT. 11, 1986

GROSS DOMESTIC PURCHASES & LAGGED MONETARY BASE
QUARTERLY PERCENT CHANGE OVER YEAR AGO

GROSS DOMESTIC
PURCHASES

ADJUSTED
MONETARY BASE
LAGGED 2 QTRS

FIRST INTERSTATE ECONOMICS   SEPT. 11, 1986
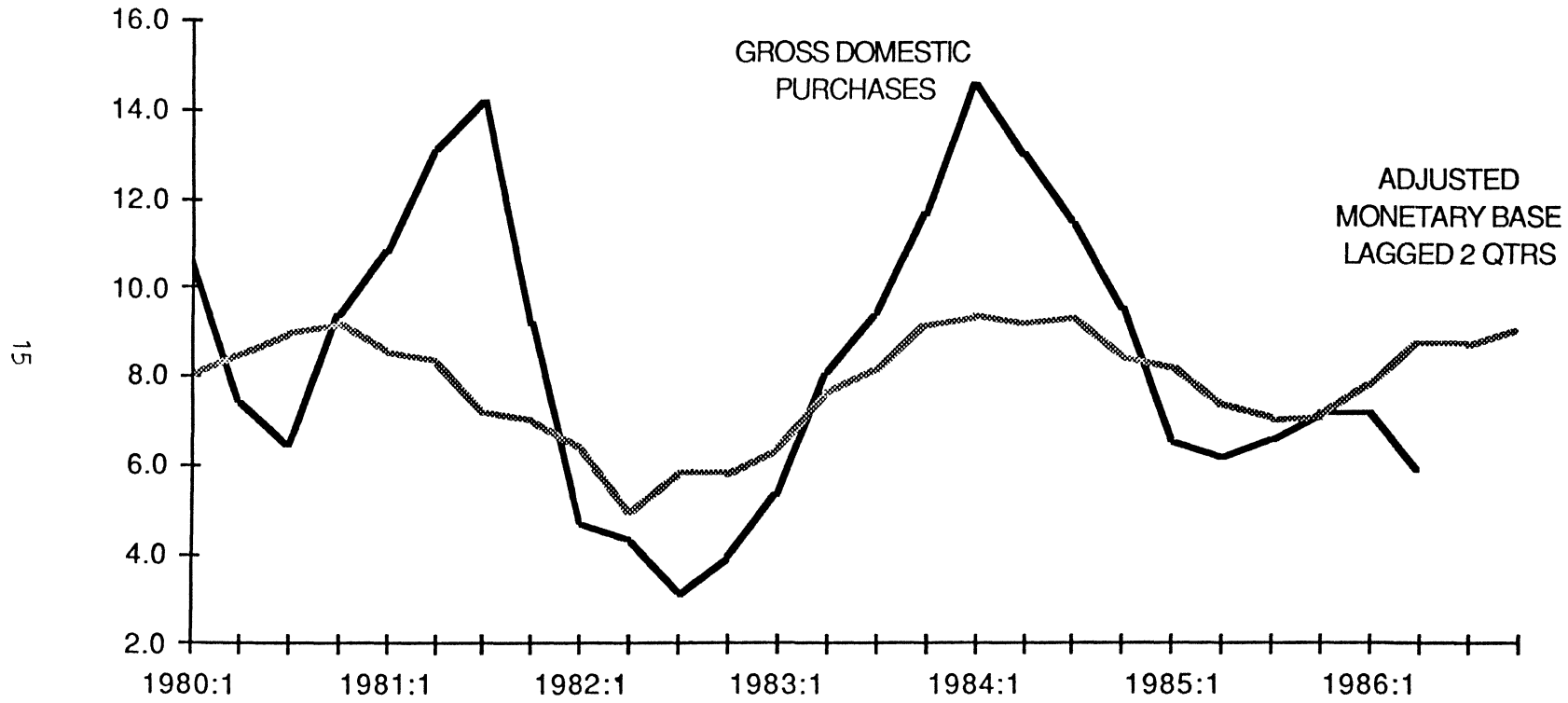
3-MONTH TREASURY BILL & INFLATION RATE*

T-BILL

INFLATION RATE

* Percent change in CPI from 3 months ago, annual rate

FIRST INTERSTATE ECONOMICS   SEPT. 4, 1986

3-MONTH TREASURY BILLS - INFLATION RATE*
REAL INTEREST RATES

* Percent change in CPI from 3 months ago, annual rate

FIRST INTERSTATE ECONOMICS   SEPT. 5, 1986
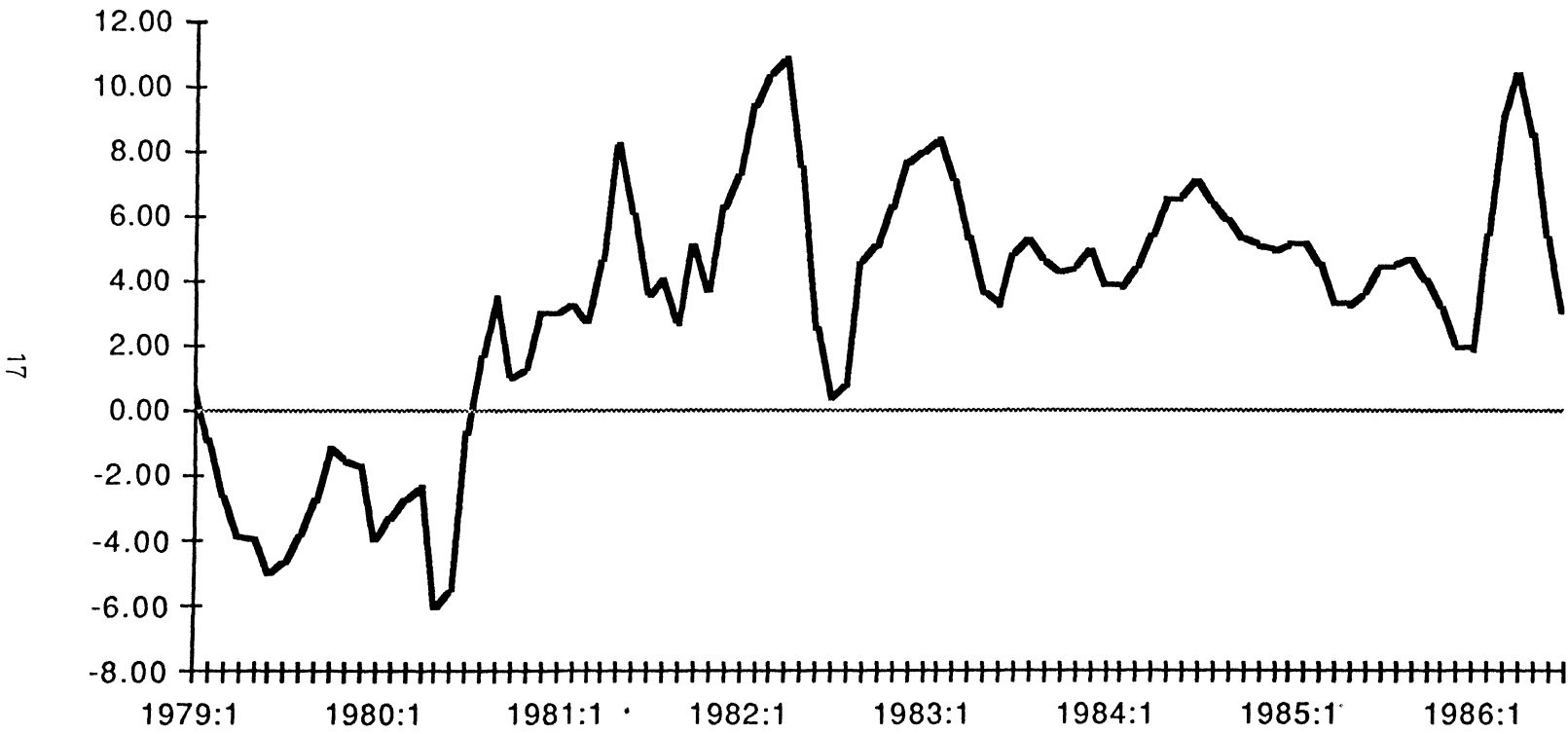
1 YEAR TREASURY BILLS & INFLATION RATE*
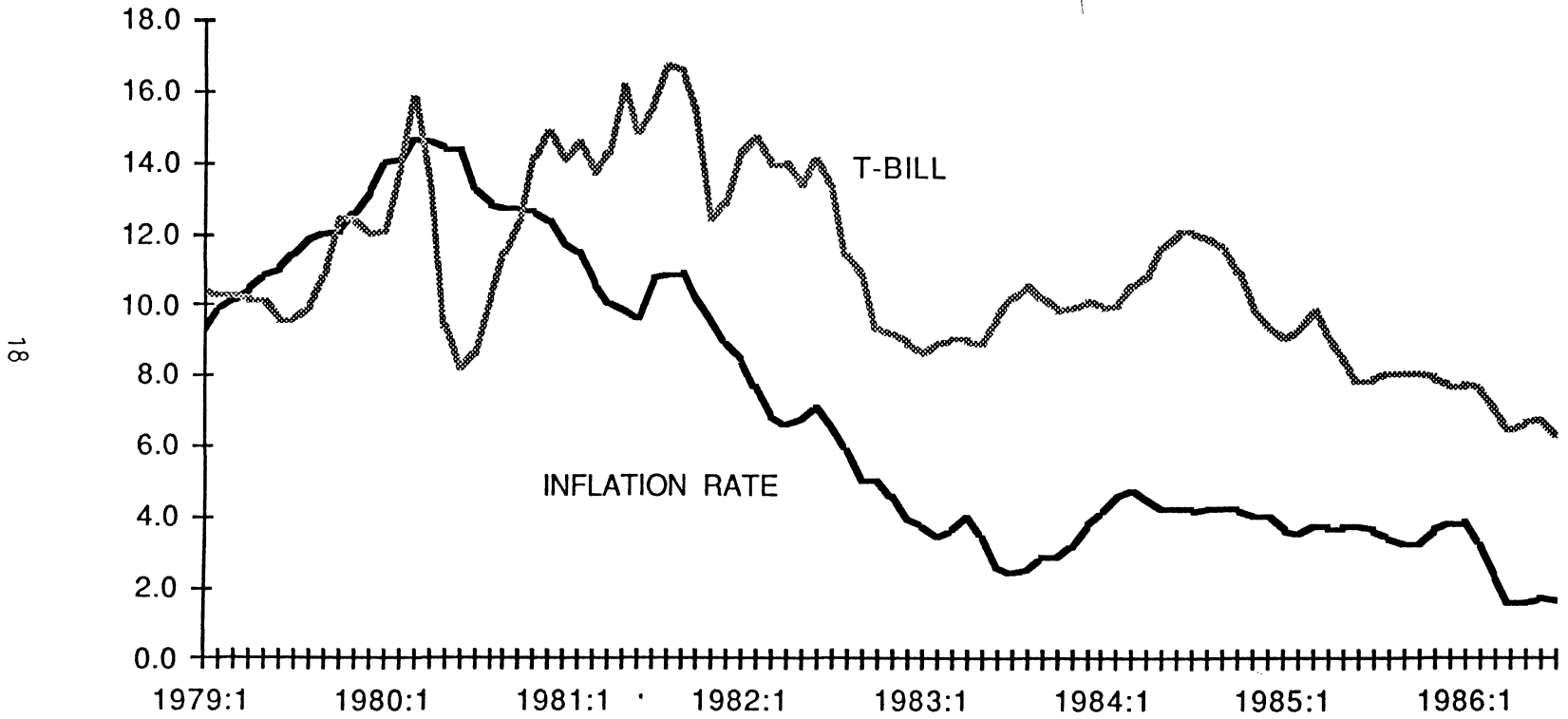
* Percent change in CPI over year ago

ONE YEAR TREASURY BILLS - INFLATION RATE*
REAL INTEREST RATES

* Percent change in CPI over year ago

FIRST INTERSTATE ECONOMICS   SEPT. 5, 1986
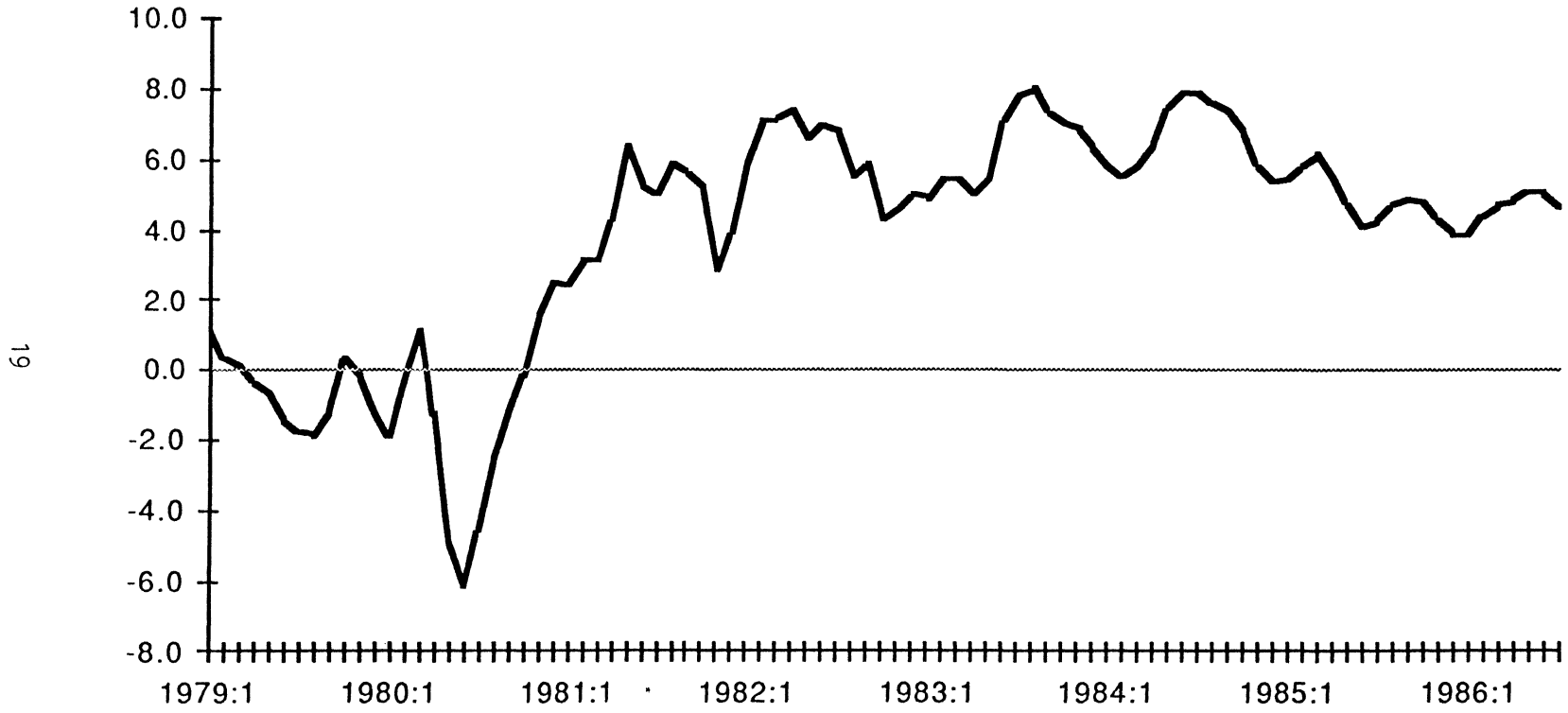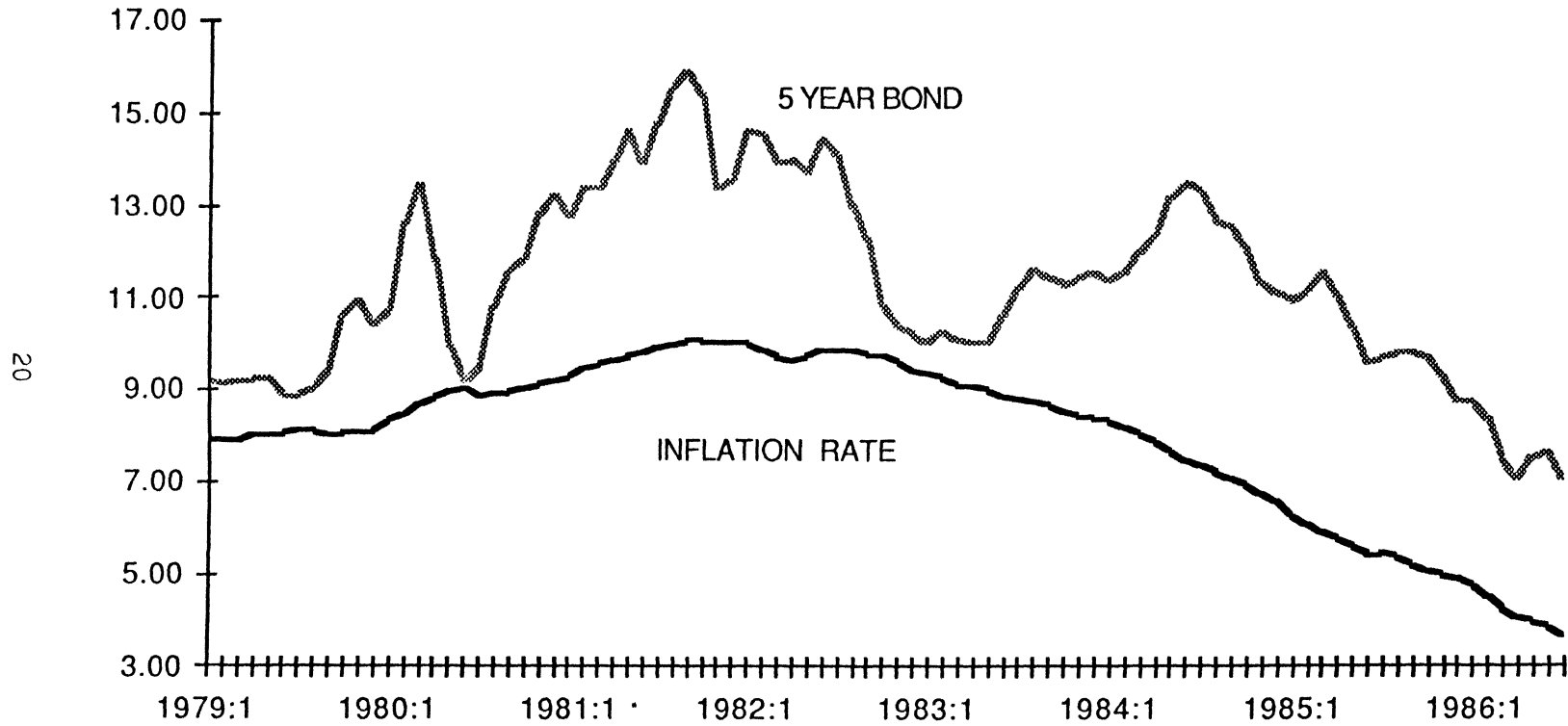
5 YEAR TREASURY BOND & INFLATION RATE*

* Percent change in CPI over five years ago

FIVE YEAR TREASURY BOND - INFLATION RATE*
REAL INTEREST RATES

* Percent change in CPI over five years ago

FIRST INTERSTATE ECONOMICS   SEPT. 5, 1986

10 YEAR TREASURY BOND & EXPECTED INFLATION *
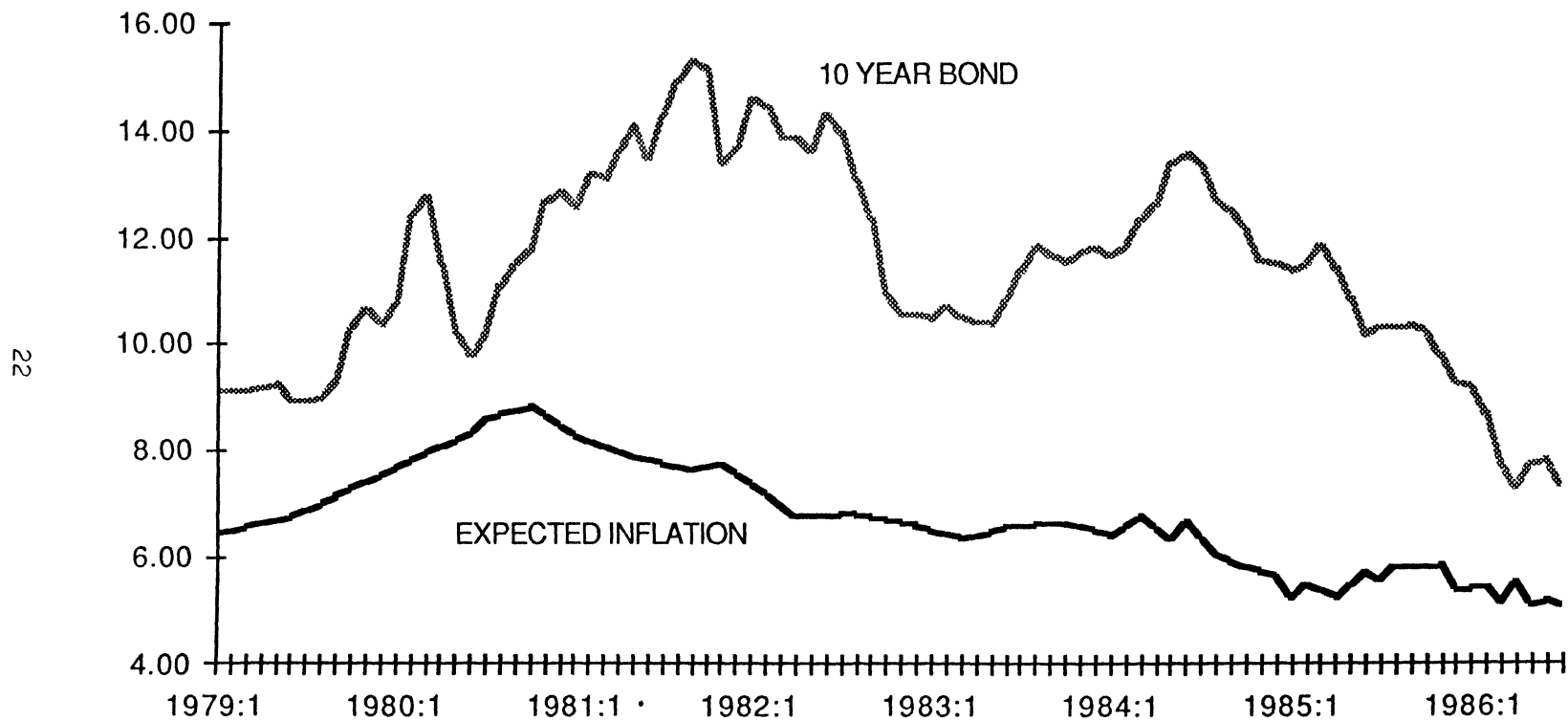
* Drexel Burnham Poll

TEN YEAR TREASURY BOND - EXPECTED INFLATION RATE*

REAL INTEREST RATES

* Drexel Burnham Poll

FIRST INTERSTATE ECONOMICS   SEPT. 11, 1986

SPREAD BETWEEN LONG AND SHORT-TERM REAL INTEREST RATES
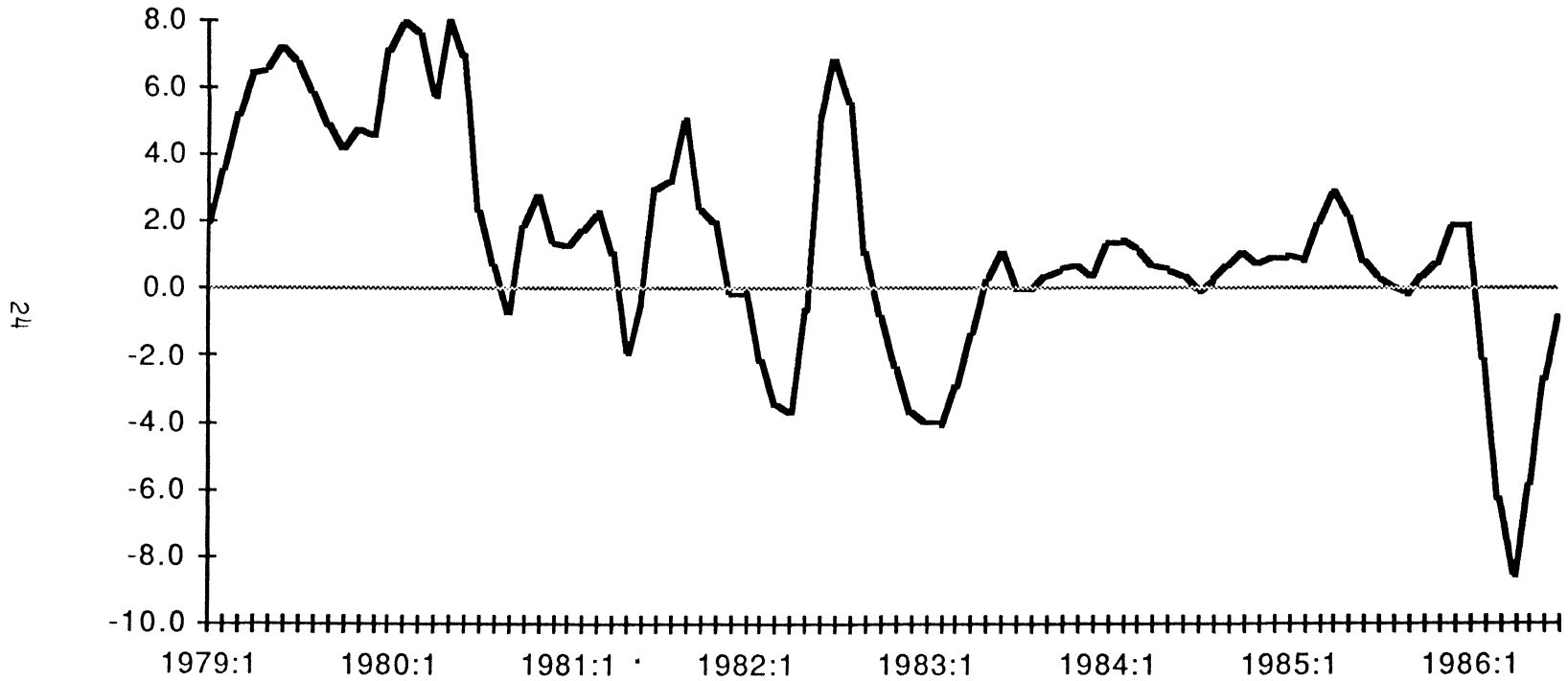
* 10 YEAR REAL INTEREST RATE - 3 MONTH REAL INTEREST RATE

FIRST INTERSTATE ECONOMICS   SEPT. 11, 1986

QUARTERLY ECONOMIC UPDATE

1986-1987

First Interstate Economics

August 18, 1986

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FEDERAL DEFICIT

(Billions, fiscal years)
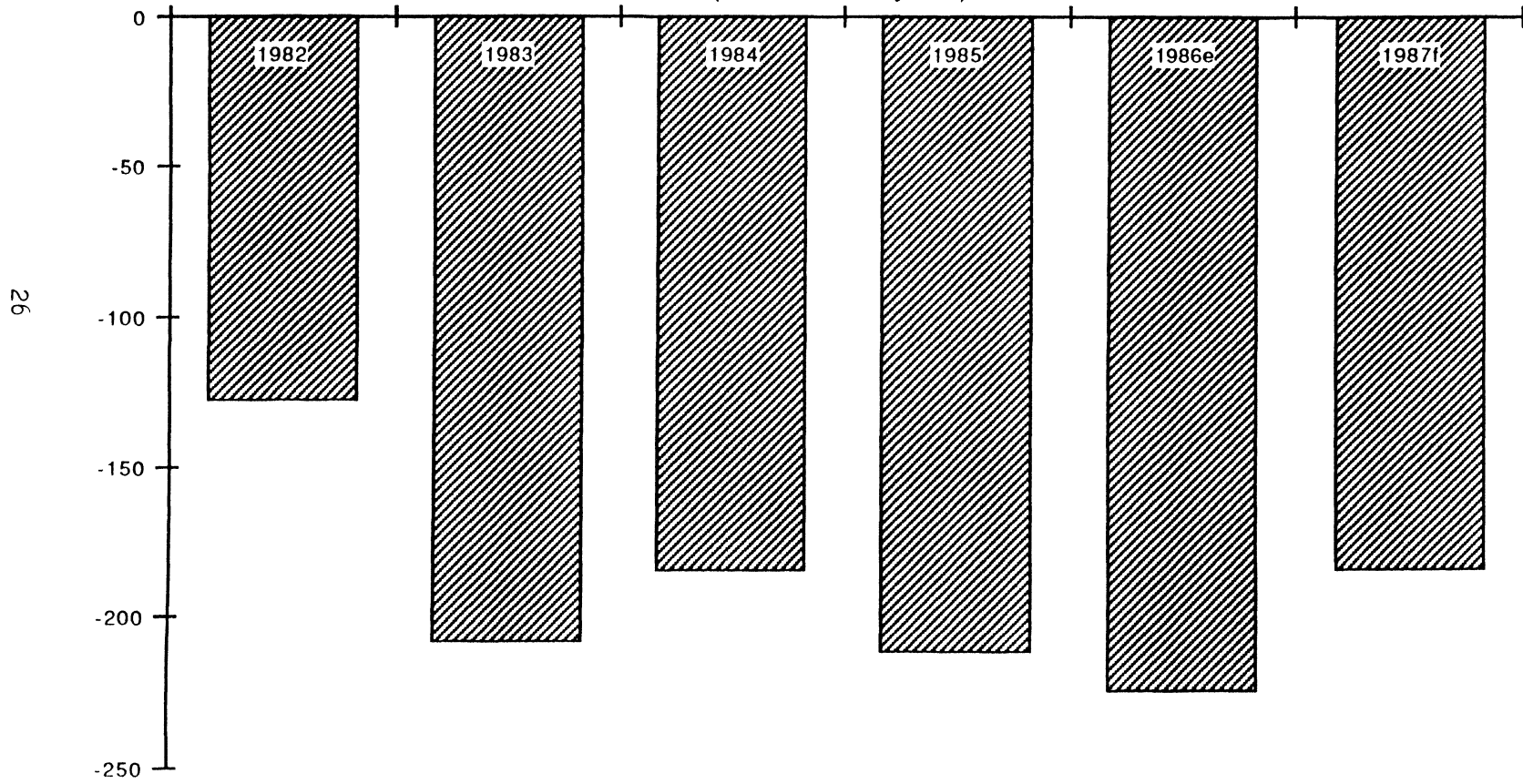
TRADE-WEIGHTED VALUE OF THE DOLLAR

(Index, March 1973=100)
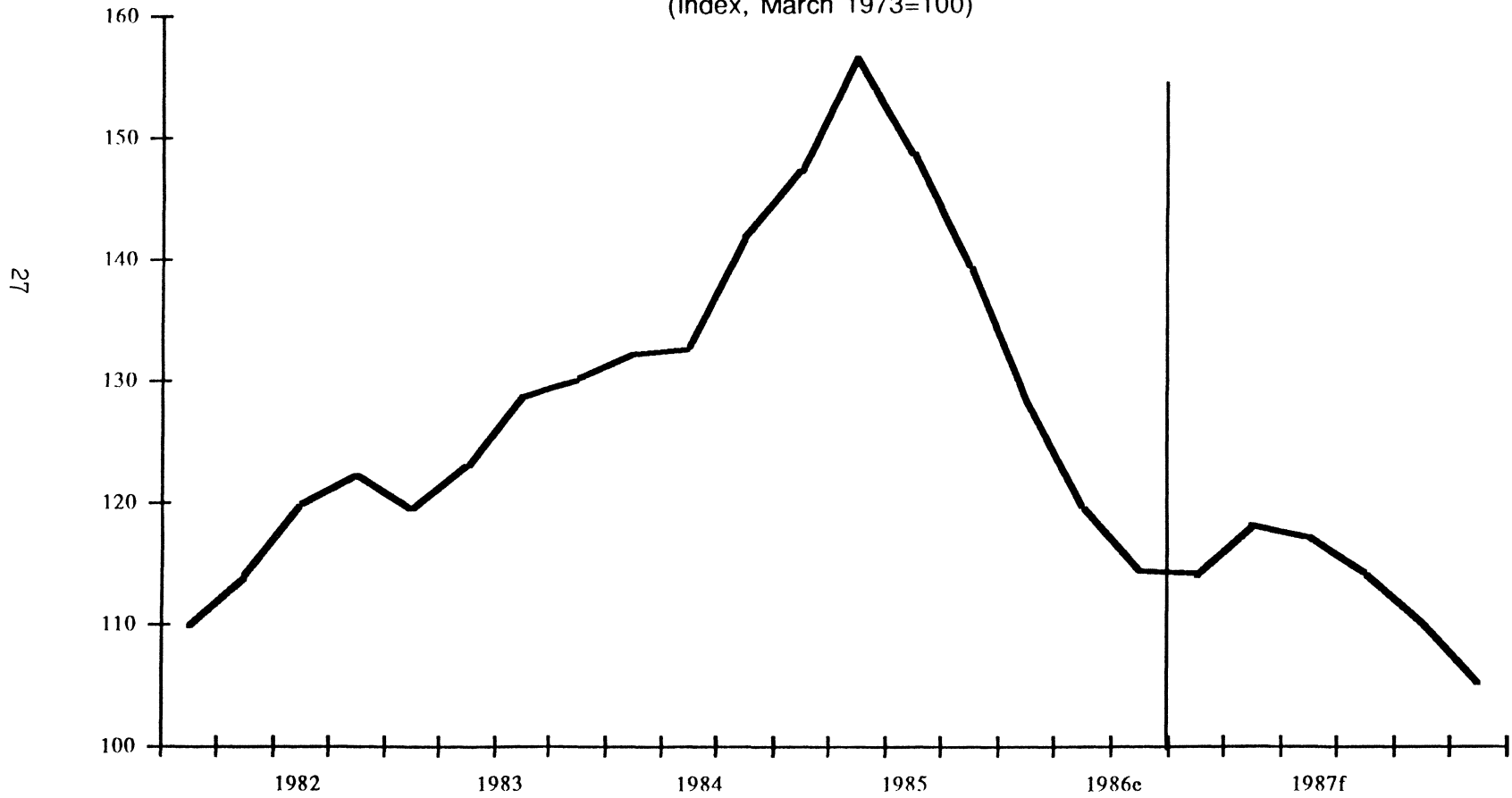
DOMESTIC DEMAND vs. PRODUCTION

(Cumulative Change From 4th Qtr. 1983   Index=1.00)
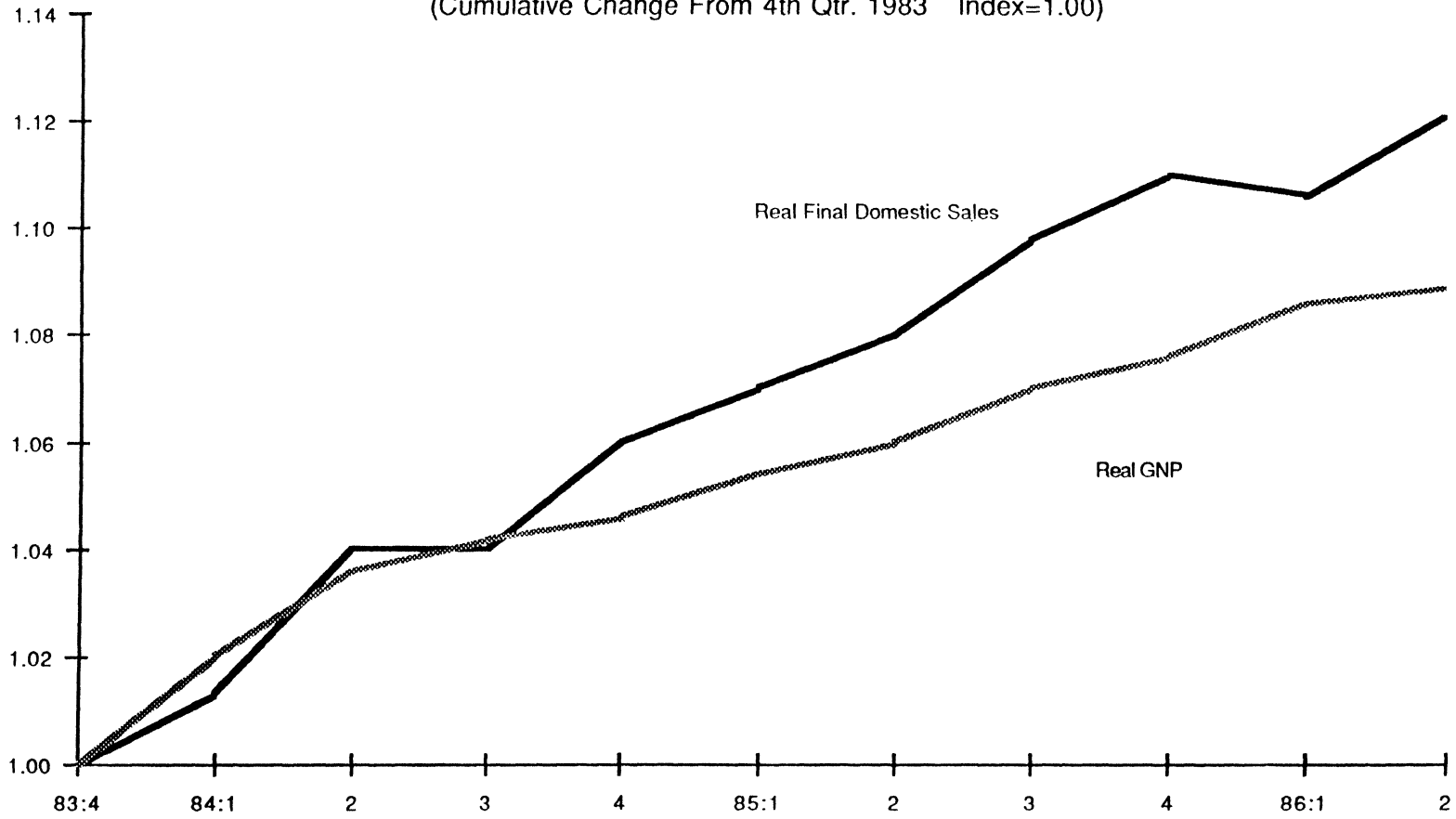
REAL GNP

(Percent change over prior quarter, annual rate)
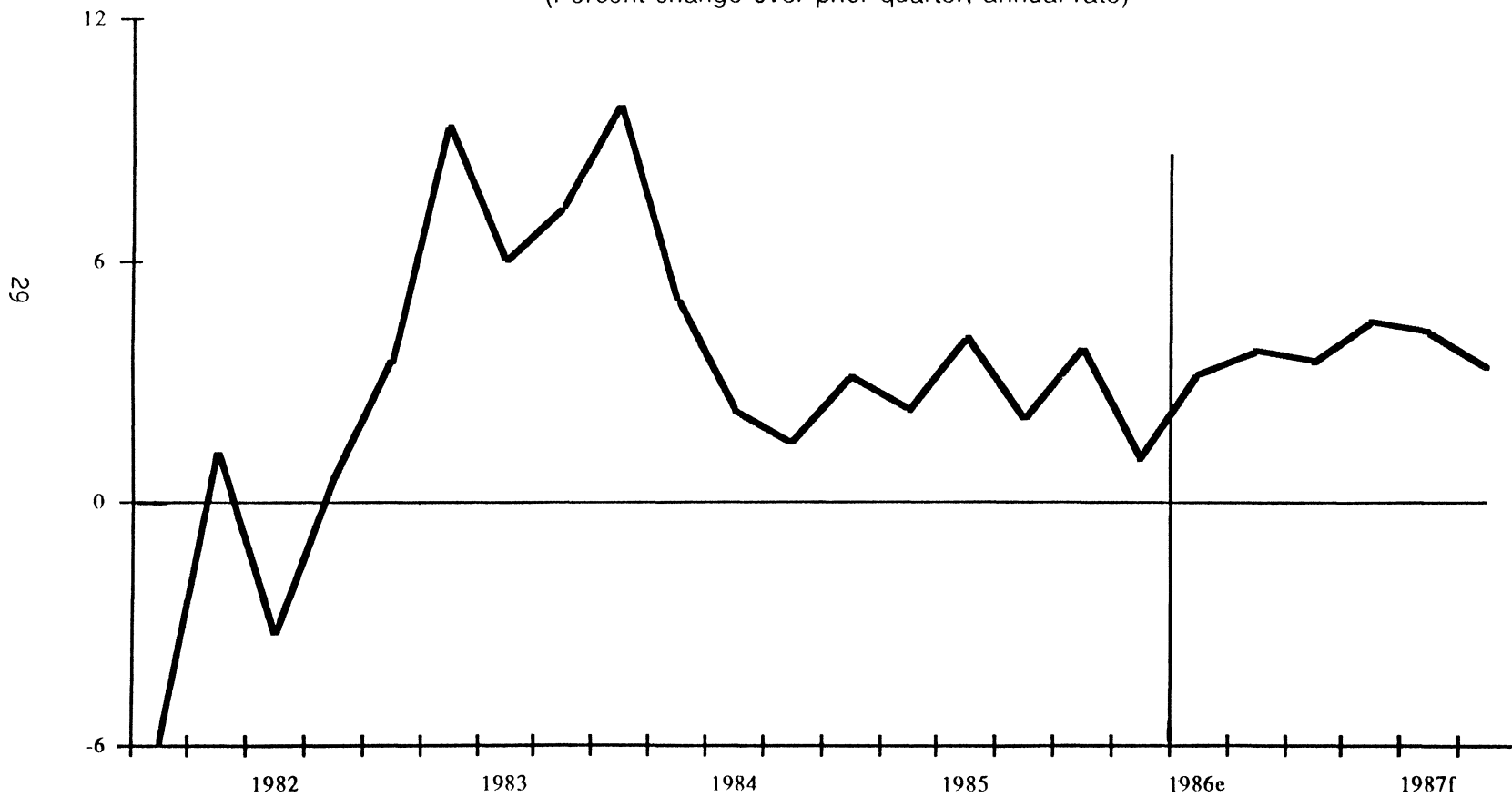
TOTAL MOTOR VEHICLE SALES

(Millions of units)

30
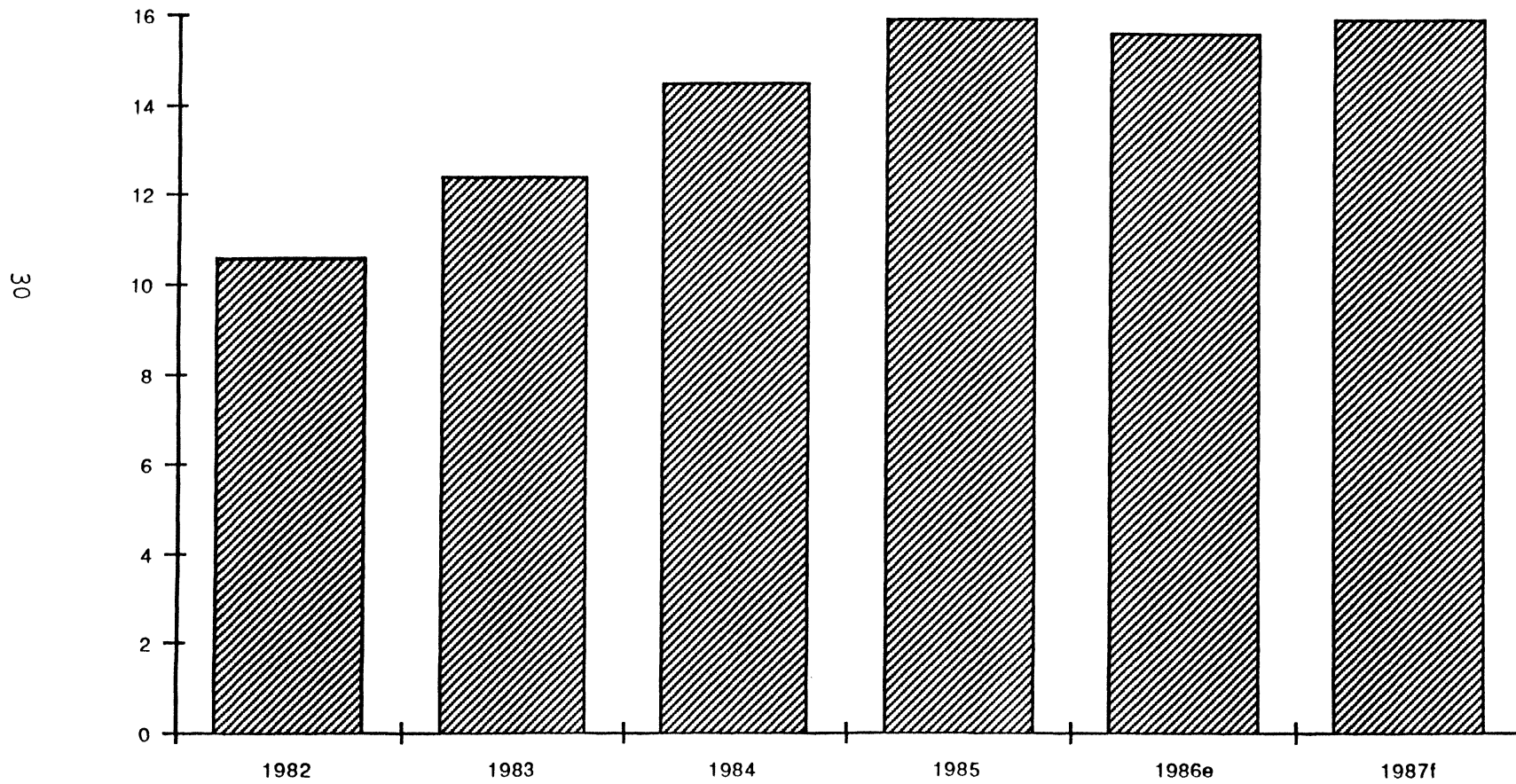
HOUSING STARTS

(Millions of units)
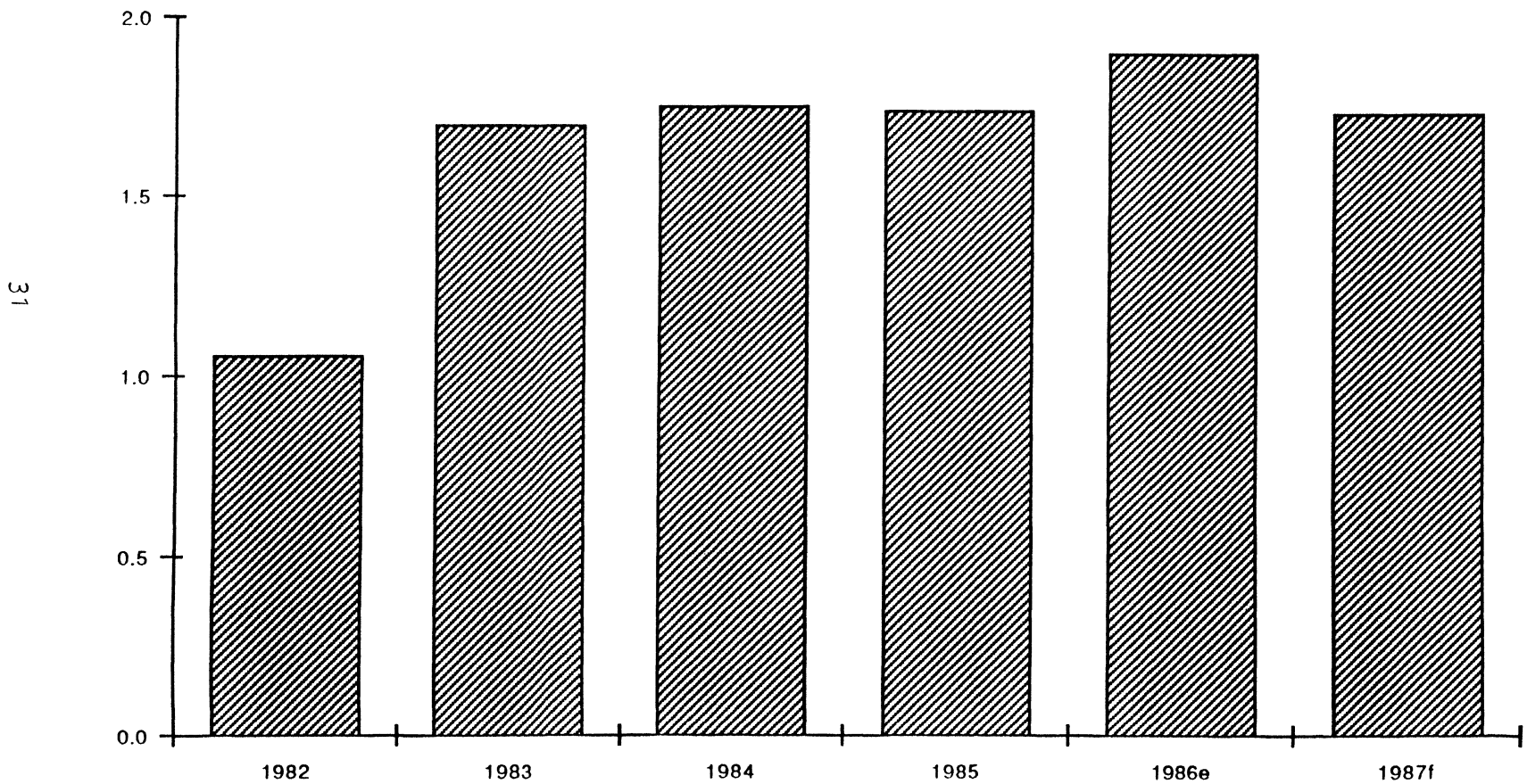
INFLATION

(Percent change in year-end CPI over prior year)

3-MONTH TREASURY BILLS & INFLATION

(Percent)
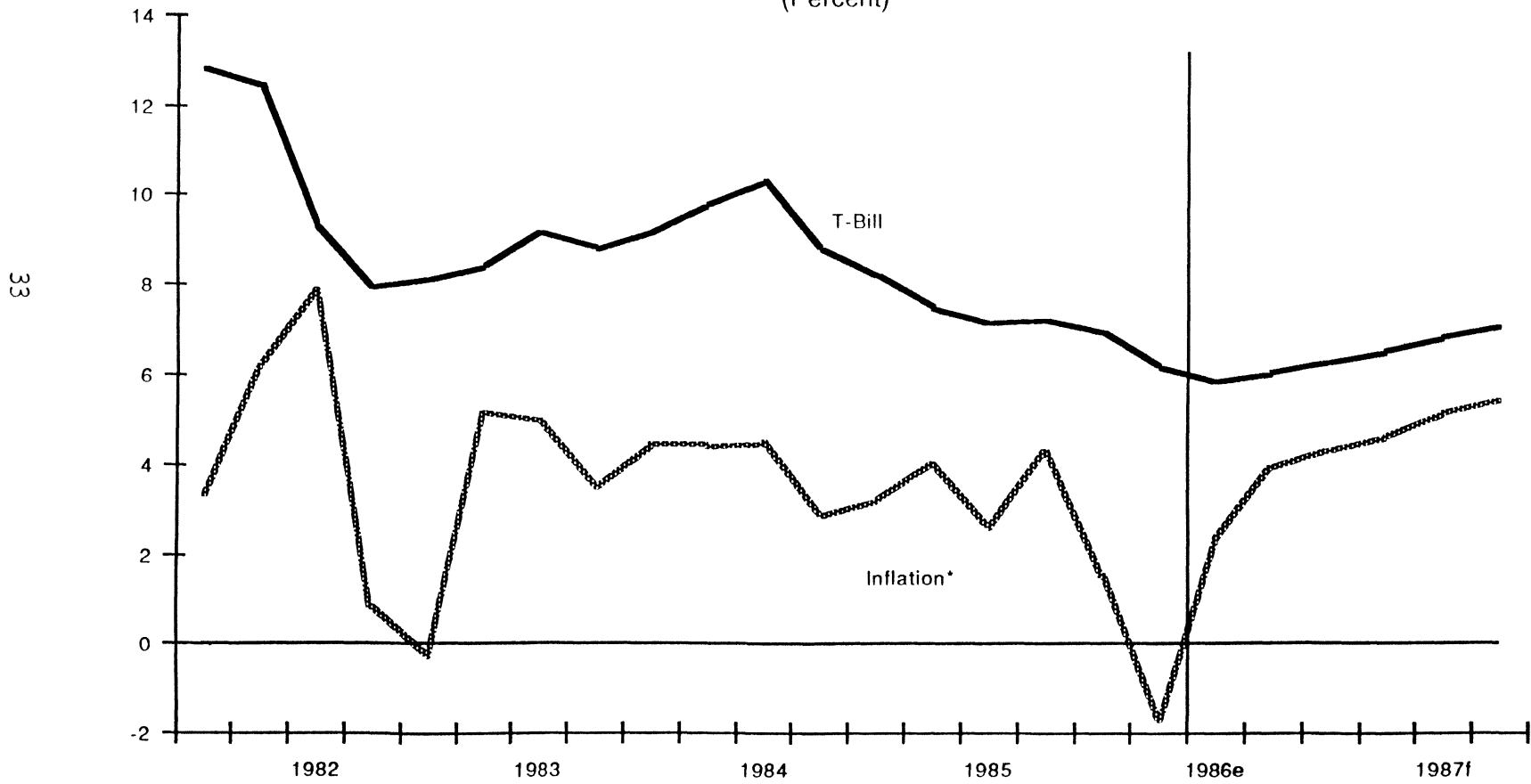
* Percent change in CPI from prior qtr., annual rate

30-YR. GOV'T. BOND AND MORTGAGE RATES

(Percent)

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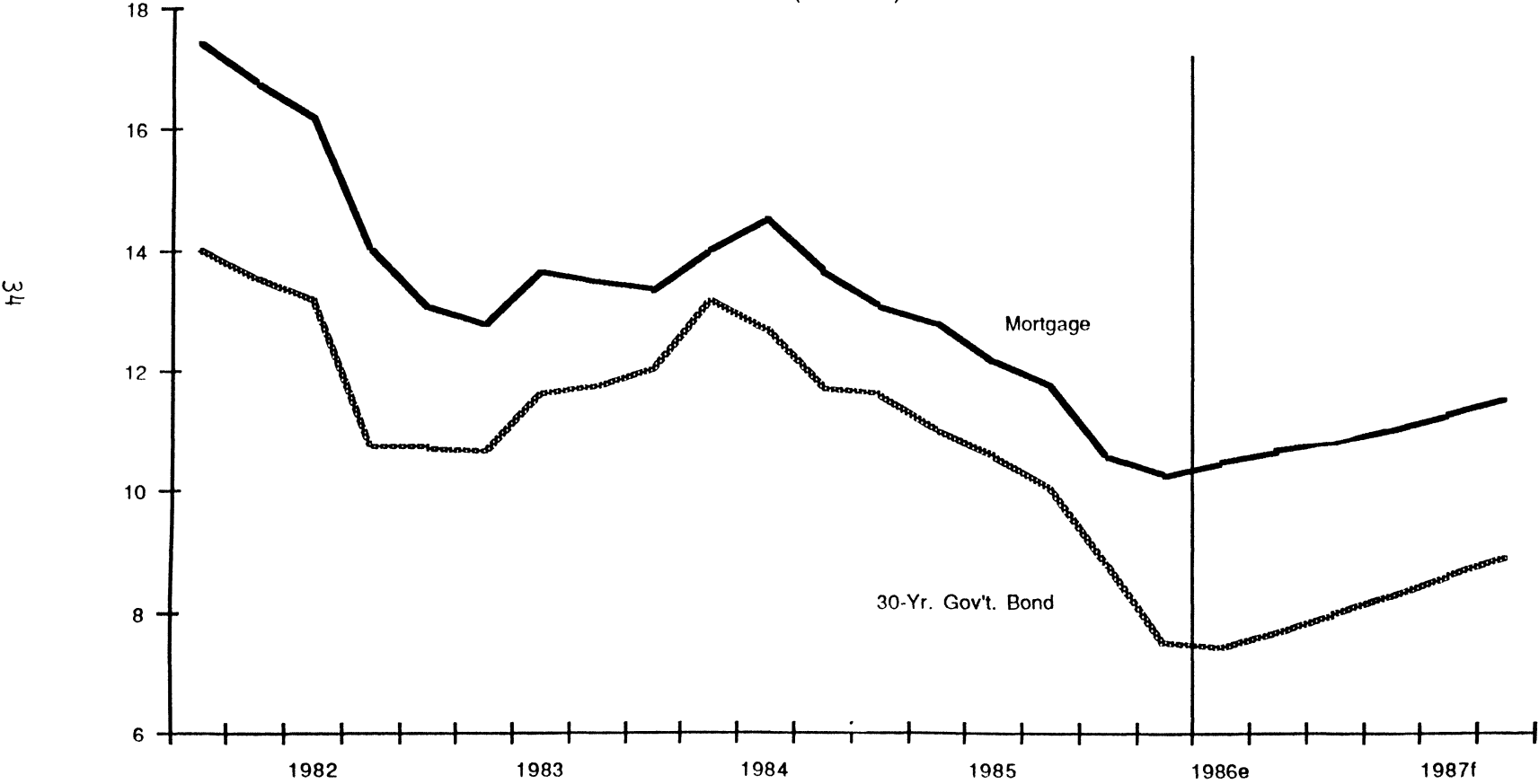
NONFARM EMPLOYMENT: FIRST INTERSTATE TERRITORY AND THE U.S.

(Percent change from prior year)
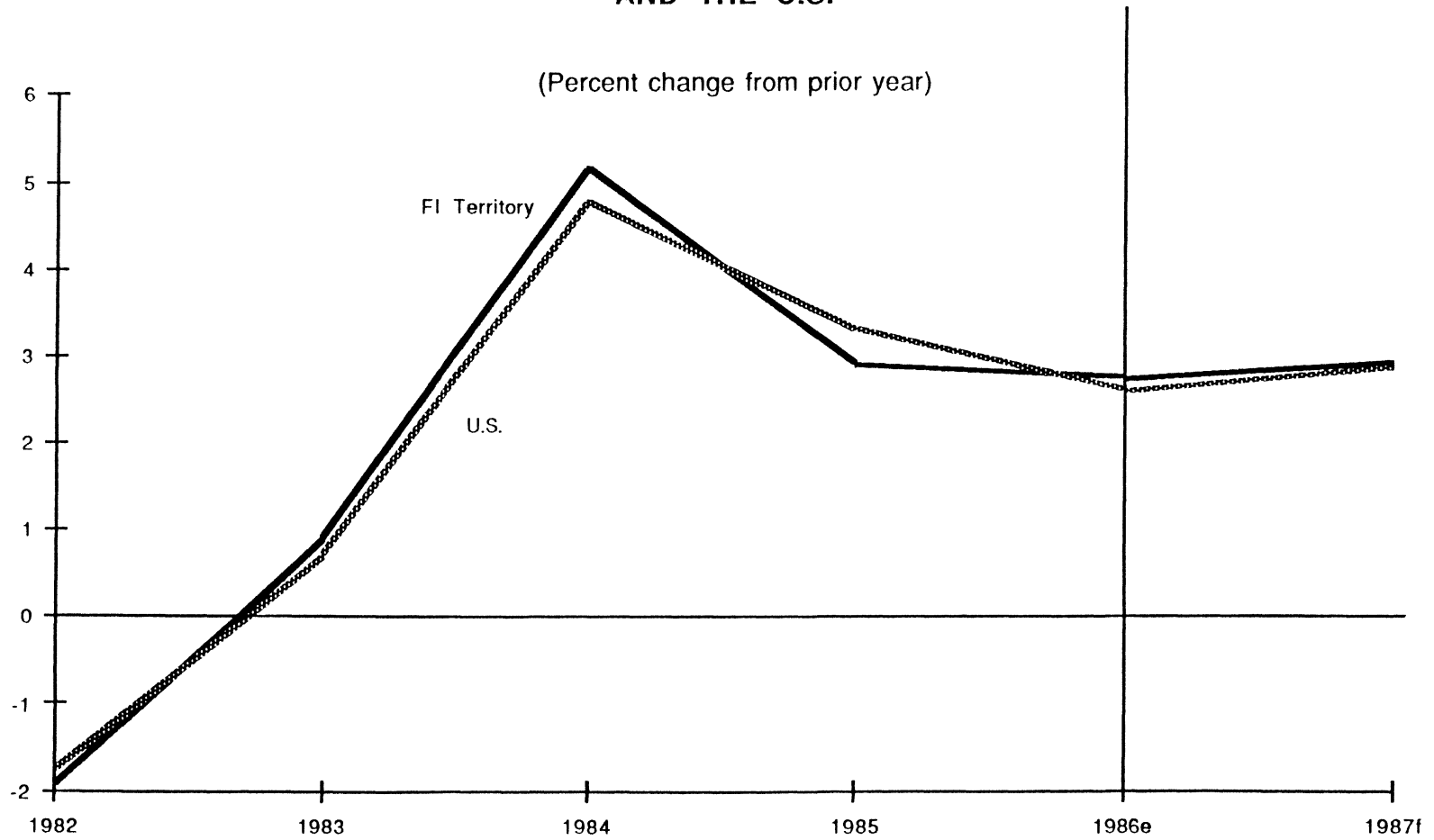
PERSONAL INCOME: FIRST INTERSTATE TERRITORY AND THE U.S.

(Percent change from prior year)

36
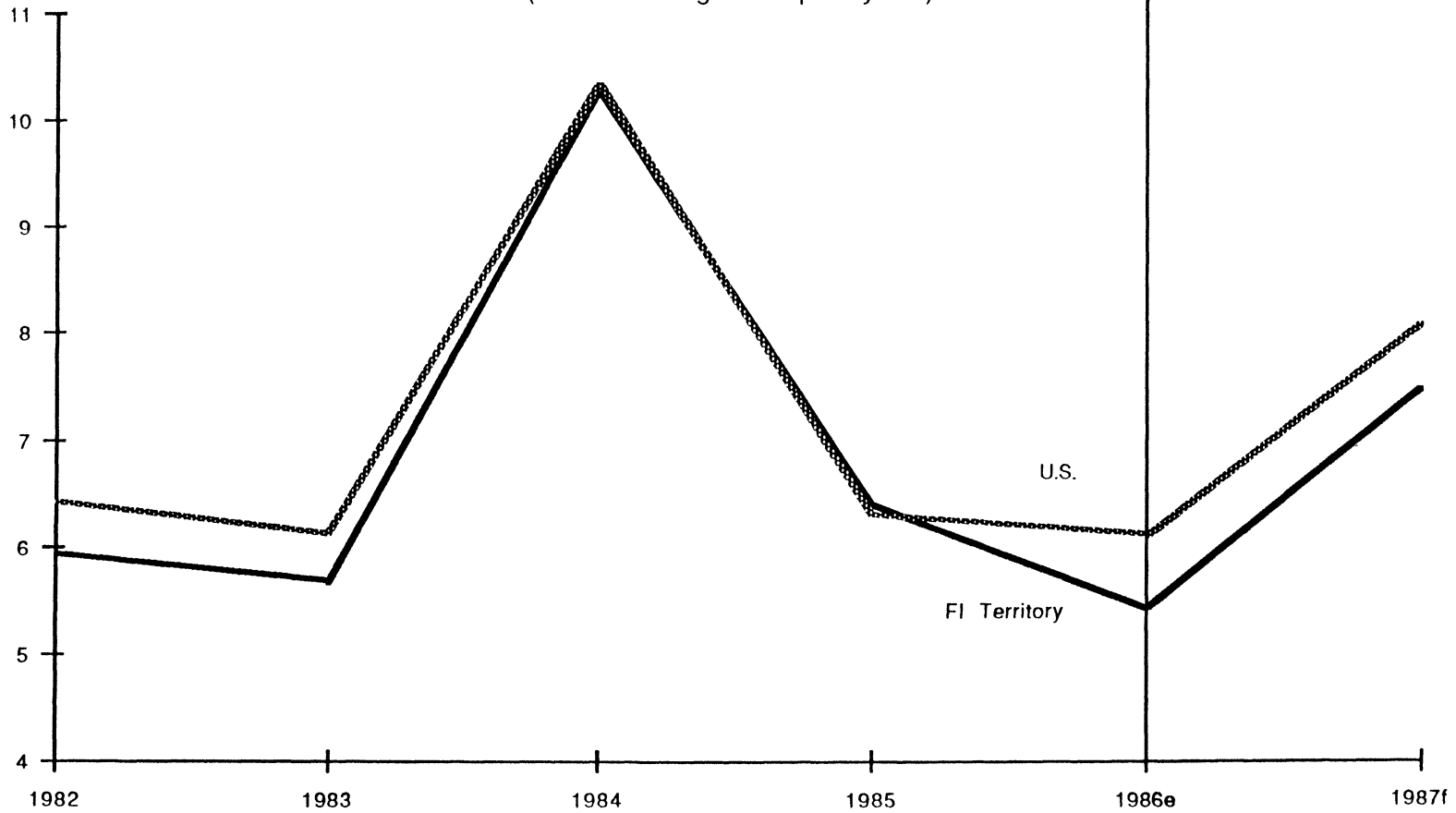
CIRCUMVENTING THE INTENT OF GRAMM-RUDMAN-HOLLINGS

Mickey D. LEVY
Fidelity Bank

The positive trends in the federal budget outlook forecast by OMB and the CBO in February 1986 were exaggerated. On the plus side, deficits should decline from current levels, and the disturbing, sharp rise in the federal debt-to-GNP ratio is projected to recede, marking a clear improvement. On the negative side, the FY1986 deficit has ballooned to a record high -- it may reach $230 billion -- and the substantially lower deficit targets legislated by the Emergency Deficit Control Act of 1985 (Gramm-Rudman-Hollings, or GRH) are unlikely to be achieved. Deficit estimates prepared for the Initial Sequestration report are biased downward by accounting requirements mandated by the Balanced Budget Act. Certain tactics will probably be used to avoid an across-the-board sequestration order for FY1987, but actual deficits will be at least $180 billion, and perhaps $200 billion, far above the $144 billion GRH target. This will make the $108 billion deficit target in FY1988 nearly impossible to attain. In light of recent budgetary maneuvering, it is unclear whether the Administration or Congress take the deficit targets of the Balanced Budget Act seriously. Nor is it clear that GRH, with its overly ambitious scheduled deficit cuts and its porous sequestration process, provides a viable guideline that contributes to sound fiscal policy.

The record-breaking deficit in FY1986 reflects weak economic growth that suppressed tax revenues, and higher-than-expected expenditures due largely to rising agricultural subsidies, a jump in outlays for deposit insurance, and the rapid pace of defense spending. The

deficit remains well above 5 percent of GNP, and the federal debt-to-GNP ratio has risen substantially, to nearly 42 percent from 38.3 percent in FY1985, reflecting the rising debt and sharp slowdown in GNP growth.   Achieving GRH's FY1987 $144 billion deficit target requires cutting over $80 billion from deficits -- slicing the deficit to approximately 3.2 percent of GNP.

The sharply lower deficit targets legislated by GRH remain law, even though the original process was declared unconstitutional.   Under the fallback mechanism now in place, the role of the Comptroller General is replaced by the Temporary Joint Committee on Deficit Reduction, composed of the entire memberships of the Senate and House Budget Committees.   In accordance with GRH, on August 15, the CBO and OMB submitted their budget base levels for FY1987 to the Joint Committee.

TABLE 1

Budget Base Levels for FY1987
(in Billions)

Budget Aggregates	OMB Estimates	CBO Estimates	Average
Revenues	826.4	827.8	827.1
Outlays	982.6	998.5	990.5
	-----	-----	-----
Deficit	156.2	170.5	163.4
Memo:			
GRH Deficit Target			144.0

OMB forecast the FY1987 deficit to be $156.2 billion and the CBO forecast $170.6 billion; the $163.4 billion average was $19.4 billion above the $144 billion GRH target (see Table 1).   Since this average estimate is more than $10 billion above the GRH target, the report for

FY1987 includes calculations for the amounts to be sequestered. After removing numerous spending programs exempt from sequestration and applying special rules that limit cuts to other programs, the initial sequestration report calculates that qualified non-defense spending programs be cut 7.6 percent and defense spending programs be cut 5.6 percent. To avoid this sequestration process, the Congress has until October 1 to enact deficit cutting legislation. A revised and final sequestration order, reflecting any change in laws or regulations since August 15, will be submitted on October 6 and effective October 15.

The OMB-CBO average deficit forecast is significantly below FY1986 levels and only modestly above the $154 billion maximum deficit allowed, suggesting that substantial progress on the deficit has been made and that the 1987 GRH target is easily within reach. Moreover, sharply lower deficit forecasts for FY1988 through FY1991 by the Administration (*Mid-Session Review of the FY1987 Budget*) and the CBO (*The Economic and Budget Outlook: An Update*) imply that future GRH deficit targets are also possible to achieve.

However, a closer look at the budget base estimates in the Initial Sequestration Report reveal a different story: the deficit estimates for FY1987 based on the accounting principles imposed by GRH are systematically biased downward; several methods likely will be used to avoid the GRH across-the-board sequestering for FY1987; and actual deficits will be much higher than estimated. This deceptive maneuvering by economic policymakers adds to public confusion about the deficit and reduces credibility in the budget process. The GRH deficit targets in later years likely will be impossible to achieve and, in fact, the Balanced Budget Act may lead to poor fiscal policy.

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<u>GRH Budget Base Levels for 1987</u>

The average OMB-CBO deficit estimate for FY1987 under Gramm-Rudman accounting rules is $163.4 billion, but a more realistic deficit estimate would be at least $180 billion and as high as $200 billion. The OMB-CBO estimates reflect laws and regulations that were in effect August 15. The budget base estimates for the Balanced Budget Act (called the "Gradison base", named after Congressman Gradison, a member of the House Budget Committee) include the deficit-cutting provisions of the Budget Reconciliation Act of 1985 and the initial GRH sequestering in March 1986. However, they are based on FY1986 appropriation levels, without adjustment for inflation, because no appropriations have yet been enacted for FY1987. This significantly reduces spending projections for programs that require appropriations, and imposes a downward bias to the deficit estimates. Exact measurement of this bias is difficult to calculate, but it is instructive that the CBO baseline projections, also published in August, estimate the FY1987 deficit to be $184 billion, or $13.4 billion higher than the budget base deficit it estimated, based on the Balanced Budget act accounting requirements.

OMB seems particularly guilty of artificially lowering the baseline deficit estimates in the Initial Sequestration Report. It estimates $15.9 billion lower spending in its budget base than the CBO, and the lower estimates in several spending programs are highly questionable. OMB's budget base does *not* include additional money to fund a 1987 pay increase for civil servants or military personnel, even though the President's *Mid-Session Review* proposes a 4 percent raise for military personnel effective October 1, 1986, and a 2 percent raise for civilian employees effective January 1, 1987. OMB justifies this exclusion on the grounds that the FY1987 appropriations bill has not

yet passed. This omission biases down OMB's spending and deficit base by $2.9 billion, compared to the CBO budget base. OMB also estimates defense outlays in FY1987 to be $4.7 billion lower than the CBO because it assumes slower spending rates. This argument about the defense spending rate is not new; OMB's slower assumed spending rate was a major source of contention in the recent debate on the Congressional Budget Resolution. Since CBO's spending rate is based on the historical relationship between defense budget authority and outlays, while OMB's is not, and because defense outlays in FY1986 have been much higher than anticipated, OMB's estimate seems suspect. The CBO also estimates $5.1 billion higher outlays for the Commodity Credit Corporation (CCC) farm price supports, largely reflecting CBO's assumed advanced deficiency payments for the 1987 crop year. Again, the CBO approach is the more conservative, and probably the more accurate in light of recent patterns of agricultural outlays and continuing weakness in agricultural prices.

Other sources of higher-than-anticipated spending may drive deficits higher than forecast. For example, a surge in failures of depository institutions could lead to higher outlays for deposit insurance, as in FY1986. In general, the legislative slippage in the fight to reduce budget deficits, reflected mainly by supplemental appropriations, is perpetually underestimated.

Besides these biases in the base calculations, the lower deficit projections are based on economic growth assumptions that seem overly optimistic. OMB assumes real GNP to grow 3.7 percent in 1987 (with real GNP gains of at least 4 percent in each quarter from 1986:III through 1987:III) and the CBO assumes slightly slower 3.2 percent

growth rate. Both assume approximately a 3 percent rise in the GNP deflator and modest interest rate increases. Importantly, GRH requires that the final sequestration report (due October 6) be based on these August 15 economic assumptions, even though the downward GNP revision in second quarter and the clear weakness this quarter nearly assures real GNP to be lower than the level used to calculate the budget base. This implies a shortfall in tax revenues and a higher deficit than in the budget base. Moreover, the growth assumptions through 1987 may be too optimistic, and continued economic weakness would generate a further shortfall in revenues.

By eliminating this downward bias in OMB's budget base levels and assuming somewhat slower economic growth, the FY1987 deficit will be at least $180 billion -- far above the maximum deficit amount that triggers sequestration.

Suspension or Avoidance of Sequestration

The Balanced Budget Act includes a provision that suspends the sequestration process if real GNP growth for two consecutive quarters is below 1 percent, or if either OMB or the CBO forecast a decline in real GNP. Real GNP rose at a 0.6 percent annual rate in 1986:II, but there is only a slim chance it will be below 1 percent this quarter. If, in fact, growth is sufficiently slow to halt the GRH process, deficits would rise and move even further away from the GRH targets.

With the OMB-CBO average estimate deficit of $163.4 billion only $9.4 billion above the maximum allowable deficit, several avenues are available to reduce the deficit base estimates by October 1 and avoid a sequestration order. If the pending tax reform bill is passed prior to October 1, then an estimated $12 billion revenue gain in FY1987 may be

used to reduce the budget base deficit below the magical $154 billion level. Unfortunately, this would give only temporary deficit relief. Since the tax reform bill is designed to be revenue neutral, presumably there is a combined $12 billion revenue loss in FY1988-1990, adding to deficits in those years. Furthermore, these are static revenue impacts that assume no change in economic behavior in response to the policy shift. If the tax bill has a short-run adverse economic impact, the initial year revenue impact may be negative, not positive. More generally, lowering the deficit by increasing taxes is not a desirable solution to the budget dilemma. Nevertheless, this estimated revenue gain in FY1987 may be used to avoid sequestration for FY1987 if the tax bill passes.

A second method of temporarily escaping GRH sequestration would be the sale of certain government financial assets, such as government housing loans. The proceeds of these asset sales, which are counted as negative spending, would legally reduce the deficit estimates. The government's loan holdings are sufficiently large that such sales could reduce the estimated deficit in FY1987 below $154 billion. While selling the government's financial assets and dropping its participation in certain credit markets has merits on other grounds, doing so to avoid sequestration in FY1987 is deceptive. The transfer of assets would provide a one-time reduction in spending which would be offset by higher future deficits due to the loss in interest income from no longer owning the assets.

Some combination of these methods will likely be used to avoid the sequestration order for FY1987. However, these methods will make meeting GRH deficit targets more difficult -- if not impossible -- in FY1988 and beyond.

Another possible action should not be ruled out. Suppose that Congress merely declines to vote on the joint resolution based on the Final Sequestration Report, or votes to delay consideration? Remember, this scenario will be unfolding one month before the national elections, and nobody in Congress would benefit from across-the-board cuts. Without any precedent, the outcome is uncertain.

The Outlook for the Balanced Budget Act

Forcing Congress and the Administration to become constantly aware of the enormous deficit problem and to consider lower deficit targets are two positive aspects of the Balanced Budget Act. But GRH has several large weaknesses. The required cuts are dramatic and rigid. It calls for a balanced budget in FY1991. Balancing the budget is strictly an *ad hoc* requirement whose appropriateness is uncertain, because it is not based on or supported by theoretical considerations. Reducing the deficit to $144 billion in FY1987 requires cutting the standardized-employment deficit from 4.3 percent of GNP to 2.5 percent. Excluding net interest costs, this involves shifting from a primary deficit of approximately $90 billion in FY1986 to a surplus of $1.3 billion. The economic impacts of such a large shift in fiscal policy are highly uncertain. They depend on the exact composition of the cuts, the extent to which spending reductions in some federal programs are offset by private sector or state and local provision of the program, and the Federal Reserve's monetary policy response. However, this shift in deficit policy will occur simultaneously with major tax reform, whose short-run impact on the economy is likely negative. The weak economic expansion may be threatened by this turmoil in budget and tax policy.

The task of achieving the ambitious GRH deficit targets in later years intensifies. Excluding net interest costs, the deficit target of $108 billion in FY1988 requires running a primary surplus of $36 billion. If in fact, the actual deficit in FY1987 is closer to $180 billion, the FY1988 GRH target will be virtually unachievable.

Numerous exemptions from the across-the-board sequestration process and special provisions that limit cuts to other programs introduce additional serious flaws. In FY1987, over two-thirds of all non-defense spending is excluded from sequestration, including social security, net interest, the earned income credit, certain low-income programs such as AFDC, child nutrition, medicaid, food stamps, SSI, and WIC, veterans compensation and pensions, state unemployment benefits, and outlays from prior year appropriations. Other programs, such as Medicare and guaranteed student loans, are subject to only limited cuts. Over one-third of defense spending is also exempt from sequestration due to prior contractual obligations. Clearly, these rules grossly violate GRH's original intent that the burden of deficit cutting be distributed evenly.

GRH's exemptions and uneven application may actually inhibit efforts to substantially lower the deficit because they protect spending in social security and transfer payments, a primary source of rising spending and deficits. As a practical matter, all government spending programs should be considered candidates for budget cuts. GRH's exemptions severely hinders the simple arithmetic of deficit reduction.

So far, the Balanced Budget Act has elicited short-term deficit-cutting actions that may not be consistent with long-run program

reform. These "quick fixes" are not necessarily good public policy if they do not generate long-run savings or if they fail to address, or preclude addressing, some of the structural flaws of spending programs.

These flaws probably doom the Balanced Budget Act. Yet rather than consider changes that would improve the effectiveness of GRH, the Administration and Congress are effectively taking steps that undermine the Act. These actions only contribute to poor public policy by breeding public misunderstanding and cynicism. Perhaps budget policymakers eventually will take GRH seriously, or make improvements to it, but they are off to a rather inauspicious start.

TIME SERIES ANALYSIS OF "VELOCITY" CONCEPTS

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A significant innovation of the last decade in the literature related to the demand for money function has been the investigation of the time series properties of the ratio of a measure of the money stock to a measure of income (or the inverse of this ratio) -- "velocity" concept. This literature, including studies by Gould and Nelson (1974), Nelson and Plosser (1982), Haraf (1986) and Poole (1986) is concerned with the question of whether the "velocity" measure is more appropriately characterized as a difference stationary (DS) or a time stationary (TS) univariate time series process. This question involves whether an autoregressive component in an ARMA model of "velocity" has a unit root. A corresponding statistical literature has developed addressing the question of the appropriate test statistic for the unit root hypothesis in simple univariate ARMA models (Dickey and Fuller, 1979, 1982; Evans and Savin, 1981, 1984). The time series literature on velocity has applied some of these univariate tests to almost a century of annual GNP velocity measures for the U.S. and to quarterly GNP and Final Sales velocity measures for the 60s and 70s. The general conclusion is that the data do not reject the simplest DS process -- a random walk with drift.

Several criticisms have been levied against this time series research and the derived conclusions. First, there seems to be a rather widespread feeling that the issue of whether a univariate "velocity" model is "TS" or "DS" is irrelevant -- the whole issue is

clearly "BS" since such tests are plagued by specification error. The
argument for specification error starts with the proposition that if
"velocity" is a meaningful concept, it must be founded in a stable
aggregate demand for money function (Wallich, 1984). However, it is
"well known" that the income elasticity of aggregate money demand is
significantly less than unity, and the interest elasticity is signifi-
cantly less than zero, both in the short run and in the long run.
Hence, univariate tests on "velocity" impose inappropriate constraints
on the parameters of the money demand function, and the issue must be
addressed in an unconstrained multivariate framework.[1] A second
criticism of this approach concerns the interpretation of the events of
the past several years. Haraf (1986) concludes that a univariate TS
process for several quarterly measures of "velocity" over the period
1959-79 is rejected in favor of a univariate DS process. He then
argues, without explicit tests, that a "shift in the drift" of the
univariate DS process occurred in about 1980, and this unexplained
"shift" is the source of the "velocity slowdown" of the 1980s. The
problem with this arbitrary selection of a shift point is that the
rejection of the TS univariate process in favor of the DS process was
developed under the restriction that no parameter instability occurred
in either model during the sample period. It is not evident that the
rejection of the TS process in favor of a DS process is robust with re-

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[1]Gould and Nelson (1974) are quite careful to note that their
conclusions on the random walk nature of velocity do not rule out an
interest elastic velocity function if interest rates are also
characterized by a random walk process (H4 and H5, p. 417). They did
not address the implicit income elasticity constraint in the
construction of the velocity measure.

spect to parameter shifts within the sample period. Given the recurring allegations of shifts in the aggregate money demand function during the 1970s, this problem needs to be considered.

Fortunately, the issue of "shift in the drift" can be investigated using more formal techniques that the visual examination of velocity series undertaken by Haraf. The likelihood ratio test statistic for a shift in a location parameter at an *unknown* point within a sample developed by Hawkins (1977) and Worsley (1979) applies directly to the "drift shift" problem.

Three measures of "velocity" are investigated in Table I.1. All involved the M1 measure of the money stock with a *shift* adjustment for nationwide NOW accounts in January-April, 1981. The first velocity concept is the traditional GNP measure of velocity. The second is based on final sales to domestic purchasers (GNP - inventory investment + net exports), since inventory changes and the large current account deficits have been mentioned prominently in recent discussions of velocity. The third measure is based on personal income. This measure typically does not show up in "velocity" discussions, but is used as the relevant (or only available proxy) in monthly aggregate money demand specifications (Farr, 1985; Judd, 1984). It has the advantage of being measured independently on a monthly basis, so that the effect of time aggregation can be investigated on three levels.

The sample periods for the tests in Table I.1 begin in January, 1952. This choice was somewhat arbitrary, but is motivated by three considerations. First it marks, roughly, the beginning of the Post-Accord period. Second, it is typically the starting point of samples for money demand specifications estimated in the late 1960s and early

1970s -- the "golden age" of short run money demand estimates. Third, several experiments with testing for "drift shift" in samples that extended back to 1947 suggested parameter shifts around 1951.

Two major conclusions emerge from the test results reported in Table I.1, regardless of the velocity measure chosen and regardless of the level of time aggregation. The first is that there is no evidence of "drift shift" in a random walk model of the various velocity measures during the 1952 through 1981 sample period. The second is that when the sample is extended through 1985 the tests unanimously point to a change in the drift parameter in 1981.

The second of these two conclusions is particularly interesting because of the existing controversy over the timing of velocity and/or money demand shifts. Haraf (1986) appears prepared to date a shift as early as late 1979 or early 1980. Others have argued that shifts occurred as a result of financial deregulation that permitted interest bearing checkable deposits such as NOW and SNOW accounts (Higgins and Faust, 1983; Roth, 1984; Paulus, 1986). Dating shifts as early as 1979 or 1980 admits the possibility that the shift could result from a monetary policy regime change in 1979 or the credit controls experience in 1980. Dating the shifts as late as the end of 1981 makes such conclusions dubious. Dating shifts in late 1981 would seem to suggest the nationwide extension of NOW accounts as an influence, but the measured money stock here has already been adjusted to filter out the impact of portfolio shifts associated with this regulatory change. Dating shifts as early as late 1981 casts doubt on the proposition that the shift is related to the introduction of checkable deposits with market determined own rates, since SNOWs did not become available until January, 1983. Thus, the time series properties of the various M1

velocities do not seem to support many, if any, of the popular ration-
alizations about what has caused the early 1980s to differ from the
preceding 30 years.

The possibility remains that the conclusions about velocity shifts
are illusions created by misspecification. This question will be
investigated later while the adequacy of the (0,1,0) ARIMA model of
velocity will be discussed here.

Table I.2 presents estimates of the univariate (0,1,0) velocity
model for the 1952-85 sample period at all three levels of time aggre-
gation, after allowing for a shift in the constant term at the begin-
ning of 1982. This dating of the shift is off by one-quarter from the
shift point identified by the Hawkins' likelihood ratio tests in the
monthly and quarterly data above, but it was chosen to facilitate
comparisons across monthly, quarterly and annual levels of time aggre-
gation. The estimated autocorrelations of the residuals for the 1952-
81 sample equations from Table I.1 and the estimated equations from
Table I.2 are given in Table I.3.

With one marginal exception (quarterly GNP velocity), the hypothe-
sis that the residuals of these velocity models are white noise cannot
be rejected. A second feature of Tables I.1 and I.2 is that the
introduction of the shift in the constant term at the beginning of 1982
has greatly reduced the difference in the residual standard error of
the 1952-85 sample compared with the corresponding 1952-81 sample,
regardless of the velocity concept or level of time aggregation. The
money and income measures used in these regressions are constructed as
conventional *arithmetic averages*. If *geometric averages* had been used
and if the residuals at the monthly level are white noise, then the

only consequence of the aggregation would be a reduction in the residual variation. In fact, aggregating from quarterly to annual time intervals produces a greater reduction in the residual that the 1.731 factor predicted by a white noise process.

The conclusion from this analysis is the data *do not reject* the hypothesis that the random walk model of M1 velocity is well character-ized by a "shift in the drift" at the beginning of 1982. One possible explanation of this phenomenon is the *financial deregulation hypothesis* (FDH). As noted above, a number of analysts have argued over the past several years that the introduction of interest bearing checkable deposits both in the form of NOWs with effective interest rate ceilings above zero or in the form of SNOWs with market determined rates have fundamentally changed the nature of the current measure of M1. Some (e.g., Paulus, 1986) have gone so far as to argue that if the current M1 measure is stripped of the other checkable deposit component and money is measured as what was called M1A in 1980-1, then the velocity relationship of the 60s and 70s reasserts itself.

To investigate the FDH we have examined the time series behavior of a number of other monetary aggregates, including the currency compo-nent of M1, the adjusted monetary base published by the Federal Reserve Bank of St. Louis, and M1 net of other checkable deposits (M1A). Under FDH, *none* of these aggregates should exhibit any "shift in the drift" in the early 1980s.

The results for the currency component of M1 are shown in Tables I.4 and I.5. Regardless of how velocity is measured, and regardless of the level of time aggregation, there appear to be two distinct breaks in the "drift" of currency velocity. The first of these occurs at the end of 1961 or beginning of 1962 and the second occurs around

the third quarter of 1981.[2] With different velocity concepts one or the other of these shifts may appear stronger, and in some cases the shift in late 1981 is either not significant or only marginally signif- icant when measured by the Hawkins likelihood ratio test statistic. However, in every case, this test points a possible change in the location parameter at the same point indicated for the M1 velocity tests. The hypothesis that the same "shift in the drift" occurred in currency velocity as occurred in M1 velocity is investigated in Table I.5 where dummy variables are introduced for a shift at the beginning of 1962 (D62) and at the beginning of 1982 (D82). In every case the estimated coefficients on these dummy variables are highly significant. The magnitude of the estimated coefficients on D82 also suggests that the 1981 "event" should not be considered solely an Other Checkable Deposit problem. The shift in the growth rate of currency velocity in 1981 measured in Table I.5 is of the order of 40-60 percent of the shift in the growth rate of M1 velocity measured in Table I.3. This strong result in support of a shift in the drift parameter of a cur- rency velocity ARIMA model can be interpreted as strong evidence against the FDH that the difference behavior of M1 velocity should be attributed solely to the advant of interest bearing checkable deposits. Certainly interest rates on currency have not been deregulated, nor is there anything in the financial deregulation literature to suggest that

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[2] It should be noted that the currency component of M1 has not been manipulated for NOW shifts in 1981.

an implication of this deregulation is a continuing increase in the demand for current relative to various income measures.[3]

The hypothesis that a "shift in the drift" of base velocity occurred simultaneously with that of M1 currency is investigated in Table 1.6. While the dominant component of the adjusted monetary base is currency in terms of the level of the base, it is not necessarily true that currency should dominate the month-to-month or quarter-to-quarter growth rates of the base, hence the results presented here do not immediately follow from those in Table I.5. The results are strikingly similar to those in Table I.2 and I.5. In every case, regardless of the level of time aggregation or the concept of income applied, there is a highly significant shift in the drift of base velocity around the beginning of 1982. The estimated coefficient of the shift dummy variable is generally 65-75 percent of the estimated coefficient for the corresponding M1 velocity concept in Table I.2. Several tests were undertaken that are not reported in detailed tables here. First the Adjusted Monetary Base velocities were investigated for a shift around the beginning of 1962 such as found for currency velocity above. In no case was the estimated coefficient of a shift dummy variable at

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[3]The underground economy hypothesis could be invoked to argue that much of the shift in the drift of M1 velocity should be attributed to the change in behavior of currency velocity, and the latter is a consequence of the rapid growth of the cocaine and other hard drug industries, which are necessarily currency oriented transactions and are not properly measured in GNP or other income concepts. There are several problems with this hypothesis. First, it cannot be refuted, since accurate data on the demand for currency for such transactions will never be available. Second, the shift in the currency velocity is smaller than the shift in M1 velocity and since currency is only about 20 percent of total M1, there remains a large shift in the velocity of the checkable deposit component of M1.

this point significant for the Adjusted Monetary Base. Second, the autocorrelation functions of the residuals of the regressions reported in Table I.6 were examined carefully. The monthly and quarterly residual autocorrelation functions gave no indication of any significant serial correlation. In some of the annual regressions there is some evidence of a weak first order moving average process, but given the relatively small samples, these estimated coefficients are not significantly different from zero. Third, after introducing the shift dummy beginning in 1982, the estimated standard error of these (0,1,0) ARIMA models of Adjusted Monetary Base velocity are virtually constant as the sample period is extended from the end of 1974 to the end of 1981 to the end of 1985.

The logical question that follows from all of these time series results is "Why?". The following section will review numerous arguments in the money demand literature that suggest the above time properties should *not* be observed.

TABLE I.1
Tests of the Stability of DS Models of Velocity
$$m*[\ln V_t - \ln V_{t-1}] = \alpha + \epsilon$$

Velocity Measure	Data Interval	Sample Period	Full Sample Drift Estimate (Annual Rate)	s	k	LR Statistic
1. Personal Income	Monthly (m=1200)	52,1-85-12	2.800 (.36)	7.21	81,9	5.66**
2. Personal Income	Monthly (m-1200)	52,1-81,12	3.455 (.36)	6.90	81,9	2.50
3. Personal Income	Quarter (m=400)	52,1-85,4	2.77 (.34)	3.93	81,3	6.40**
4. Personal Income	Quarter (m=400)	52,1-81,4	3.44 (.29)	3.18	54,3	2.50
5. GNP	Quarter (m=400)	52,1-85,4	2.58 (.41)	4.73	81,3	4.76**
6. GNP	Quarter (m=400)	52,1-81,4	3.20 (.39)	4.25	54,3	2.15
7. Final Sales	Quarter (m=400)	52,1-85,4	2.76 (.31)	3.66	81,3	4.91**
8. Final Sales	Quarter (m=400)	52,1-81,4	3.26 (.30)	3.29	67,1	2.01
9. Personal Income	Annual (m=100)	52-85	2.87 (.39)	2.28	81	5.32**
10. Personal Income	Annual (m=100)	52-81	3.43 (.27)	1.46	54	2.70
11. GNP	Annual (m=100)	52-85	2.66 (.42)	2.46	81	4.28**
12. GNP	Annual (m=100)	52-81	3.19 (.33)	1.79	54	2.78
13. Final Sales	Annual (m=100)	52-85	2.84 (.33)	1.95	81	4.52**
14. Final Sales	Annual (m=100)	52-81	3.28 (.26)	1.39	73	2.26

TABLE I.2
(0,1,0) ARIMA Models of Velocity
1952-85 with Constant Shift
$$m*[\ln V_t - \ln V_{t-1}] = \alpha + \beta D_{kt} + \epsilon$$

	Velocity Measure	Data Interval	α	β	s	d-w
1.	Personal Income	Monthly (m=1200)	3.45 (.37)	-5.56 (1.07)	7.00	1.99
2.	Personal Income	Quarter (m=400)	3.44 (.32)	-5.71 (.93)	3.48	1.48
3.	GNP	Quarter (m=400)	3.20 (.40)	-5.28 (1.18)	4.42	1.62
4.	Final Sales	Quarter (m=400)	3.26 (.31)	-4.28 (.91)	3.40	1.67
5.	Personal Income	Annual (m=100)	3.43 (.31)	-4.78 (.90)	1.69	2.27
6.	GNP	Annual (m=100)	3.19 (.36)	-4.55 (1.06)	2.00	2.48
7.	Final Sales	Annual (m=100)	3.28 (.28)	-3.72 (.82)	1.55	2.39

TABLE I.3
Estimated Autocorrelations for (0,1,0) ARIMA
Models of Velocity

Table (line)	Lag 1	2	Lag 3	4	5	6	Chi Squared(6)
1. I.1(2)	-.07	.07	.01	-.03	-.04	.05	5.2
2. I.2(1)	.00	.08	.04	-.02	-.03	.03	4.6
3. I.1(4)	.17	.06	.04	-.05	.03	.03	4.4
4. I.2(2)	.25	-.06	-.04	-.13	-.06	-.09	12.7
5. I.1(6)	.11	.13	.16	-.06	-.06	.08	8.5
6. I.2(3)	.18	-.11	-.09	-.12	-.12	.03	11.2
7. I.1(8)	.08	.09	.10	-.14	.07	.14	8.0
8. I.2(4)	.16	-.05	-.10	-.16	-.02	.06	8.7
9. I.1(10)	.06	-.09	-.01	.02	-.10	-.02	.7
10. I.2(5)	-.17	.04	.06	-.01	-.09	.04	1.4
11. I.1(12)	-.17	.14	.02	.08	-.18	.00	2.5
12. I.2(6)	-.28	.04	.16	-.03	-.14	.02	4.1
13. I.1(14)	-.06	.10	.04	.05	-.28	-.02	2.9
14. I.2(7)	-.20	.03	.14	-.01	-.22	.02	3.5

TABLE I.4
Tests of the Stability of DS Models of Currency Velocity
$$m*[\ln V_t - \ln(v_{t-1})] = \alpha + \epsilon$$

Velocity Measure	Data Interval	Sample Period	Full Sample Drift Estimate (Annual Rate)	s	k	LR Statistic
1. Personal Income	Monthly (m=1200)	52,1-85,12	1.937 (.31)	6.27	81,9	4.42**
2. Personal Income	Monthly (m-1200)	52,1-81,12	2.364 (.33)	6.31	61,6	3.43**
3. Personal Income	Monthly (m=1200)	62,1-81,12	1.573 (.39)	6.09	81,9	2.55
4. Personal Income	Quarter (m=400)	52,1-85,4	1.904 (.27)	3.12	81,3	5.44**
5. Personal Income	Quarter (m=400)	52,1-81,4	2.367 (.26)	2.87	61,4	4.19**
6. Personal Income	Quarter (m=400)	62,1-85,4	1.10 (.30)	2.96	81,3	4.57**
7. GNP	Quarter (m=400)	52,1-85,4	1.71 (.37)	4.29	62,1	3.55**
8. GNP	Quarter (m=400)	52,1-81,4	2.12 (.39)	4.25	62,1	2.86
9. GNP	Quarter (m=400)	62,1-85,4	.93 (.40)	3.94	81,3	2.95**
10. Final Sales	Quarter (m=400)	52,1-85,4	1.89 (.28)	3.23	62,1	4.57**
11. Final Sales	Quarter (m=400)	52,1-81,4	2.19 (.28)	3.11	62,1	4.05**
12. Final Sales	Quarter (m=400)	62,1-85,4	1.14 (.31)	3.07	81,3	2.29

TABLE I.4 (continued)
Tests of the Stability of DS Models of Currency Velocity

$$m*[lnV_t - ln(v_{t-1})] = \alpha + \varepsilon$$

Velocity Measure	Data Interval	Sample Period	Full Sample Drift Estimate (Annual Rate)	s	k	LR Statistic
13. Personal Income	Annual (m=100)	52,1-85,1	1.96 (.35)	2.03	62,1	4.16**
14. Personal Income	Annual (m=100)	62,1-81,1	1.21 (.34)	1.67	81,1	3.97**
15. GNP	Annual (m=100)	52,1-85,1	1.75 (.40)	2.35	62,1	3.34**
16. GNP	Annual (m=100)	62,1-85,1	1.06 (.40)	1.97	81,1	2.84
17. Final Sales	Annual (m=100)	52,1-85,1	1.94 (.32)	1.86	62,1	4.83**
18. Final Sales	Annual (m=100)	62,1-85,1	1.21 (.31)	1.51	81,1	2.33

TABLE I.5
(0,1,0) ARIMA Models of Currency Velocity
1952-85 with Constant Shifts

$$m*[lnV_t - lnV_{t-1}] = \alpha + \beta D62_t + \Theta D82_t + \epsilon$$

Velocity Measure	Data Interval	α	β	Θ	s	d-w
1. Personal Income	Monthly (m=1200)	3.94 (.55)	-2.37 (.68)	-2.84 (.28)	6.09	2.09
2. Personal Income	Quarter (m=400)	3.82 (.43)	-2.18 (.52)	-3.21 (.74)	2.70	1.60
3. GNP	Quarter (m=400)	3.56 (.64)	-2.16 (.79)	-2.78 (1.11)	4.05	1.65
4. Final Sales	Quarter (m=400)	3.68 (.47)	-2.24 (.58)	-1.77 (.81)	2.99	1.82
5. Personal Income	Annual (m=100)	3.77 (.45)	-2.09 (.55)	-2.84 (.78)	1.42	1.71
6. GNP	Annual (m=100)	3.41 (.62)	-1.90 (.76)	-2.67 (1.08)	1.96	2.22
7. Final Sales	Annual (m=100)	3.68 (.44)	-2.17 (.54)	-1.76 (.77)	1.40	2.21

TABLE I.6
(0,1,0) ARIMA Models of Adjusted Monetary Base Velocity
1952-85 with Constant Shifts

$$m*[\ln V_t - \ln V_{t-1}] = \alpha + \beta D82_t + \epsilon$$

	Velocity Measure	Data Interval	α	β	s	d-w
1.	Personal Income	Monthly (m=1200)	2.74 (.36)	-3.98 (1.04)	6.78	2.17
2.	Personal Income	Quarter (m=400)	2.74 (.28)	-4.20 (.82)	3.09	1.55
3.	GNP	Quarter (m=400)	2.49 (.39)	-3.78 (1.13)	4.26	1.60
4.	Final Sales	Quarter (m=400)	2.55 (.31)	-2.78 (.90)	3.37	1.86
5.	Personal Income	Annual (m=100)	2.76 (.28)	-3.70 (.82)	1.55	1.95
6.	GNP	Annual (m=100)	2.52 (.36)	-3.44 (1.03)	1.95	2.45
7.	Final Sales	Annual (m=100)	2.61 (.28)	-2.65 (.81)	1.52	2.19