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PAUL A. VOLCKER
CHAIRMAN

August 9, 1987

The Honorable Stephen L. Neal
U.S. House of Representatives
Washington, D. C. 20515

Dear Steve:

On my last weekend in office, you'll be delighted to know I read through your "Inflation Threat" report. It strikes me as a first class job in every respect. Whoever helped you with the drafting deserves a gold star, but more important the conclusions seem to me to strike the right note. When I look around me, it's hard to believe we've been too "tight," even though some seem to think so.

Regards,

Paul

*P.S. I appreciate all your
sympathetic interest over the years
in the Fed - and in me. If I can
help, you only have to call.
PAC.*

U.S. House of Representatives
SUBCOMMITTEE ON DOMESTIC MONETARY POLICY
OF THE
COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS
ONE HUNDREDTH CONGRESS
Washington, DC 20515

FOR RELEASE MONDAY, JULY 20
Contacts: Ben Crain, Carl Mintz
202-226-7315

WASHINGTON--The sharp increase in inflation this year "should be taken seriously as a warning signal" for Congress and the Federal Reserve, a House Banking Subcommittee chairman concludes in a new report on "The Threat of Inflation."

A resurgence of 1970s-style inflation "is not inevitable," the report says, but it could happen if Congress does not steadily reduce the budget deficit and if the Federal Reserve does not maintain a prudent monetary policy.

The report was issued by Rep. Stephen L. Neal, D-N.C., chairman of the Domestic Monetary Policy Subcommittee of the House Committee on Banking, Finance and Urban Affairs. It summarizes and draws conclusions from recent subcommittee hearings on inflation.

"The Inflation Dragon isn't dead," Neal said. "There's a lot of complacency among government officials, economists and businesspeople about the threat of serious inflation. But that complacency is not justified by the facts. Our report makes that clear, even though we state both sides of the issue."

Inflation, the report says, "is not just a threat, it is a current reality." In the first five months of 1987, inflation increased at an annualized rate of 5.6%. Some increase was inevitable because of the drop in the dollar's exchange rate and a rise in oil prices, the report said, "But it should not be dismissed as purely transitory, a one-time-only adjustment..."

Among the report's conclusions:

* "The major threat is not rampant inflation within the next year or so. The major threat is that, without serious and sustained reductions in the budget deficit, the degree to which (the Federal Reserve's) monetary policy can err, without causing recession or inflation, will shrink to the point of disappearing...The Federal Reserve cannot always fine-tune its policies..."

* Continuing the 1985-1986 pace of monetary expansion "would be exceptionally risky," but the Federal Reserve appears to recognize the danger and has modified its policies so far this year.. "M1 slowed from a rate of 16.5% in 1986 to an annualized rate of 7.6% through April of 1987. No one can be sure that this is precisely the right degree of restraint, but, given the risks at hand, it is surely the right direction for monetary policy in 1987."

* The Federal Reserve should "make every effort" to analyze the new relationships that banking deregulation has created between money growth and economic activity.

#

(Copies of the Chairman's report may be obtained from the Subcommittee office.)

DRAFT

A Report of the
Subcommittee on Domestic Monetary Policy

This draft report has not been officially adopted by the Subcommittee on Domestic Monetary Policy of the Committee on Banking, Finance and Urban Affairs, and may not therefore necessarily reflect the views of its members.

THE THREAT OF INFLATION

Table of Contents

	Page
INTRODUCTION	1
Forecasts of Inflation	2
A THREAT OF INFLATION ?	3
Relative Price Adjustments	4
Production Cost Pressures	8
Commodity Prices	12
The Velocity of Money	13
THE THREAT OF INFLATION !	16
The Impact of Inflation on Velocity	16
The Impact of Interest Rates on Velocity	17
The Impact of Portfolio Growth on Velocity	19
The Impact of the Trade Deficit on Velocity	21
Velocity and the Changing Definition of Money	21
Relative Prices and Production Costs	23
Monetary Policy and Budget Deficits	26
CONCLUSIONS	32

U.S. House of Representatives
SUBCOMMITTEE ON DOMESTIC MONETARY POLICY
OF THE
COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS
ONE HUNDREDTH CONGRESS
Washington, DC 20515
July 15, 1987

The Honorable Fernand J. St Germain, Chairman
Committee on Banking, Finance and Urban Affairs
2129 Rayburn House Office Building
Washington, D.C. 20515

Dear Mr. Chairman:

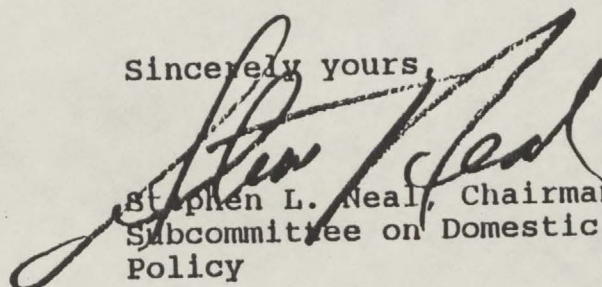
I am pleased to transmit herewith a report on hearings held by the Subcommittee on Domestic Monetary Policy on The Threat of Inflation. This report is based on the four days of public testimony before the Subcommittee in June 1987, which yielded more than 200 pages of analysis and commentary. The report, prepared by the Subcommittee staff at my direction, summarizes the major points and recommendations presented at these hearings, and draws the conclusions that, in my opinion, are most warranted.

The major conclusion is that the threat of inflation is very serious indeed, though a resurgence of inflation may not be apparent in the immediate future. This sense that we still have time to keep it under control should not, however, lull us into complacency. Once it is upon us, it will be too late to rein it in without a serious recession.

Monetary control over the long-run remains the essential, indeed the only way to control inflation. But the prospects of an anti-inflationary monetary policy are being seriously undermined by our massive budget deficits. Without more disciplined fiscal policy it will prove exceptionally difficult, perhaps impossible, for monetary policy to ward off inflation.

I hope this report can help clarify, to Members and to the public, the principal reasons for these conclusions.

Sincerely yours,



Stephen L. Neal, Chairman
Subcommittee on Domestic Monetary
Policy

INTRODUCTION

Early in the 1970s President Nixon resorted to wage and price controls in a futile effort to strangle inflation -- then raging at about 4%. Today, in mid-1987, it is widely accepted that we face

a rebound in inflation, comparing 1987 to a temporarily depressed 1986, but it's a rate of inflation we can live with.... Look for the CPI (consumer price index) to rise by 3 1/2 to 4 per cent this year....¹

In the 1970s the American economy rode an inflationary roller-coaster. (See chart 1). A fatal combination of OPEC-imposed oil price increases and excessive monetary stimulus produced two big surges in prices, each tamed by subsequent monetary tightening and recession. The first taming did not hold. The second, engineered by the Federal Reserve under the leadership of Chairman Volcker, has proven more durable.

But 1987 brings warnings of a revival of inflation. Oil prices are once again climbing. The foreign exchange value of the dollar has been falling rapidly, making imported goods more expensive. Commodity prices are clearly on an upswing. Long-term interest rates, which embody inflationary expectations, have sharply reversed a two-and-a-half year decline. And money, which affects the economy with a lag, has been growing at explosive rates for the past two years.

A major resurgence of inflation would be a tragedy. Taming it for yet a third time within fifteen years would probably entail the most wrenching recession in our post-war history. The relief it might bring debtors would surely be temporary, and not worth the costs to be paid when opinion eventually swings behind firm anti-inflationary policies.

Is there a serious threat of a revival of inflation, such that policy-makers, and above all the Federal Reserve, should act now to nip it in the bud? Or does the economy require continuing, perhaps

¹Testimony of David Seiders, Chief Economist of the National Association of Home Builders, June 4, 1987.

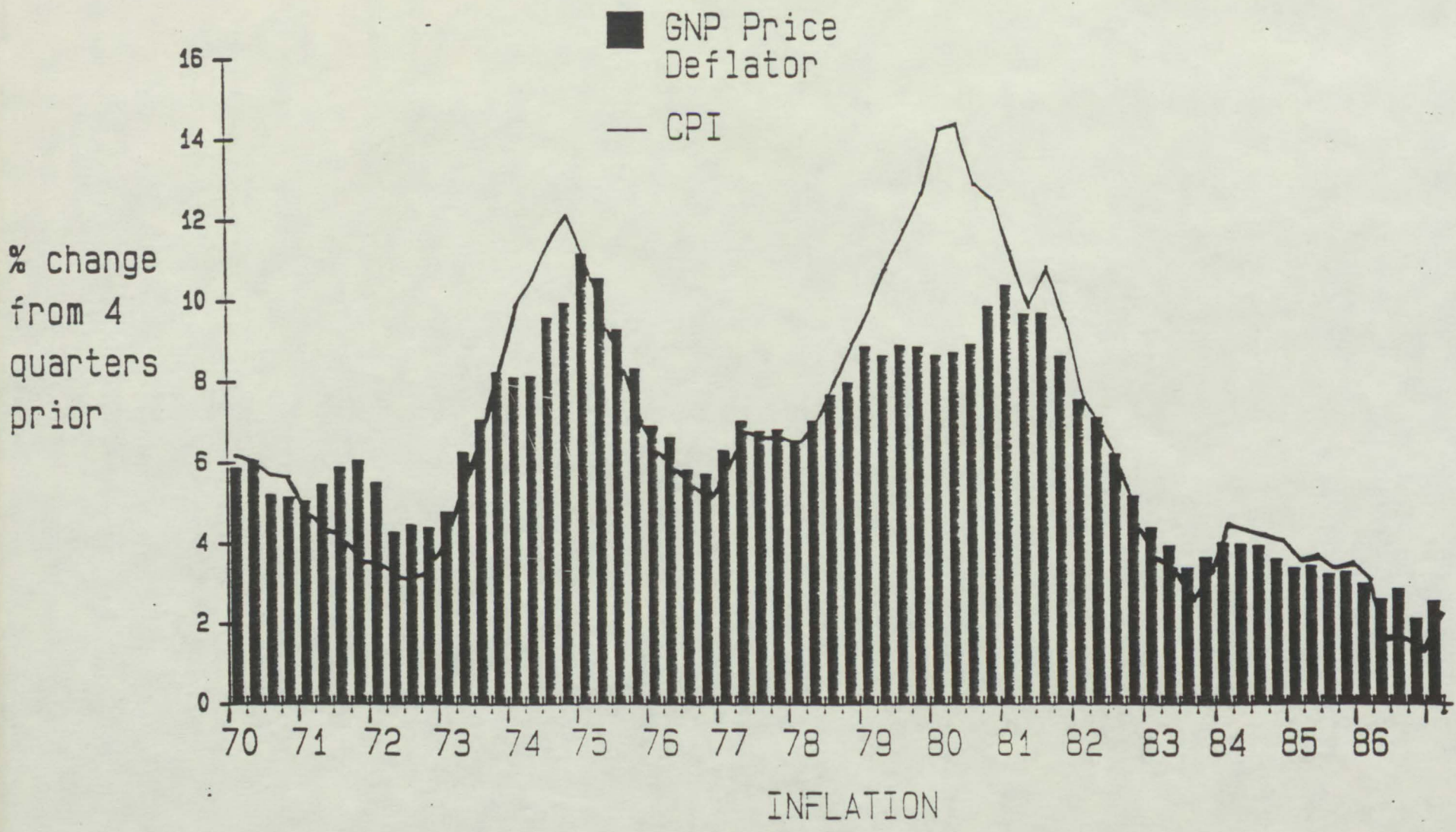


CHART 1

even greater macroeconomic stimulus? Is monetary restraint now required to head off the next round of inflation, or would it tip over an already sluggish economy into a world recession? Does the weight of our recent economic past -- the massive red ink of budget and trade deficits, and an explosion of money -- foreordain an inflationary future?

To seek answers to these questions the Subcommittee on Domestic Monetary Policy of the Committee on Banking, Finance and Urban Affairs held four days of hearings, in June 1987, on The Threat of Inflation. Prominent economists, forecasters, and Administration officials were invited to testify.² A wide and balanced range of views was sought. This report summarizes the main analyses and arguments put forward in these hearings, and presents the conclusions reached by the Chairman of the Subcommittee.

Forecasts of Inflation

The course of inflation over the past two decades, as measured by the GNP Implicit Price Deflator and the Consumer Price Index (CPI), is portrayed in chart 1. The following table summarizes forecasts for inflation presented by various prominent forecasting firms, and by the U.S. government, as of Spring 1987.³ Chart 2 projects several of these consumer price forecasts into 1987 and

²Witnesses for these hearings were: Dr. David Seiders, Chief Economist, National Association of Home Builders; Prof. Donald Ratajcvak, Economics Forecasting Center, Georgia State University; Dr. Paul Craig Roberts, Center for Strategic and International Studies, former Assistant Sec. of the Treasury for Economic Affairs; Mr. Lawrence Kudlow, Chief Economist, Bear Stearns & Co., former Chief Economist, OMB; Dr. Roger E. Brinner, Chief Economist, Data Resources; Dr. James Annable, Chief Economist, First National Bank of Chicago; Prof. William Poole, Brown University, former Member, Council of Economic Advisers; the Hon. Michael R. Darby, Assistant Sec. of the Treasury for Economic Policy; the Hon. Michael L. Mussa, Member, Council of Economic Advisers; Dr. Allen Sinai, Chief Economist, Shearson Lehman Brothers; and Dr. Jerry L. Jordan, Chief Economist, First Interstate Bancorp, former Member, Council of Economic Advisers.

³These forecasts convey a general picture of inflationary expectations. Forecasters frequently update their forecasts, so these numbers do not necessarily represent the current opinion of the forecasters. Sources: Memorandum to the Subcommittee from Congressional Research Service, May 5, 1987; Testimony before the Subcommittee on June 4, 10, 11 and 17, 1987. (GSU is the Georgia State University Economic Forecasting Center. The First Nat. Bk. of Chicago forecasts are for the fourth quarter of each year, at an annualized rate. Other figures are year-over-year forecasts.)

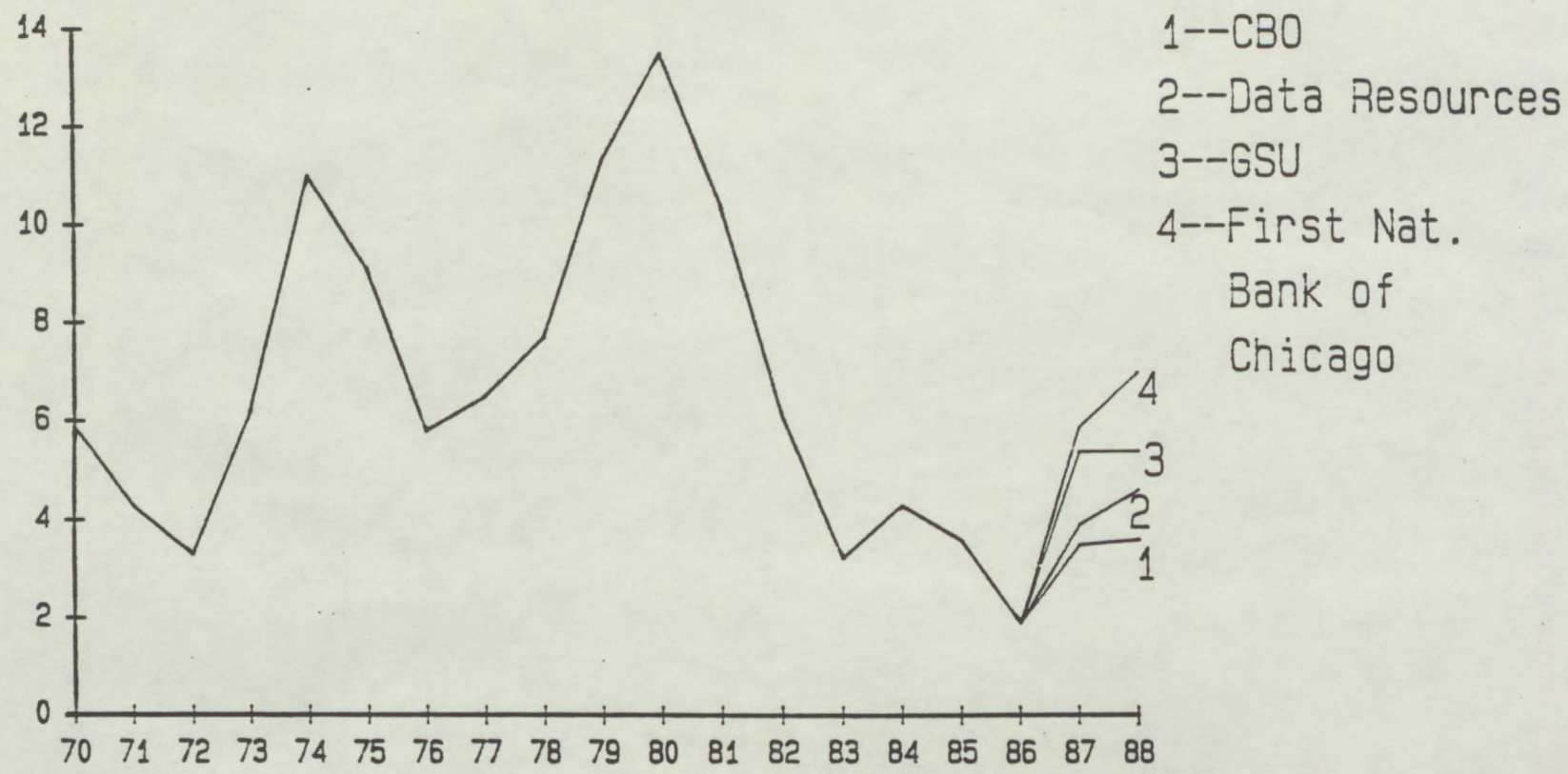
1988. As of May 1987 the annualized rate of increase for the CPI, since December 1986, stood at 5.6 percent.

	GNP DEFLATOR			CONSUMER PRICES		
	1987	88	89	1987	88	89
U.S. Government	3.3	3.5		3.0	3.6	
Congressional Budget Office	3.2	3.8		3.5	4.3	
Shearson Lehman	3.5	4.1	4.7	3.8	4.3	4.7
Data Resources	3.1	3.7	4.0	3.9	4.6	4.7
Townsend-Greenspan	2.8	4.3				
Wharton	3.2	4.3	4.8	4.0	4.7	5.0
GSU Econ. Forecasting Center				5.4	5.4	
First Nat. Bk. of Chicago	5.6	6.5		5.9	7.0	

The point of the hearings on which this report is based was not to determine who can make the best forecasts of inflation over the next few years. The best analysis of the threat of inflation may not generate an impressive forecast. Policy-makers sharing or reacting to that analysis might change policy so as to invalidate the forecast. Or the forecast might err in timing, especially in assessing the impact of monetary policy, since money affects economic activity with uncertain lags. The point is not to pick the best short-run forecast, but to assess the strength of gathering forces which could, sooner or later, reignite substantial inflation in the American economy. The forecasts presented above simply indicate the range of inflationary expectations held in the Spring and early Summer of 1987 by some prominent forecasters.

A THREAT OF INFLATION ?

A plausible case for relative complacency about the threat of future inflation can be built on the testimony presented by some of the witnesses at these hearings. No one doubts that inflation would eventually return, with a vengeance, if monetary policy grossly errs in the direction of excessive stimulus. In the opinion of some witnesses, however, that is the least likely error to which the Federal Reserve will be prone. The real economy is, in this view, sluggish and fragile. Few if any of the forces that inflate prices by inflating costs are now at work. Nor is excessive demand in



CPI forecasts for 1987 & 1988

CHART 2

evidence. Indeed, the major risk is that the Federal Reserve will err toward monetary tightening and precipitate a world recession:

I am not confident that the economy is robust enough at this point to stand monetary tightening.... A tightening of monetary policy runs counter to the urgent need for an expanding world economy.... Those calling for monetary tightening had better think about all the fallout. It is almost certain to produce bigger subsidies, more bailouts, a weaker economy and a larger budget deficit.⁴

No witness argued that monetary policy should target higher real growth with no regard for the inflationary consequences. Conquering the inflation of the late 1970s was a necessary and positive achievement, even when measured against the high cost of the recession of 1981-82. But the balance of risks for the foreseeable future is seen to lie preponderantly on the side of economic stagnation.

All observers agree that a global growth recession is a far more likely prospect than an inflationary boom in the late 1980s. A replay of 1972-73 is highly unlikely.⁵

What evidence and arguments support this downgrading of the risks of inflation?

Relative Price Adjustments

Movements in two important prices -- oil and the foreign exchange value of the dollar -- will undoubtedly put upward pressure on the U.S. price level throughout 1987. (See charts 3 and 4). In 1986 the price of finished energy products, reflecting the sharp drop in the price of oil, fell by more than 38 percent. This was largely responsible for the deceleration of consumer price inflation to about 1.1 percent in 1986. Excluding energy, the consumer price index (CPI) rose in 1986 at about the same rate, 3.8 percent, as in the previous three years. In 1987, however, energy prices have rebounded. Through April 1987 the price of finished energy products

⁴Testimony of Paul Craig Roberts, June 4, 1987.

⁵Testimony of Roger E. Brinner, June 10, 1987.

ENERGY COSTS

SOLID LINE is CPI Index of ENERGY COSTS - percent change from same month 1 year ago (LEFT SCALE)
DASHED LINE IS the relative price of energy = $\frac{\text{CPI Index of Energy Costs}}{\text{CPI, All Items}}$ (RIGHT SCALE)

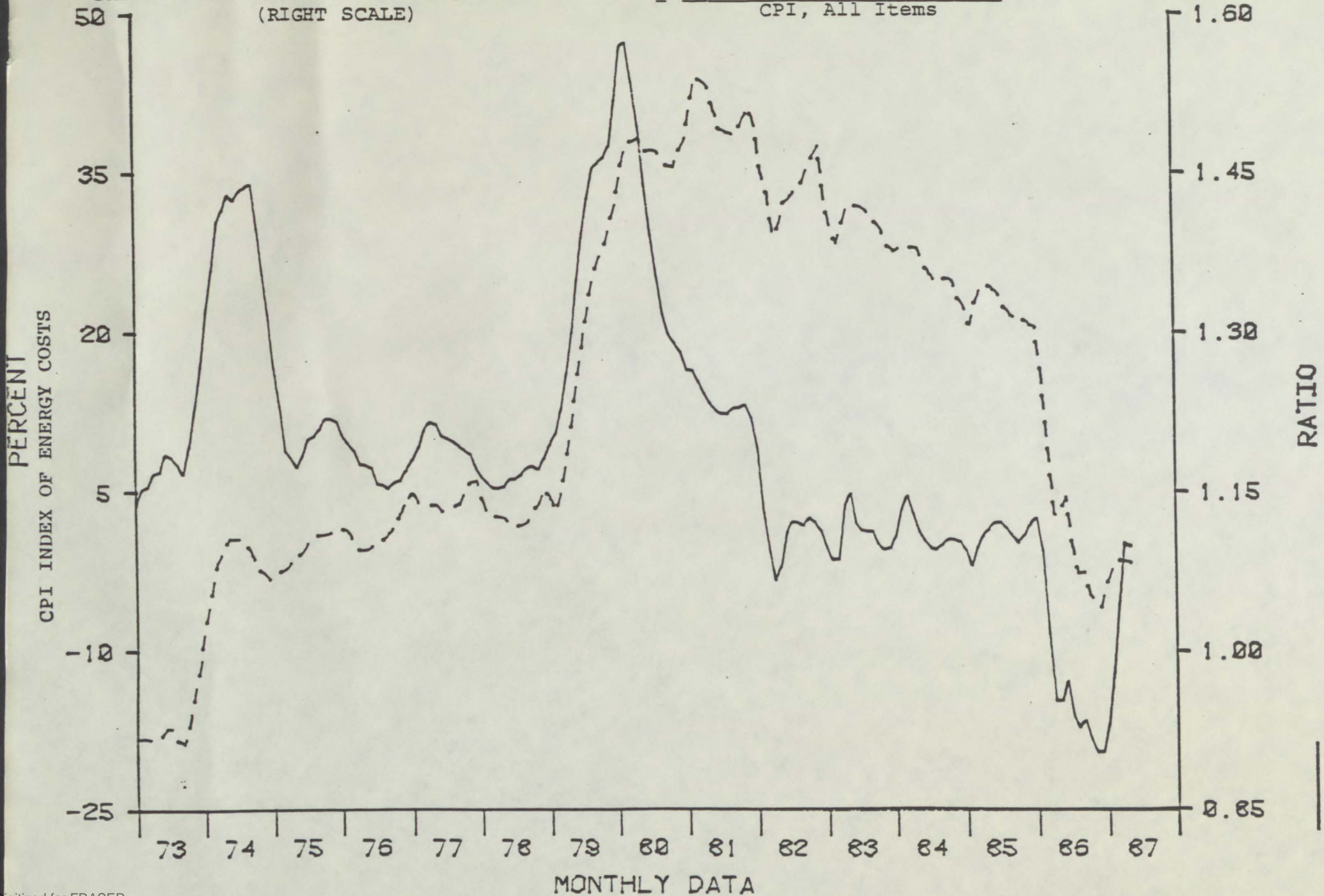


CHART 3

Trade-Weighted Real Exchange Rate for the Dollar

Dallas Federal Reserve Bank

(Index measures the value of the dollar against all 131 U.S. trading partners)

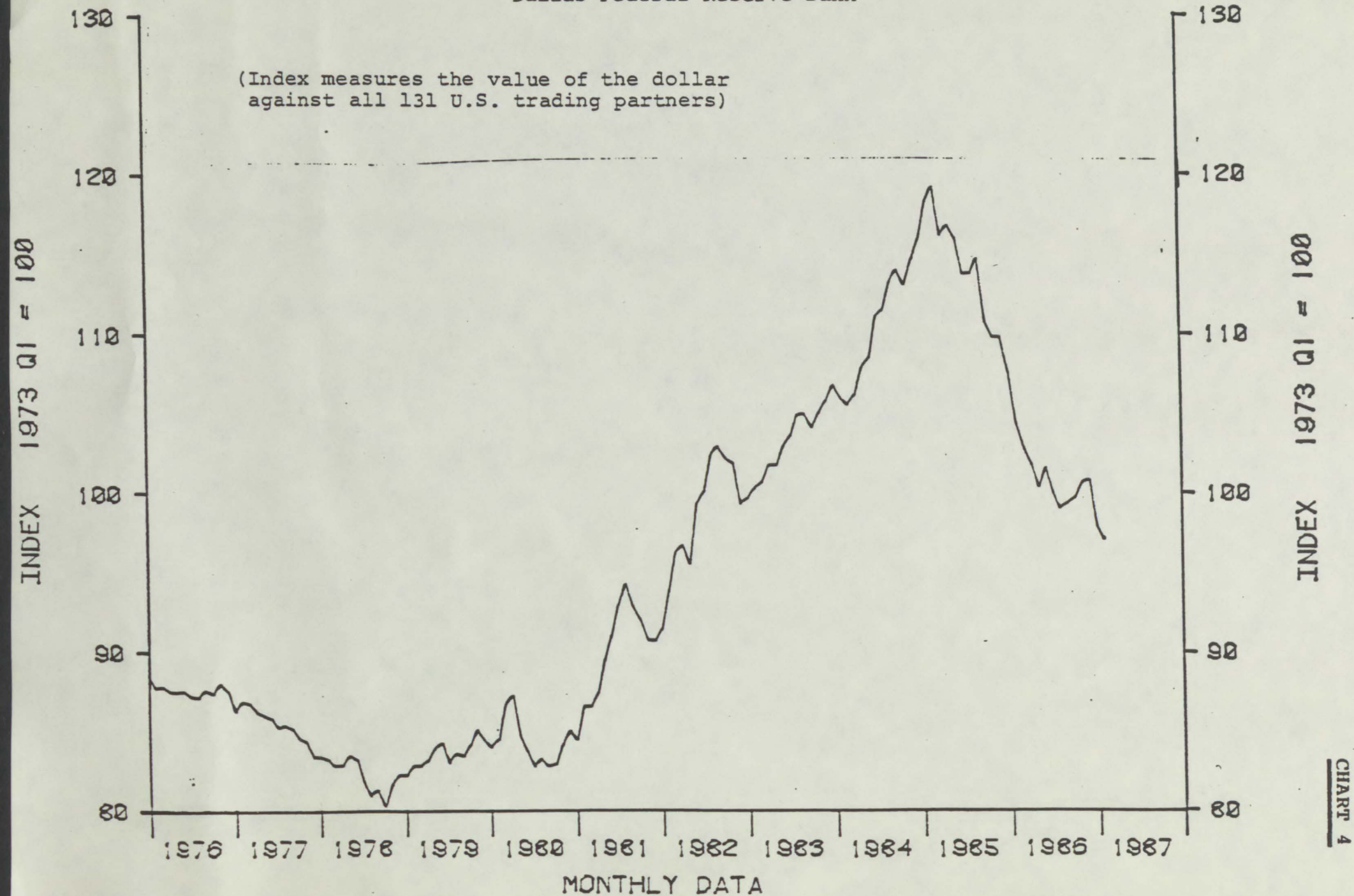


CHART 4

has jumped more than 14 percent. And the price of nonfuel imports, reflecting the depreciation of the dollar, rose at about an 11 percent annual rate in the first quarter of 1987.

But these movements do not necessarily portend a revival of inflation. They are both relative price movements (changes in the price of one set of goods relative to other goods), and they both can be interpreted as one-time adjustments that need not put persistent upward pressure on the overall price level.

(C)oncerns about a sustained resurgence in the inflation rate, above that recorded during the first 3 years of the current expansion, are exaggerated. The recent uptick of inflation, above the 4 percent range, is attributable largely to temporary, supply-side disturbances. Inflation should slow later this year as the passthrough of the rebound in energy prices is completed.⁶

No witness expected OPEC to be able to impose and maintain quasi-monopolistic increases on the price of oil as it did twice in the 1970s. The present increase in oil prices corrects an artificially exaggerated collapse in 1986, but bears no threat of chronic inflation.

The falling dollar is seen as a potentially more serious inflationary threat -- not in its own right, but in terms of the danger that policy-makers could misinterpret its significance. The decline in the dollar is an adjustment in relative prices, making foreign goods more expensive to Americans and American goods cheaper to foreigners. It is, in today's world, the most potent (perhaps the only) force tending to reduce the massive American trade deficit. It should, therefore, be viewed as highly beneficial, and policy should not try to "defend the dollar" against fundamental and persistent downward market pressures.⁷ Overcoming the trade deficit is a major policy objective, the attainment of which will require some increase in the U.S. price level. Such policy trade-offs are unavoidable, and

⁶Testimony of the Hon. Michael L. Mussa, June 11, 1987.

⁷Even the rebound in oil prices has its positive side. "(S)ome of the price increases now working through the economy are beneficial. Higher foreign goods prices signal better sales prospects for U.S. producers and more jobs for American workers. In addition, higher energy prices more closely reflect the long-term scarcity of oil, and their arrival should ease the financial pressures on the domestic energy industry." Brinner, op. cit.

should be recognized as such, without complaint.⁸

The depreciation of the dollar will unambiguously raise the U.S. price level. The price of imported goods are directly affected, but so are domestic prices. Domestic producers competing against foreign imports can, without sacrificing their competitive position, raise their own prices in tandem with import prices. But some witnesses judged the direct impact of the dollar on overall prices to be quite modest: "It seems reasonable to expect rising prices of nonoil merchandise imports to add less than a percentage point to CPI growth in 1987."⁹ Research at Data Resources supports the conclusion that "only a fraction of import price inflation will filter through to domestic production and labor markets."¹⁰

The expectation that the impact of the falling dollar on domestic prices will be quite modest stems, in part, from evidence that foreign profit margins widened considerably under the exceptionally strong dollar. Foreign producers are now able to adjust to the weak dollar more by reducing profit margins than by raising the dollar price of their goods.

The ultimate passthrough of the dollar's depreciation since early 1985, therefore, may be less than would be expected from historical relationships. Certainly, the increase in nonenergy import prices that has occurred thus far is less than would have been expected based upon the historical experience.¹¹

The inflationary danger posed by a falling dollar is the danger of misinterpretation and policy overreaction.

The recent depreciation of the dollar probably does not presage a new round of inflation, at least not at this time.... It would be a serious mismanagement of monetary policy for the Federal Reserve to misinterpret the dollar adjustment process as inflation and to tighten to prevent the adjustment.¹²

⁸"As soon as the dollar declined enough to begin improving the trade deficit, people started complaining about the low dollar. A country that turns every alternative into a crisis presents a confused face to the rest of the world." Roberts, op. cit.

⁹Seiders, op. cit.

¹⁰Brinner, op. cit.

¹¹Mussa, op. cit.

¹²Roberts, op.cit.

There is also the danger that the private sector will misread and misreact to the one-time price increase touched off by the falling dollar.

The only source of worry is the possibility that management and labor will fail to recognize the nature of the inflation surge (rising prices of imported goods and oil) and then reach overly generous pay agreements, followed by aggressive price increases -- thus initiating a cost-push inflation spiral. The American business community must exercise restraint in pay and pricing to allow the new value of the U.S. dollar to make a genuine improvement in competitiveness.¹³

Essential to overcoming a trade deficit through relative price changes (i.e., through a falling exchange rate) is the acceptance of a decline in real income.

When the dollar appreciated ... between 1980 and 1985, relative import prices declined and the real income of U.S. households rose. They could buy more imported goods at a smaller cost in terms of domestic goods. The real depreciation of the dollar, needed to correct the relative competitive position of U.S. industry, implies that this process must be reversed. Real living standards of U.S. residents must grow more slowly because of increases in the relative prices of imported goods. Increases in nominal wages and nominal incomes to offset the real income effects of dollar depreciation would be self-defeating.¹⁴

If workers demand wage increases to protect their purchasing power in the face of rising import prices, domestic prices will also rise in line with import prices. Overall inflation will tend to track the falling dollar, with no change in relative prices between imports and domestically produced goods. That is, there will be no change in real exchange rates, and no impact on the trade deficit. Downward pressure on the nominal exchange rate would then likely accelerate, leading to yet higher wage demands and yet higher domestic prices -- a classic wage-price spiral that will either be accommodated by increasingly expansive monetary policy or stopped by a monetary tightening that induces a serious recession.

This danger, though recognized, tends to be downplayed, primarily because it is thought that a relatively weak domestic economy, high

¹³Brinner, op. cit.

¹⁴Mussa, op. cit.

unemployment and unused capacity will keep a lid on domestic wages and production costs.

Production Cost Pressures

A sustained resurgence of inflation is likely only if the inflationary process begins to affect domestic production costs, most importantly, wage costs. Provided that firms and workers recognize the nature and necessity of relative price adjustments and the reality of the international competitive situation, ...unjustifiable increases in domestic production costs should not be an independent source of inflationary pressures.¹⁵

Are domestic costs likely to be pushed up aggressively in response to the relative price changes brought about by rising oil prices and the falling dollar? Witnesses who thought domestic cost pressures would continue to be minimal emphasized three factors in support of their assessment: (1) the current relatively high unemployment rate, (2) the very modest wage increases over the past few years, and (3) the continuing high level of excess manufacturing capacity.

Unemployment remains at rates which seem high by post-war standards, though it shows a downward trend for recent months. There is, moreover, no obviously stable relationship between unemployment and inflation. (See chart 5). Another, more comprehensive measure of employment shows a steady rise in the ratio of the employed to the total working-age population. (See chart 6).

An historically high unemployment rate could still touch off inflationary pressures. For reasons these hearings did not explore, the rate of unemployment at which inflationary pressures will begin to emerge has risen in the United States over the past two decades.

Optimists assert that the unemployment rate could be cut to 5.5% before such pressures would exist; pessimists would probably worry at 6.5%.¹⁶

This concept, often referred to as the "natural rate of unemployment," is not necessarily the "full employment" rate. It is,

¹⁵Mussa, op. cit.

¹⁶Brinner, op. cit.

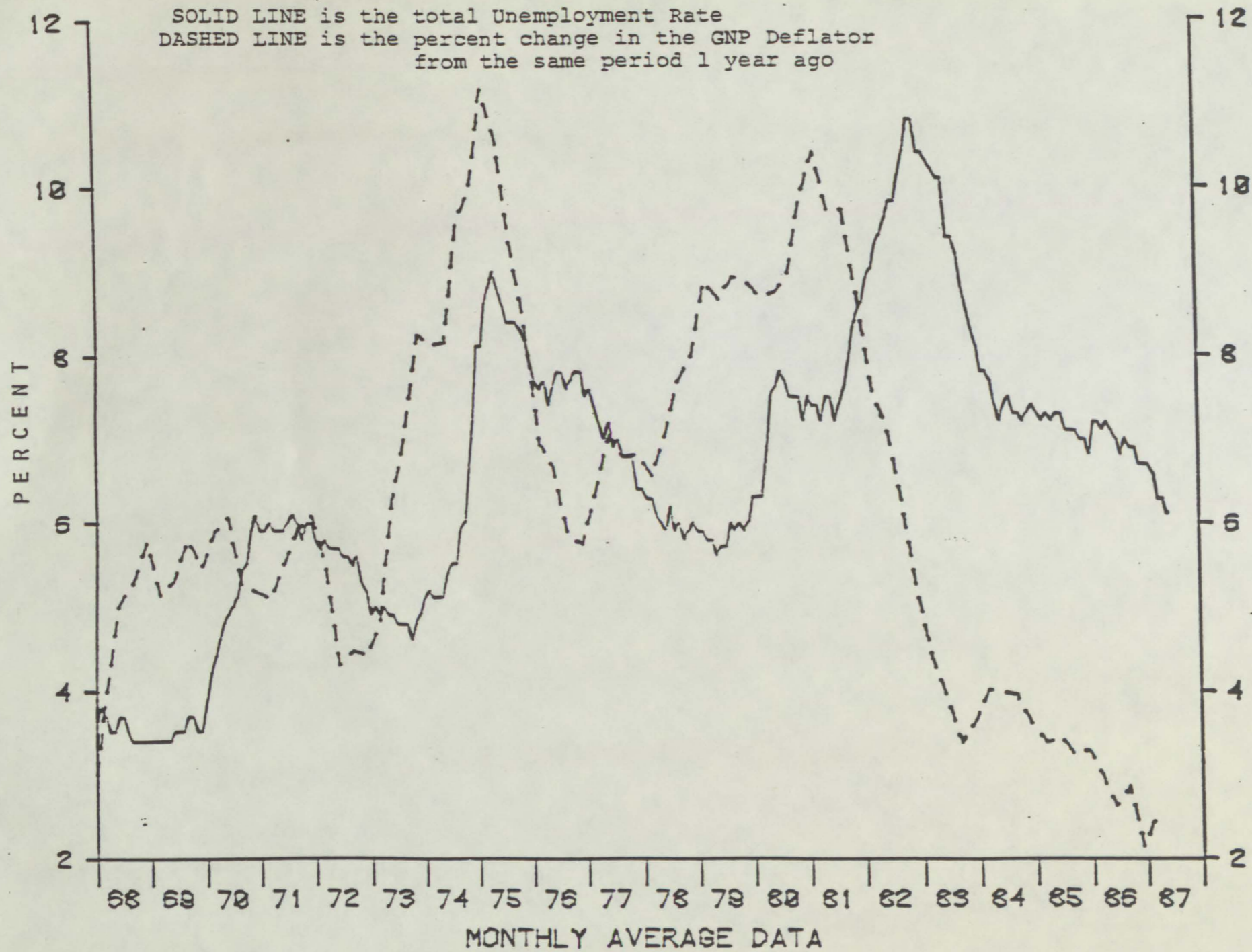


CHART 5

EMPLOYMENT RATE

SOLID LINE is total of those employed (including those in the armed forces) divided by the total population over 16 years old.

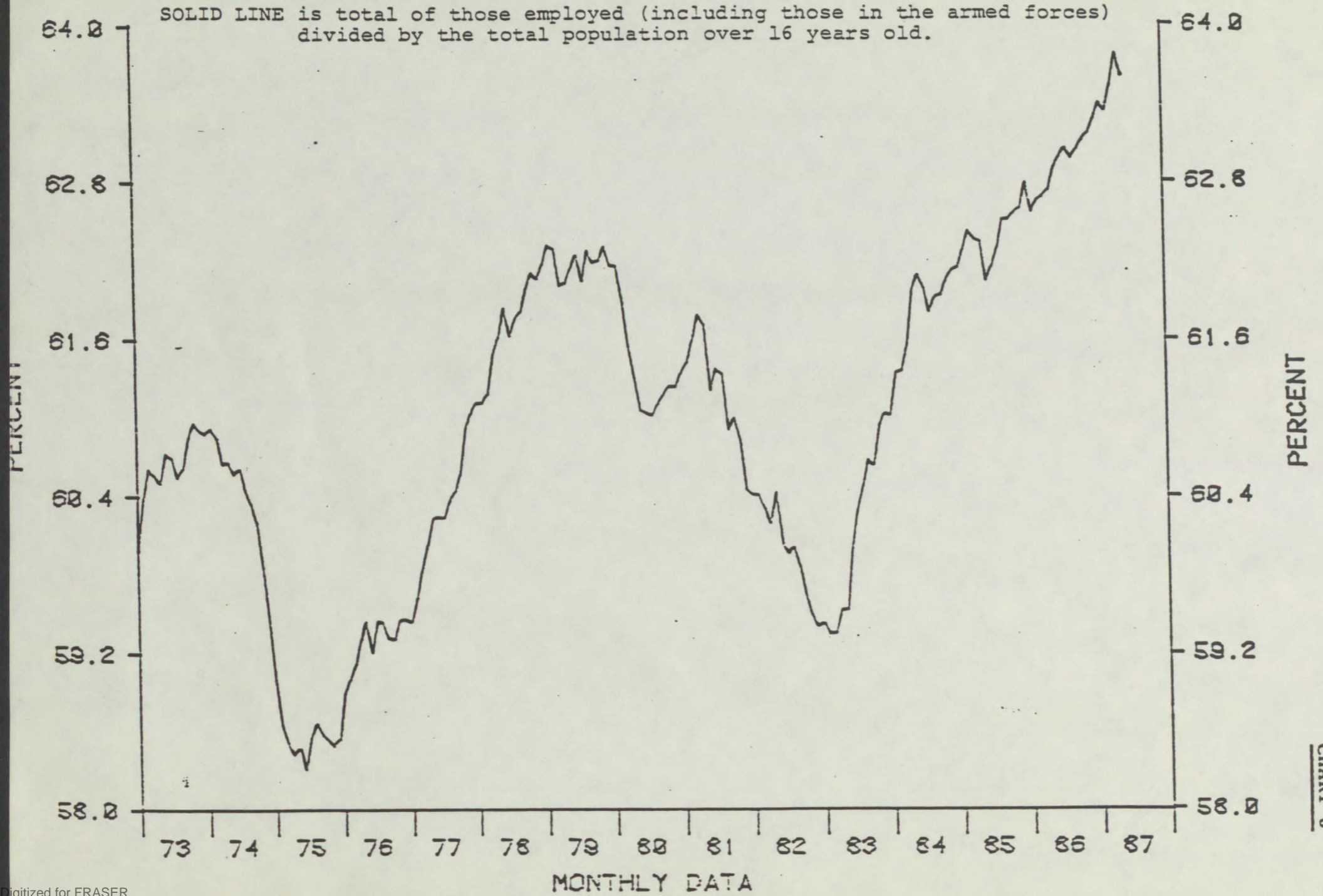


CHART 6

rather, the rate of unemployment which cannot be reduced by further macroeconomic stimulus without generating inflationary pressures. Furthermore, any reduction that might be achieved by such stimulus would likely be shortlived, since the market, after adjusting to the unexpected rise in inflation, would tend to move the rate of unemployment back to its "natural" level. This "natural" level can be lowered only through policies that change the structure of the labor market itself, not through the blunt instruments of fiscal or monetary policy.

Witnesses agreed that this "natural" rate, though an important theoretical concept, is difficult to estimate empirically. Our inability to pinpoint it precisely should rule it out as an operational target for macroeconomic policy.¹⁷ At best it can serve as a general indicator of the state of the labor market. By mid-1987 the measured U.S. unemployment rate was moving toward the midpoint of the estimated range for the "natural" rate of unemployment. Further downward movement would not necessarily entail renewed inflation, but would signal that we are close to the limit beyond which macroeconomic stimulus will generate inflation, but no lasting gains in employment.

The most encouraging current restraint on inflation is the behavior of wages:

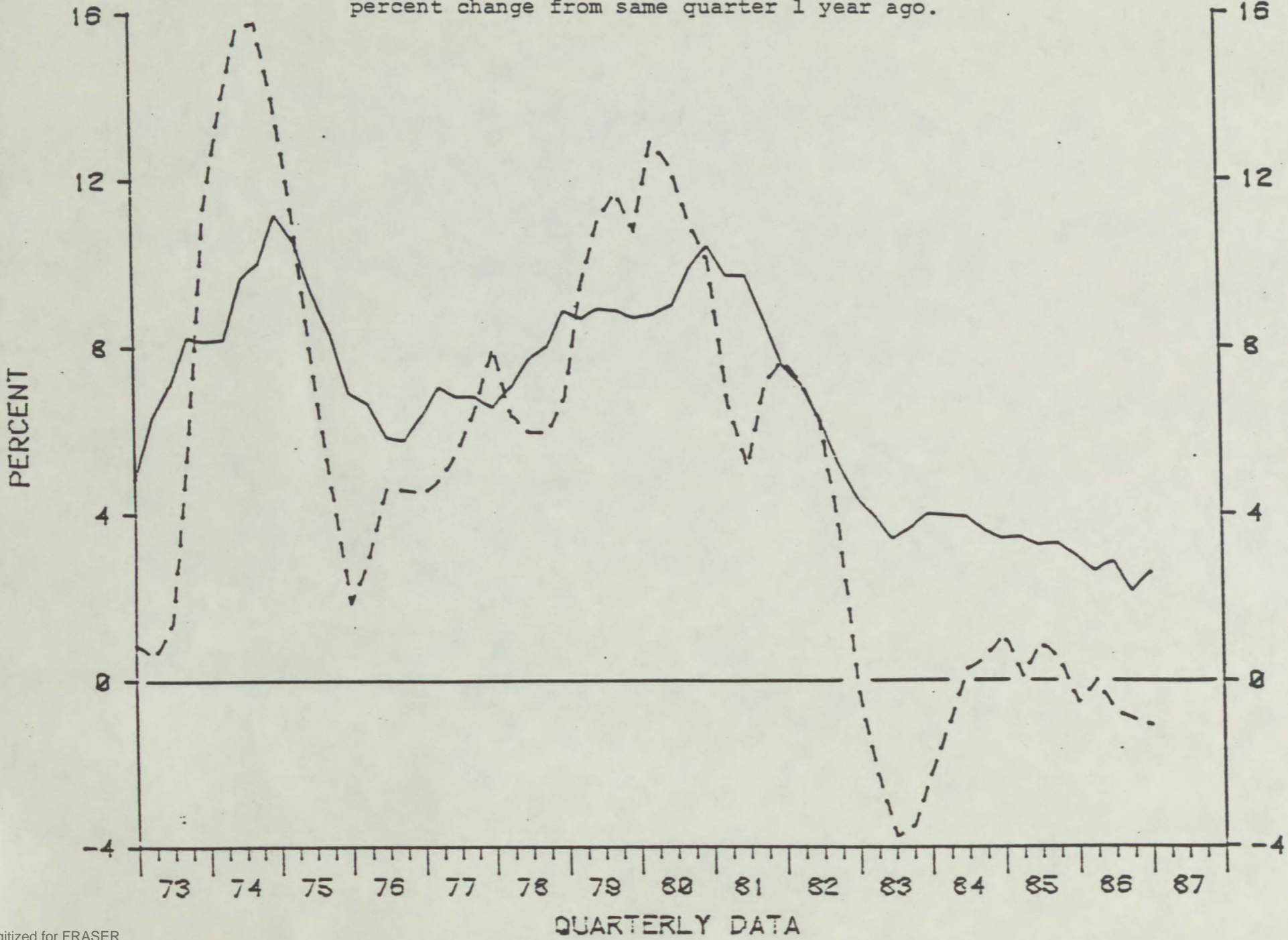
(W)hile the civilian unemployment rate has been reduced from 10.7 percent to 6.3 percent in the current expansion, there is not the upward pressure on unit labor costs that is normally associated with the inflationary process. For example, over the past year unit labor costs in the nonfarm economy have risen by 2 percent and by only about 1 percent for nonfinancial corporations.¹⁸

Unit labor cost is measured by subtracting the rise in productivity from wage inflation. If productivity rose as rapidly as wages, wages would exert no pressure at all on final prices. Though productivity growth has slowed considerably in recent years, so have wages, and unit labor costs have have been trending modestly downward for the past two years. (See chart 7).

¹⁷ Comments by Poole, Hearing of June 10, 1987.

¹⁸ Testimony of the Hon. Michael R. Darby, June 11, 1987.

SOLID LINE is the GNP Deflator, percent change from same quarter 1 year ago
DASHED LINE is unit labor costs in the manufacturing sector,
percent change from same quarter 1 year ago.



PERCENT

CHART 7

Assuming productivity gains remain modest, sharp rises in wages will generate sharp rises in prices. Wage costs represent about two-thirds of production costs for domestically produced goods and services. Little, if any, of the increase in wages could be absorbed by a reduction in corporate profits, which constitute a much smaller share of total production costs. (Over the past decade after-tax corporate profits averaged 4.7 percent of GNP.) Nor would it be desirable for them to be so absorbed, since investment depends, in the final analysis, on the expectation of healthy profits, productivity gains require robust investment, and the growth of real income requires rising productivity.

Could we have price inflation without parallel wage inflation? Initially prices can surge with wages lagging behind, since wage rates are set at intervals, and do not all adjust instantaneously to the current rate of inflation. But they will surely catch up sooner or later, and probably sooner.

Any sustained and substantial increase in the inflation rate, therefore, must involve a sustained and substantial increase in the rate of wage inflation.... Workers will want to protect their real living standards against rising prices. Employers, realizing or anticipating increases in the prices of products they sell, will grant wage increases to secure the labor they require for production. Through this mechanism, an excessively expansionary monetary policy can generate inflation in which prices and wages move in a mutually reinforcing upward spiral.¹⁹

The relatively sanguine inflationary forecast by Data Resources stems from its relatively optimistic view of the evolution of wages, productivity and unit labor costs.

I expect growth of hourly compensation to fall to 2.5% in 1987, then rise to 4.5% in 1988-89, and possibly 5.0-5.5% in 1990. Because productivity growth should simultaneously recover to 1.5% per year, labor costs per unit of output will only accelerate moderately.... to perhaps 3.5% per year.... Prices of goods produced -- not just consumed -- in the United States should rise at about the same rate as unit labor costs. Specifically, our forecast for the price deflator for gross national product is 3% in 1987, followed by 4% in 1988 and 1989.²⁰

This is quite in line with recent inflationary experience, since

¹⁹Mussa, op. cit.

²⁰Brinner, op. cit.

the GNP deflator also rose at about 4% in 1983 and 1984, while the 3.3% in 1985 and 2.3% in 1986 were temporary and artificial lows attributable to the passing influence of the high dollar and lower oil prices. Thus the United States "is not at a critical turning point."²¹

That conclusion is reinforced by the state of capacity utilization in manufacturing. (See chart 8).

(T)he capacity utilization rate for total U.S. industry remains below 80 percent. Utilization increased sharply in the early stages of the current expansion but has remained on a plateau since 1984.... in general there is more unutilized capacity than is characteristic of an overheated economy or even a potentially inflationary situation.²²

Data Resources shares this assessment, and doubts that it will change in the next few years.

Overall, the operating rate for manufacturing is 79% and is unlikely to rise beyond 81% during this decade. At least an 85% rate (and probably an 87% or 88% rate) would be required before aggressive price increases beyond costs would become widespread.²³

Other factors were also cited as evidence that inflation is firmly under control.

Commodity prices have not broken out on the upside,... and the latest Fed data show a continuing deterioration of the farm banks despite the massive federal subsidies to farmers....Land values are still uncertain in much of the Midwest and the oil states.²⁴

Both these factors might be cited as indications that there is little of no expectation of future inflation. But they may be very unreliable indicators of actual future inflation. Farm land values reflect expectations of future agricultural prices. With agricultural products oversubsidized and in excess supply on world markets, it is plausible to expect agricultural prices to lag behind the general price index, whatever the overall rate of inflation. Nonetheless, stagnant farm land values contribute to an overall

²¹Ibid.

²²Darby, op. cit.

²³Brinner, op. cit.

²⁴Roberts, op.cit.

SOLID LINE is Capacity Utilization in Manufacturing (LEFT SCALE)
 DASHED LINE is the GNP Deflator, percent change from same month 1 year ago (RIGHT SCALE)



CAPACITY UTILIZATION DATA IS MONTHLY . GNP DEFLATOR DATA IS QUARTERLY

CHART 8

assessment that current inflationary expectations are still quite modest.

Commodity Prices

Commodity prices present an ambivalent picture. Commodity price indices are growing in popularity, on the claim that they can serve as reasonably reliable guides for the conduct of monetary policy. This claim deserves a more careful evaluation than it could be accorded in these hearings. The behavior of several such indices is plotted, together with consumer inflation, in charts 9 and 10. It is clear that their record as indicators of future inflation is far from perfect. Commodity prices generally moved in tune with the two big inflations of the 1970s, but do not appear to have led the movements, as policy indicators should do. The spot index for raw materials gave a clearly misleading signal with its upswing of 1983.

While commodity prices have not yet "broken out on the upside," there is an unmistakable upswing that appears as steep as previous major upswings.

The Commodity Research Bureau spot price index has risen 12.1% since December 31, 1986 or at a 25.8% annual rate. The rise has accelerated in the past few months....Raw industrial prices are up 12.7% over the past two months. This is a sizeable and widespread higher inflation.²⁵

The usefulness, if any, of commodity prices (or any other dominant indicator) as a guide to monetary policy must stem from a capacity to provide reasonably reliable early warning signals. If a policy response must wait until the indices have "broken out on the upside," it will be too late. If an indicator is to play a predominant role, policy must be willing to respond to its early signals, when other indicators are ambiguous and uncertain.

Commodity prices should not, at present, be invested with such weight in the setting of monetary policy. The upswing that commenced in 1986 is certainly not, by itself, a necessarily reliable indicator of future inflation, nor a reason, by itself, to tighten monetary policy. But neither does it offer any reason to be complacent about

²⁵Testimony of Allen Sinai, June 17, 1987.

SOLID LINE is the Producer Price Index for Industrial Commodities
DASHED LINE is the Consumer Price Index for All Items
(both are percent change from same month 1 year ago)

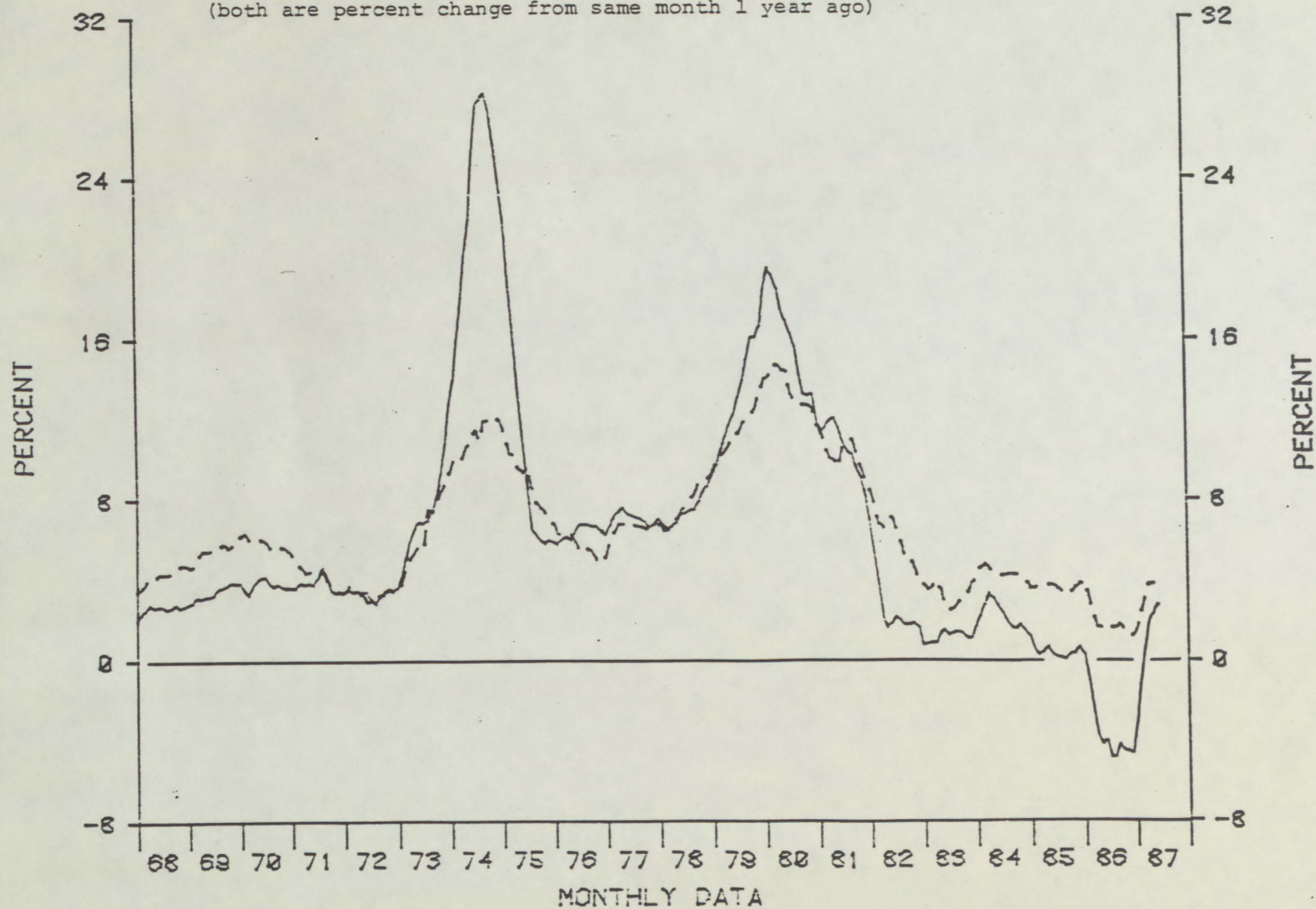


CHART 9

SOLID LINE is Spot Market Prices of Raw Materials Index (1967 = 100)
(Commodity Research Bureau Index)

DASHED LINE is the Consumer Price Index for All Items
(Both are percent change from same month 1 year ago)

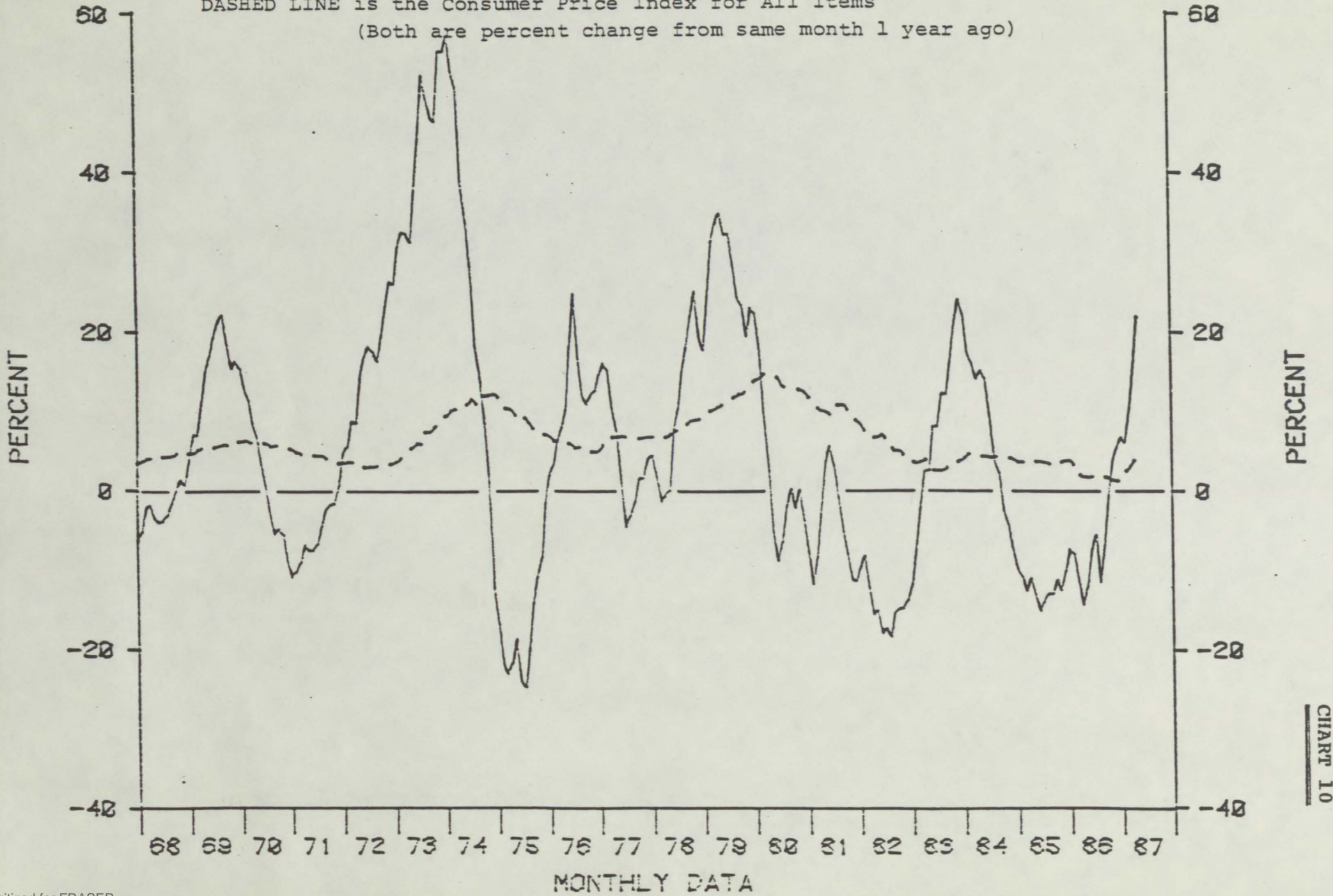


CHART 10

the future threat of inflation.

The Velocity of Money

Since 1982 the American economy has absorbed several big upswings of monetary growth. (See chart 11). From about the third quarter of 1982 to the third quarter of 1983 M1 grew at close to 13%, compared to about 6.5 % per annum over 1980 and 1981. This spurt coincided with recovery from the recession of 1982. From the third quarter of 1983 through about the end of 1984 growth in M1 decelerated to about 5.6% per annum. This deceleration gave rise to the charge that the Federal Reserve, fearing the inflationary consequences of rapid economic growth, was strangling the recovery. But M1 growth surged once again, accelerating to about 11-12% through 1985 and about 16% through 1986. These rates compare with average annual growth rates of about 6.6% for M1 throughout the 1970s.

There is an impressive body of theory and empirical evidence which points to rapid growth in money as the ultimate cause of inflation.... This is not a partisan issue. It should command general agreement.²⁶

Why, then, has recent rapid monetary growth failed, so far, to cause inflation? This question was widely discussed in these hearings, in terms of the concept of the "velocity of money".

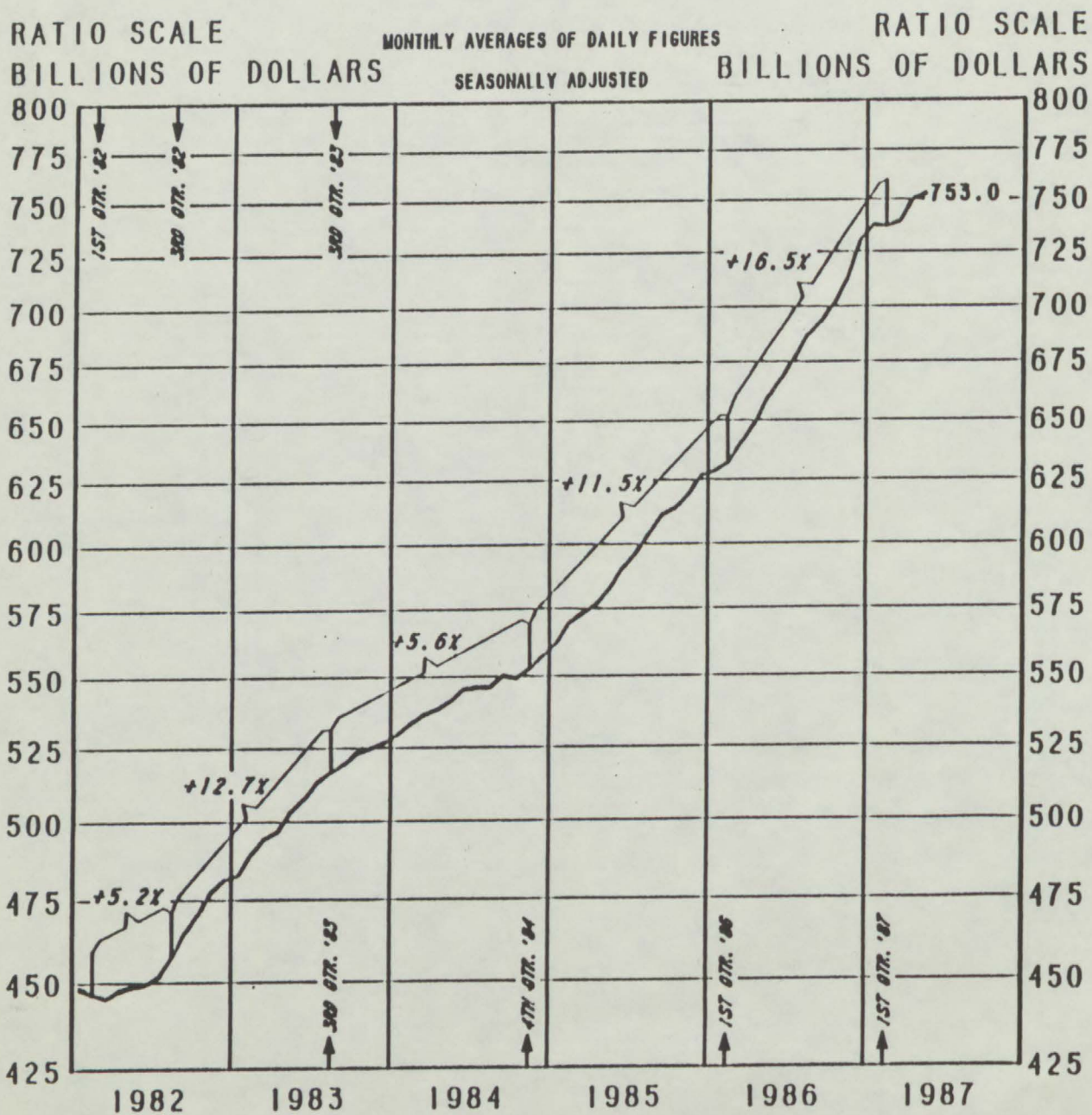
The velocity of money is the ratio of income to money. Since there are various measures and definitions of income, and of money, there are various kinds of velocity. The most common is the ratio of nominal GNP to M1. Since money affects spending, and thus GNP, with a lag, it is also useful to examine velocities whose denominator is a measure of money over some previous time period.

In a rough way velocity indicates the rate at which money is being spent. A velocity of 5 suggests that, on average, each dollar is spent five times to generate the aggregate spending that gives rise to the GNP.

The image of velocity as money "turning over" should not be taken too literally. Money is also spent on many transactions the

²⁶Darby, op.cit.

MONEY STOCK (M1) ¹¹



¹¹M1 CONSISTS OF CURRENCY HELD BY THE NONBANK PUBLIC, DEMAND DEPOSITS, OTHER CHECKABLE DEPOSITS AT ALL DEPOSITORY INSTITUTIONS AND TRAVELERS CHECKS.

PERCENTAGES ARE ANNUAL RATES OF CHANGE FOR PERIODS INDICATED.
 LATEST DATA PLOTTED: MAY

PREPARED BY FEDERAL RESERVE BANK OF ST. LOUIS

full value of which is not a part of GNP. Buying stock, or a used car, requires money, but only the value of the services of the stockbroker or used car dealer contribute to GNP, not the value of the stock or the car. GNP measures the value of goods and services produced by the economy, not the value of all things traded in the economy. The demand for money is determined by, among other things, the transactions for which it is used, including those outside GNP. GNP is normally assumed to be workable proxy for total transactions, since we lack a ready measure of their value.

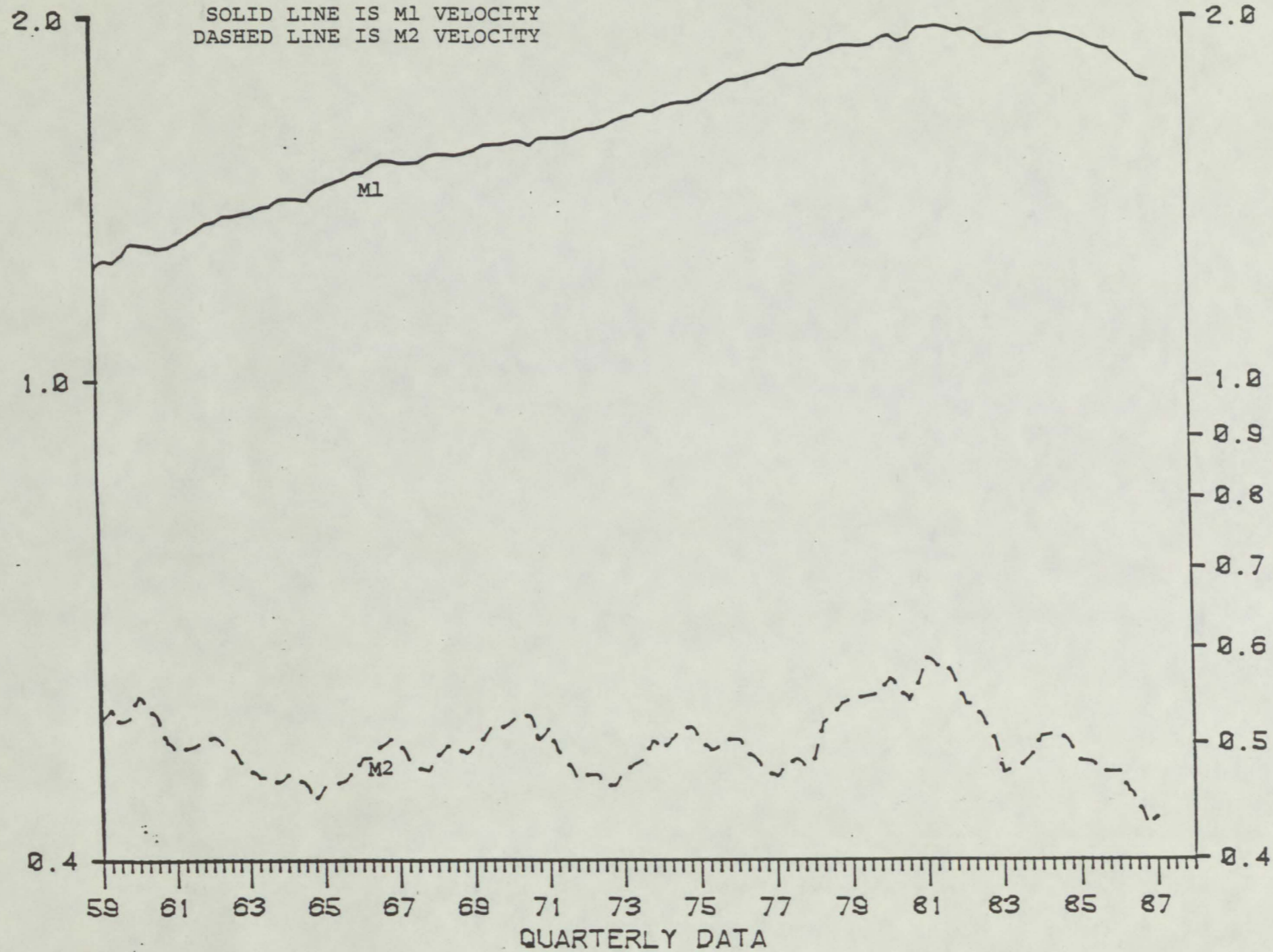
The link from money growth to inflation can be traced through the behavior of velocity. If velocity were perfectly constant, the rate of increase of the numerator (nominal GNP) and the rate of increase of the denominator (the money stock) would be exactly the same. The numerator, nominal GNP, is the product of real GNP and the price level. The growth in nominal GNP is (approximately) the sum of real growth and inflation. If velocity were constant and money grew at 10%, then GNP might, for example, grow at about 3%, with inflation at about 7%. If real GNP could not, in the short-run, grow faster than 3%, then increasing money growth from 10% to 20% would just raise inflation from 7% to about 17%.

To be useful in setting policy velocity need not be absolutely constant. Velocity with a constant rate of change would be just as useful. And a "constant rate of change" need not be taken literally. Velocity could be quite volatile quarter to quarter, even somewhat volatile year to year, and still be useful for policy if it adhered to a reasonably stable longer term trend, or if policy makers could confidently predict future deviations from that trend. Under those conditions the expected behavior of velocity could usefully guide policy makers in the setting of monetary targets which would restrain inflation while allowing (not ensuring) maximum real economic growth.

For much of the past three decades M1 velocity did seem reliably wedded to a long-term trend of about 3% growth per year. (See chart 12). However, beginning about 1980 it began to deviate significantly from that trend. The normal relationship between money and income broke down, and velocity declined abnormally. This

MONEY VELOCITY

SOLID LINE IS M1 VELOCITY
DASHED LINE IS M2 VELOCITY



LOG SCALE

CHART 12

breakdown had two important implications for monetary policy. In the first place, the monetary tightening of 1980-82 was, in fact, much more severe than the money supply figures, based on historical relationships, would have suggested. Given the fall in velocity, a given degree of monetary contraction produced a much larger contraction in nominal income than could have been predicted from the pre-1980 behavior of velocity. And, in the second instance, the rapid expansion of the money supply from 1983 to 1986 produced a much smaller rise in nominal income than could have been predicted from the pre-1980 behavior of velocity. That much smaller rise in nominal GNP, combined with a healthy, if not spectacular, rise in real GNP, squeezed inflation (as measured by the GNP deflator) down to 2.6% in 1986, the lowest in the past two decades.

In common parlance one speaks of monetary tightening or contraction, monetary ease or expansion. These terms make sense only as shorthand for the relationship of the supply of money to the demand for money. Monetary tightening means the money supply is being depressed relative to demand; monetary ease means the money supply is being expanded relative to demand. But only the money supply can be observed. Money demand must be estimated on the basis of other economic variables that are directly observable, such as income, interest rates and prices. Good estimates of money demand require a reasonably reliable relationship between money demand and those directly observable variables. Significant shifts in velocity imply significant shifts in these relationships. If demand for money is growing much faster than anticipated, a given growth of the money supply, which might appear to be highly expansionary, could in fact be neutral or contractionary, in relation to the actual (but unexpected) growth in the demand for money.

The collapse in velocity of the 1980s might suggest the conclusion that velocity is so unreliable (money demand so unpredictable) that monetary aggregates are useless as targets for monetary policy. It might also suggest that no scaling back of last year's torrid pace of monetary growth is required, since falling velocity will render future monetary expansion harmless. These two

conclusions are, of course, mutually inconsistent. If velocity has become truly random and unreliable, no prediction of its future course is warranted. The task is to explain its behavior, and thereby reestablish a basis, however tentative, for assessing the consequences of past monetary growth and the threat that might be posed by its continuation at such unprecedentedly high rates.

THE THREAT OF INFLATION I

The collapse in velocity (or rise in the demand for money) has obviously allowed the economy to absorb rapid monetary growth with no contemporaneous inflationary fallout. The downward trend in velocity has persisted long enough to convince earlier sceptics that the shift was real and substantial.

Starting in October 1982 the Federal Reserve accommodated the decline in velocity by permitting money growth to rise. I thought at the time and for some time thereafter that higher money growth ran the risk of reigniting inflation. But Paul Volcker called it right at the time.²⁷

Why did velocity collapse? Witnesses presented five reasons to explain the break in velocity: (1) the impact of inflation on velocity; (2) the impact of interest rates on velocity; (3) portfolio growth; (4) the trade deficit; and (5) changes in the definition of money.

The Impact of Inflation on Velocity

Accelerating inflation should act to increase velocity, and decelerating inflation to reduce velocity. With higher prices people will need to hold more money, but will also have a strong incentive to economize on their holdings of money. The components of M1 either earn no interest, or earn interest at rates that adjust slowly to changes in inflation. Thus, M1 loses purchasing power as inflation accelerates. People will need to increase their demand for M1 as inflation rises, but can be expected to increase that demand at a

²⁷Testimony of William Poole, June 10, 1987.

pace less than the rate of inflation, so as to minimize the loss of purchasing power on the money they do hold. They will, therefore, tend to spend M1 faster and faster as inflation accelerates.

Accelerating inflation tends to raise velocity. Decelerating inflation reverses these incentives, so it tends to reduce velocity.

At moderately accelerating or decelerating rates of inflation the influence of these incentives may be hard to detect. They may also operate with considerable lags, especially when serious inflation is a novel experience, adjustment to which takes some time. The jump in inflation in the mid-1970s appears to have had no major impact on velocity. By the late 1970s, however, velocity clearly rose above its trend line. And, of course, the drop in inflation of the 1980s coincides with a major drop in velocity. If inflation has now come to exert an influence on velocity larger than suggested by previous estimates, "then the decline in velocity in recent years is not a puzzle but is a consequence of the decline of inflation."²⁸ Moreover, if "inflationary concerns are reappearing, more rapid gains in velocity should be forthcoming or, at least, the rate of velocity decline should slow sharply."²⁹

The Impact of Interest Rates on Velocity

Interest rates should have a clear impact on velocity. In fact, two kinds of impact have been at work: an impact through the traditional relationship between interest rates and the demand for money, and an impact from the changes wrought by the financial deregulation of the early 1980s which permitted the payment of interest on most checkable deposits.

The traditional relationship operates much like inflation on the demand for money, or on velocity. Rising interest rates induce people to minimize their holdings of money that pay no interest (or that pay rates that lag behind market rates). The higher the market rate, the stronger the inducement to shift money from sterile balances into assets that earn the market rate. To some extent, this

²⁸Ibid.

²⁹Testimony of Donald Ratajczak, June 4, 1987.

is simply a replay of the impact of inflation on velocity, since market rates, especially at the long end, contain an "inflation premium", which rises with inflationary expectations. This premium is necessary to compensate asset holders for their expected losses due to expected inflation.

An increase in the "real" rate of interest -- the nominal rate minus the inflationary premium -- should also induce shifts from money to assets earning market rates. Since the inflationary premium is unobservable, there is no neat way to separate the impact of inflation, per se, from the impact of real interest rates, per se, on velocity. But the general conclusion is clear enough. Rising interest rates should increase velocity, falling interest rates should decrease velocity.

A long-term relationship between velocity and interest rates is discernible. (See chart 13). It suggests the hypothesis

that the postwar increase of velocity was due to rising interest rates, and the 1980s decline of velocity was due to falling interest rates. On this hypothesis there is a stable relationship between velocity and interest rates and we should use that relationship as an important input to monetary policy decisions.³⁰

The other impact of interest rates on velocity stems from the deregulation measures which permitted the payment of interest on checkable deposits. The transition from the old regime (money bearing no interest) to the new regime (some components of money bearing interest) had an important impact on velocity. Suddenly the incentives for not holding some forms of money were significantly diminished, the incentives for holding those forms significantly enhanced. After the shift in regimes some components of M1 became more attractive as assets to be held as savings, as well as temporary abodes of purchasing power awaiting the next transaction.

That part of M1 in NOW and SuperNOW accounts is not necessarily transactions-based monies, used against a flow of nominal goods and services. The NOW and SuperNOW accounts serve just as well for precautionary or savings purposes.³¹

³⁰Poole, op. cit.

³¹Sinai, op. cit.

VELOCITY AND INTEREST RATES, 1915 - 1986

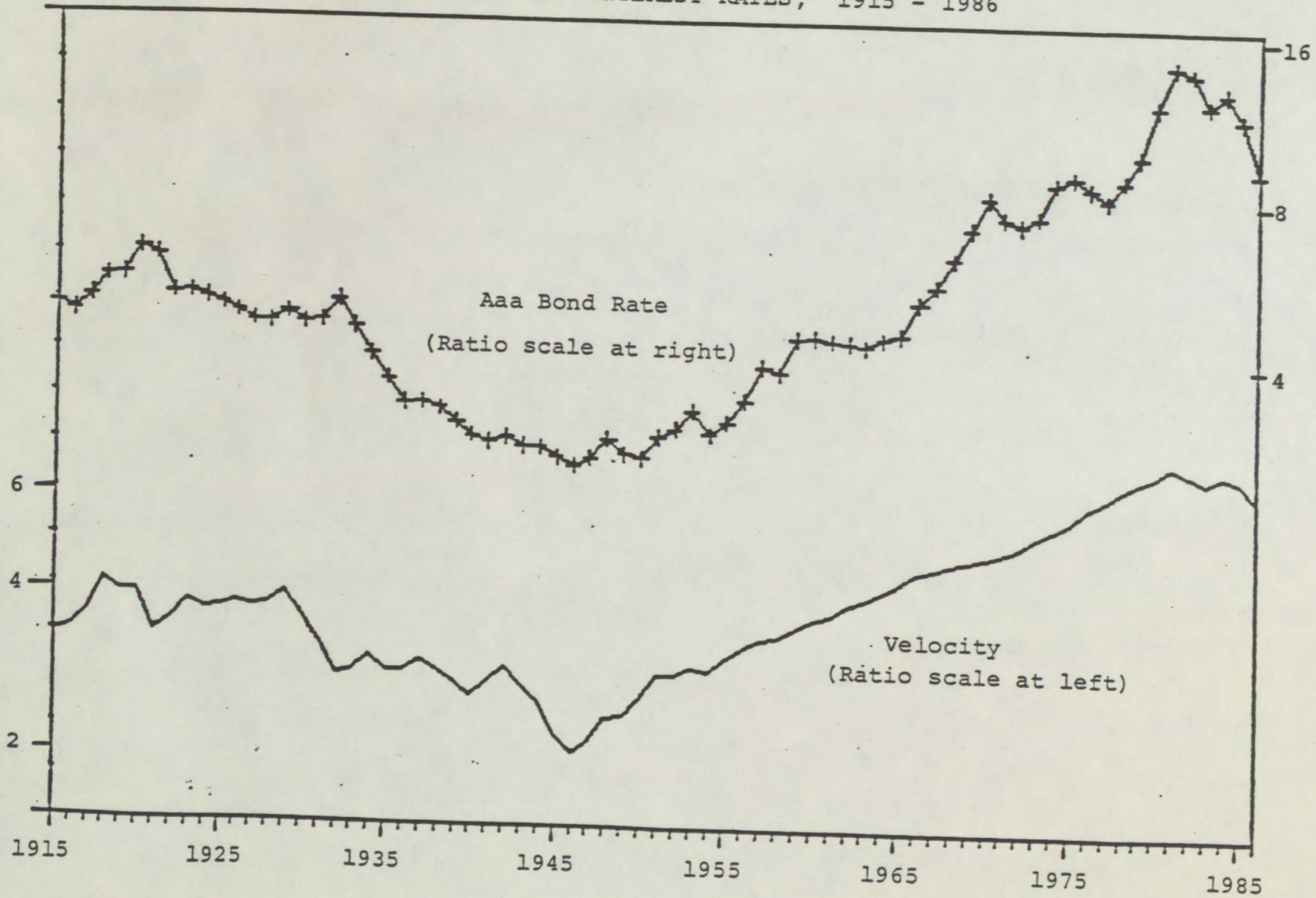


CHART 13

Assets held as savings are not spent as rapidly as assets held primarily to finance transactions. Incorporating more money held as savings in M1 would cause its velocity to decline. Since the magnitude and timing of the impact of this shift in regimes on velocity were difficult to estimate, the Federal Reserve had to operate in the early 1980s in fogs of uncertainty and ambiguity much more opaque than normal.

After the economy adjusts to the new regime, a new relationship between velocity and interest rates should emerge, with interest rates likely to have a greater impact on velocity than in the past.

The interest rate sensitivity of M1 or M2 balances is now much greater, particularly in periods of sharply lower or sharply rising interest rates.... On this factor, M1 and M2 velocity growth should be much less than trend in periods of relatively low market interest rates and rise faster than trend growth when interest rates are rising.³²

If yields on some checkable deposits tend to be "stickier" and less volatile than other short-term interest rates, funds may flow between those checkable deposits and other short-term assets much more readily than they would have flowed between non-interest-bearing demand deposits and other assets. This could happen because non-interest-bearing deposits are primarily transactions accounts, and sacrificing the convenience of ready transactions accounts entails real costs. Some part of interest-bearing checkable deposits act more like savings accounts, however, so there would be less cost, in terms of the sacrifice of transactions balances, in shifting from checkable deposits to other short-term assets.

As a result, velocity would be expected to fall significantly as short-term interest rates are declining and then begin rising after short-term interest rates begin to increase.³³

The Impact of Portfolio Growth on Velocity

Recovery from the recession of 1982 has been accompanied by substantial growth in the value of financial assets of all

³²Ibid.

³³Ratajczak, op. cit.

types held by the private sector. Much of this asset growth is attributable to the rise in the market valuation of stocks and bonds -- which may itself be attributable to rapid money growth.

Rapid money growth can lead to expectations of faster growth in future earnings, which may be capitalized in asset prices. The recent sharp climb in the stock market would appear to reflect this process.³⁴

Growth in the value of all financial assets will induce some rise in the demand for money, on the assumption that, "to reduce risk of lost principle from interest rate changes, investors will tend to increase their holdings of monetary aggregates as holdings of other financial instruments increase."³⁵ Increases in wealth increase the demand for money. The economy may react to an increased market valuation of financial assets as though it represented real increases in wealth, ignoring any offsetting increases in liabilities which arise from massive foreign borrowing to finance trade deficits and from future tax liabilities to cover budget deficits. Normally this phenomenon would have little impact on velocity, since assets tend to grow at about the same rate as economic activity. But asset growth since 1982 has outstripped economic growth. Financial assets held by households, for example, have grown by 45%, compared to a 33% rise in GNP since 1982.³⁶

As with the other factors adduced to explain the break in velocity, this one can also operate in the opposite direction.

When assets grow more slowly relative to earnings, as they are prone to do when interest rates begin turning up, money growth for portfolio needs will probably slacken as well. The velocity of money should once again increase following this one-time upward valuation of financial assets.³⁷

³⁴Testimony of Jerry L. Jordan, June 17, 1987.

³⁵Ratajczak, op. cit.

³⁶Ibid.

³⁷Ibid.

The Impact of the Trade Deficit on Velocity

Velocity is the ratio of GNP to a monetary aggregate. But

GNP measures production, whereas theory would suggest that the connection is between money and spending. The distinction is irrelevant in a closed economy, but becomes very important when there are sizeable flows of exports and imports.³⁸

Expansive monetary and fiscal policies have stimulated total real spending in the American economy to grow at an annual rate of 3.2% since mid-1984, but real GNP has grown at an average rate of only 2.5%. The difference is the trade deficit. A good portion of spending growth falls on imports, which contribute nothing to GNP. If exports, which do contribute to GNP, fail to rise equivalently, GNP growth lags behind spending growth, and the measured velocity of money falls, other things being equal. An increase in exports, relative to imports, should tend to increase velocity.

Chart 14 compares normal M1 velocity with a "domestic final sales" velocity. Domestic final sales is constructed by subtracting exports and changes in inventories, and adding imports, to GNP. It measures spending by the American economy on final goods and services, wherever produced, while GNP measures the production of the American economy. Replacing GNP with domestic final sales in the numerator of velocity should, according to the argument above, yield a more stable measure of velocity. However, the actual behavior of "domestic final sales" velocity is virtually indistinguishable from that of normal velocity. Though the trade deficit increased dramatically in absolute size in the 1980s, it still remains quite small relative to GNP. The impact of the trade deficit on velocity appears to be insignificant.

Velocity and the Changing Definition of Money

In response to financial deregulation permitting the payment of interest on some kinds of deposits, the Federal Reserve confronted a definitional conundrum. Prior to deregulation, M1, composed

³⁸Jordan, op. cit.

M1 VELOCITY

SOLID LINE is with GNP
DASHED LINE is with DOMESTIC FINAL SALES

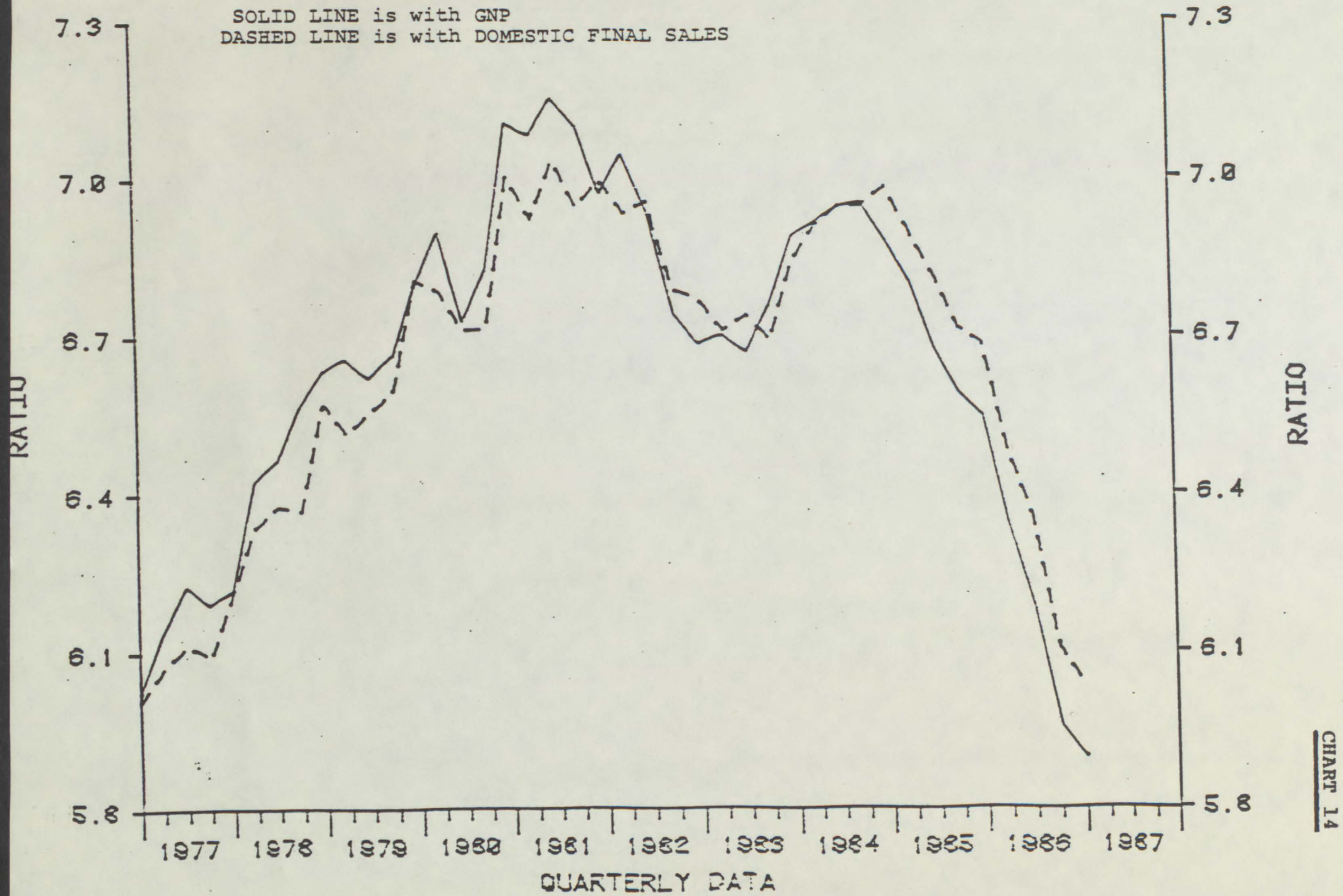


CHART 14

(primarily) of currency and non-interest-bearing demand deposits, was the basic measure of money defined as a means of payments. After deregulation, those deposits in M1 that paid interest took on greater appeal as a savings asset in addition to their transactions function. As M1 became more heterogeneous, the economic significance of flows in and out of M1 became more difficult to interpret.

What monetary aggregate, after deregulation, should be defined to capture the transactions function of money? The Federal Reserve chose to include interest-bearing deposits in M1, but then let the aggregate grow far beyond the targets set for it in 1985 and 1986, and finally suspended it altogether as a target for monetary policy.

An alternative would be to maintain its transactions character by excluding interest-bearing deposits from the definition of M1. This alternative is motivated by the desire to minimize the extent to which changes in the traditional relationship between interest rates and money render M1 an unreliable target for monetary policy. But deleting interest-bearing deposits from M1 does not precisely recapture the properties of the old M1, because those deleted deposits are also used for transactions purposes. Either definition yields a monetary aggregate different from the old M1. The question, then, is empirical: Which emerges as a more stable and reliable aggregate, for the purposes of monetary policy?

Based on research of the behavior of M1 stripped of interest-bearing deposits, now dubbed M1-A, the Assistant Secretary of the Treasury for Economic Policy claims that the apparent break in the velocity of M1 was, in large part, spurious, a consequence of the change in definition:

(P)roperly defined, the basic monetary relationship has been surprisingly stable.... (S)tructural changes appear to have disqualified M1 as a reliable monetary indicator, at least temporarily. We find, however, that on the traditional definition of money -- currency plus demand deposits or M1-A -- there is no evidence of structural change.... Specifically, the pattern of M1-A growth predicts the rapid recovery after late 1982 and the subsequently slower growth of the economy. In the analysis of quarterly inflation, M1-A remains a consistently superior performer.³⁹

³⁹Darby, op. cit.

Chart 15 portrays velocity for M1-A and M1. The claim advanced on behalf of M1-A is that, with the exception of the one-time shift brought about by the advent of deregulation, the relationship of M1-A to GNP and to inflation has not changed significantly from its historical record over the past three decades. If that claim is borne out, the result may be quite alarming. The rapid growth of M1-A over the past two years, taking account of the estimated two year lag in the impact of M1-A on inflation, strongly suggests a sharp revival of inflation through 1989. (See chart 16). Why, then, does the Treasury share a "cautious optimism" on the outlook for inflation? Because it assumes

that the Federal Reserve will achieve a gradual reduction in the rate of growth of the monetary aggregates in the future. That is perhaps the single most important reason one would have for relative optimism on the longer-run inflation outlook.⁴⁰

If M1-A is brought down sufficiently over the next year or so, its recent surge could be seen as balancing out the sharp drop in 1981, so that average growth of M1-A over several years would coincide with only modest inflation. But, given its growth over the past two years, it will be quite a feat for M1-A to remain a "superior performer" in the analysis of inflation, unless inflation accelerates substantially.

Relative Prices and Production Costs

Velocity is a broad macroeconomic concept, the aggregated outcome of numerous economic activities. Many analysts try to analyze those activities directly, using a more disaggregated approach to the assessment of inflation. The more unstable and uncertain velocity appears, the greater appeal such an approach has. Much of the case made by those who see no serious threat of imminent inflation rests on the argument that changes in relative prices will exert only minor and transitory pressure on the general price level, and that increases in production costs will be modest. Though possible,

⁴⁰Ibid.

MONEY VELOCITY

SOLID LINE is M1 Velocity
DASHED LINE is M1-A Velocity

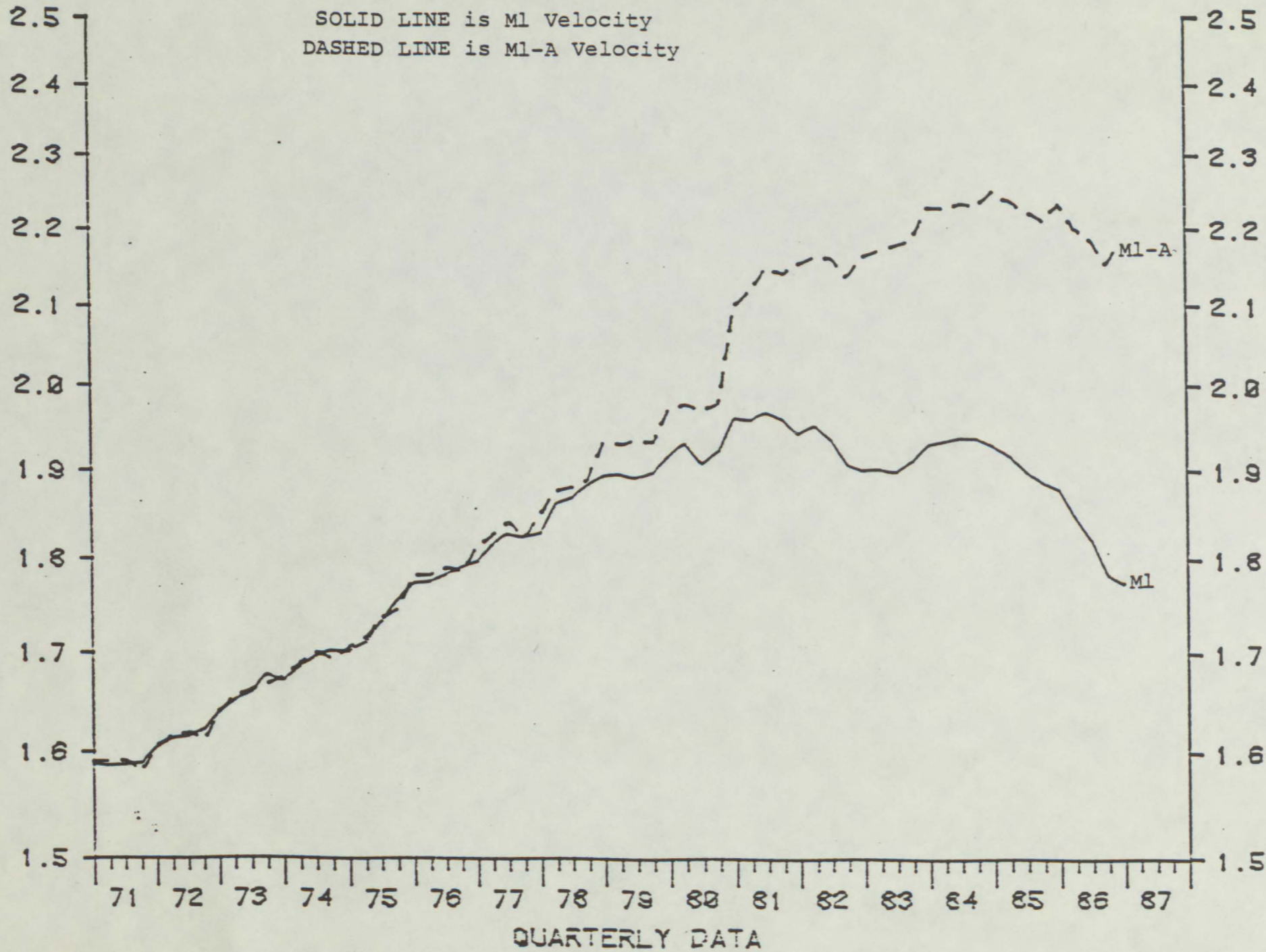


CHART 15

MONEY GROWTH AND INFLATION

SOLID LINE IS M1-A MONEY SUPPLY LAGGED 8 QUARTERS
DASHED LINE IS THE GNP DEFLATOR

DATA ARE PERCENT CHANGE FROM
SAME QUATER IN PREVIOUS YEAR
OF A 4-QUARTER MOVING AVERAGE
OF THE ORIGINAL SERIES

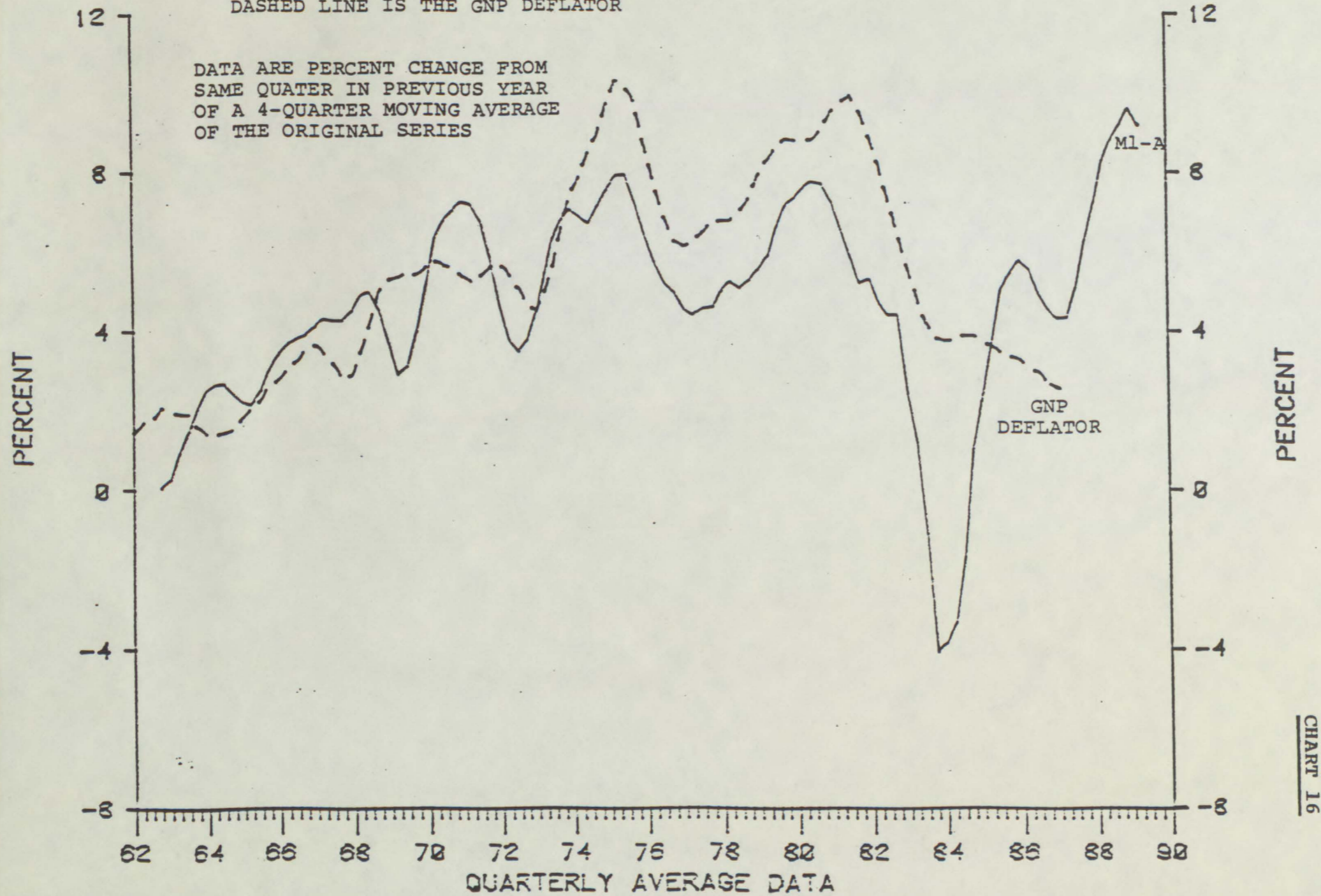


CHART 16

this pattern would be quite unusual. Inflation has tended to be serially correlated, feeding from one stage into another until some intervention, either by tight monetary policy, a disinflationary shock, or a major slowdown...occurs.... The lesson of history is that once the inflation genie gets out of the bottle, it continues to persist and to be perpetuated.⁴¹

Why is this danger now so acute? The impact of the decline in the dollar may be much greater than widely assumed.

Dollar-related inflation is the primary source of the current inflation, and probably has been underestimated as an inflation determinant in previous episodes....⁴²

This underestimation stems from the difficulty of assessing the indirect effects of dollar depreciation. For example, almost 30% of the goods in the PPI-Finished Goods Index have imported counterparts, so the prices of these domestic goods can rise in tandem with import prices and not lose their competitive standing. Imported commodities and intermediate goods (manufactured goods that go into the production of final goods) feed into the production of a wide array of domestic goods, so production costs in general will rise as import prices rise. Other, even more indirect effects can be cited.⁴³

Dollar depreciation will work best, reducing the trade deficit and generating only moderate inflationary pressures, if

domestic producers hold prices and try to recapture previously lost markets....Some industries, including the American machinery industry appear to be trying to recapture those lost markets. However, the automobile industry shows a tendency to increase prices in line with the price gains registered by their foreign competition. Such a pricing strategy leads to substantial inflationary fallout from dollar devaluation with only limited gains in employment and industrial activity.⁴⁴

The inflationary impact of dollar depreciation is now being compounded by rising energy costs. Both are, in principle, one-time relative price changes,

⁴¹Sinai, op. cit.

⁴²Ibid.

⁴³Ibid.

⁴⁴Ratajczak, op. cit.

but their effect on inflation is spread out and magnified by consequent adjustments in labor costs, other production costs, and profits. The lag from oil-price changes to overall inflation is relatively short (about six months).... The lag from dollar changes to inflation is significantly longer (about eighteen months). The combination of the oil-price and dollar changes that have already occurred with their differing lag structures generated the low inflation of 1986 and made inevitable the sharp acceleration of inflation in 1987.⁴⁵

Even if the transitory impact of these relative price changes proves greater than expected, will not the general slack in the economy allow them to be absorbed without engendering a chronic wage-price spiral? What about the current stability of wages and the relatively low capacity utilization?

Currently stable wages offer no buffer against future inflation:

Wage costs always have lagged the earlier waves of higher or lower price inflation. Improved profit margins and strong product markets from a more inflationary environment permit wage costs to move higher. Higher wage and unit labor costs then are passed into final prices and the price-cost-price-wage-price spiral is completed.⁴⁶

And low capacity utilization? Surely we have ample idle productive capacity, ready to produce more at current prices? Not necessarily. "Structural problems have made excess factory capacity a weak constraint on rebounding inflation."⁴⁷ There may be considerable excess capacity in a physical sense, but not in an economic sense. Physically idle capacity is economically useless -- not a part of real economic capacity -- when burdened by production costs that render its potential output uncompetitive on world markets.

These problems are largely rooted in inflexible wage systems that produce labor costs out of line with an increasingly competitive world economy.... Workers in steel, autos, rubber, and many other industries, in their attempt to maintain customary real wage growth during a period when global market trends were working against them, priced themselves and the products they produce out of increasingly

⁴⁵Testimony of James Annable, June 10, 1987.

⁴⁶Sinai, op. cit.

⁴⁷Annable, op. cit.

competitive world markets.⁴⁸

This uncompetitive pricing of labor in some industries is estimated to have caused about a three percent loss of usable factory capacity. Unusable capacity will not restrain inflation.

Idled factories have not prevented home shelter prices from rising at a 5 percent rate during the past six months; nor have they held down price increases for medical care (6 percent), apparel (10 percent), and other goods and services (7 percent).⁴⁹

Unusable capacity becomes usable only if production costs become competitive. But

(t)he spate of wage concessions that followed the 1980-82 recessions have done little to correct the structural problem. In a number of industries, the wage differential (the excess of wages over their competitive levels) is no longer rising and, in some cases, has even declined somewhat. But that is not enough. If the structural problems rooted in wage disequilibrium are to be corrected, today's wage premiums must be sharply -- not slightly -- reduced.⁵⁰

Macroeconomic policy should not be used to resolve problems of structural unemployment. Macroeconomic stimulus falling on structural unemployment and unusable capacity would be dissipated in higher inflation.

Monetary Policy and Budget Deficits

Whatever the initial impetus, inflation cannot persist in the face of sufficient monetary restraint:

Indeed, without an accommodative monetary policy, inflation is unlikely to surge higher over an extended period of time....⁵¹

It is a truism that inflation is always a monetary phenomenon. The Federal Reserve can slow, stop, or reverse any inflation with a sufficiently tight grip on money-supply growth.⁵²

The Federal Reserve can always err in estimating the degree of

⁴⁸Ibid.

⁴⁹Ibid.

⁵⁰Ibid.

⁵¹Sinai, op. cit.

⁵²Annable, op. cit.

monetary restraint required to forestall or squash inflation, particularly when velocity and money growth are abnormally difficult to interpret. But errors can be corrected and monetary policy adjusted until the goal is attained -- if the commitment to controlling inflation is unyielding. The pessimists on inflation think that commitment will soon give way, or has already done so. The ultimate blame, however, will lie not on the Federal Reserve, but on a fiscal policy that presents monetary policy with no alternative but inflation. As two former members of President Reagan's Council of Economic Advisers see the problem:

Besides the usual fear of recession, today there is another powerful consideration pushing monetary policy toward expansion, and that is the large federal budget deficit. Congress and the Administration, and the Fed for that matter, are horrified by the thought that a recession might push the Federal budget deficit to \$300 billion or more. The fact of the matter is that current monetary policy will have the effect of inflating the deficit away, or partly away. Inflation will rise not because that outcome is the deliberate and conscious choice of the U.S. Government but because the Government is unwilling to run monetary policy without tilting toward inflation because it cannot take any risk of a recession and the larger deficit a recession would bring.⁵³

In the final analysis, any country that is not able to control government spending in line with tax revenue is going to yield to the temptation to resort to the only unlegislated form of general tax increase -- inflation. Ultimately, monetary policy is simply another way to finance the government.⁵⁴

Why will large fiscal deficits pose such a dilemma for monetary policy? The normal expectation is straightforward. Massively larger deficits will put strong upward pressure on interest rates. The Federal Reserve could choose to or refuse to "accomodate" the deficit by expanding the money supply in an effort to hold down interest rates. The first choice would eventually generate inflation, the second would eventually undermine real economic growth by allowing higher interest rates to crimp investment.

The strong anti-inflation stance of the Federal Reserve was destined to clash with the rapid increase in Federal Government deficit spending that is structural, not cyclical, in nature.... The Fed has a basic choice when it comes to

⁵³Poole, op. cit.

⁵⁴Jordan, op. cit.

dealing with a Federal deficit. It can buy the deficit, printing more money in the process, and ... generate an accelerating inflation. Or the Fed can refuse to buy the deficit, forcing it out on to the private credit markets, and drive up inflation-adjusted interest rates.⁵⁵

But the dire consequences that would normally flow from massive, sustained deficits have not -- yet -- come true.⁵⁶ Why not?

The explanation is not subtle or elusive. It is the common staple of numerous analyses of recent macroeconomic policy.⁵⁷ In the wake of the recession of 1982 the American economy could indulge in a sharp and sustained rise in spending concomitant with a sharp and sustained drop in inflation in part because much of that new spending fell on imports. We could consume significantly more than we produced because we could draw on the production of the rest of the world. That is not the whole story, since we also increased our own production. But the economic expansion since 1982 had not, through 1986, strained our productive capacity to the point of generating inflationary pressures because much of the new spending was readily dissipated on foreign goods made cheap by the soaring dollar.

A large inflow of foreign capital into the United States is the financial counterpart to the inflow of foreign goods. This single phenomenon can be examined from two points of view. From the perspective of the real economy, we consume more than we produce by importing from abroad. From the financial or flow-of-funds perspective, we borrow, collectively, more than we save,

⁵⁵Annable, op. cit.

⁵⁶"According to conventional analysis, these massive budget deficits would result in inordinately high real interest rates as the government's demand for funds collided with private financing requirements. In the process, high real interest rates would crowd out private financing.... (But) these dire predictions did not come true. Real interest rates did rise, but consumer spending on durables increased steadily and substantially through the expansion, and housing activity was strong. A marked pickup in business plant and equipment spending occurred as well.... The economy's overall growth, too, surpassed expectations. It expanded uninterruptedly from 1983 through 1986 at a 4 percent annual rate.... Over the whole period, total employment climbed about 12 million workers. Market interest rates dropped perceptibly and inflation was subdued, averaging just over 3 percent." The Unpleasant Arithmetic of Budget and Trade Deficits, Federal Reserve Bank of Minneapolis 1986 Annual Report.

⁵⁷In particular, it was the central point of The Foreign Exchange Value of the Dollar, a report of the Subcommittee on International Finance, Investment and Monetary Policy of the House Banking Committee, March 1984.

collectively, by borrowing the difference from abroad. The foreign borrowing, the net inflow of funds, finances the trade deficit. The two are equivalent, one measuring the flow of goods, the other measuring the flow of funds to pay for the goods.

Much attention has been given to the cause of the trade deficit. A common answer is that the budget deficit "caused" the trade deficit. The two certainly emerged, in their current dimensions, more or less simultaneously. (See chart 17). And a very plausible logic supports this chain of causation. The budget deficit put upward pressure on interest rates, which attracted foreign capital. The inflow of foreign funds drove up the exchange rate, causing the trade deficit. The trade deficit supplied foreign goods on which (some of) the growth in spending stimulated by the budget deficit could fall, thereby relieving inflationary pressure on America's domestic productive capacity.

This line of explanation is basically correct, though it greatly simplifies a more complex phenomenon. A large budget or a large trade deficit need not entail the other, and neither need entail an appreciating currency. In fact, a depreciating currency typically accompanies large deficits of either type, as it has for the dollar since 1985. And large budget deficits can be observed to coexist with large trade surpluses, as they have in Japan. But, for reasons particular to the time and circumstances, the United States has experienced large trade deficits concomitant with its large budget deficits. And that configuration, regardless of the precise cause-and-effect relationship, has permitted the economy to increase consumption significantly without depressing investment. The huge inflow of foreign funds has made a major contribution to neutralizing the normally adverse effects of large structural budget deficits. That foreign inflow, when added to the savings generated by the domestic economy, supplied ample credit to meet the government's voracious demand for credit to finance the budget deficit without the normally expected crowding out of private investment.

The relative importance of this inflow of funds can be seen in

SOLID LINE IS THE U.S. BUDGET DEFICIT (Billions of Current \$)
DASHED LINE IS THE U.S. TRADE BALANCE (Billions of Current \$)

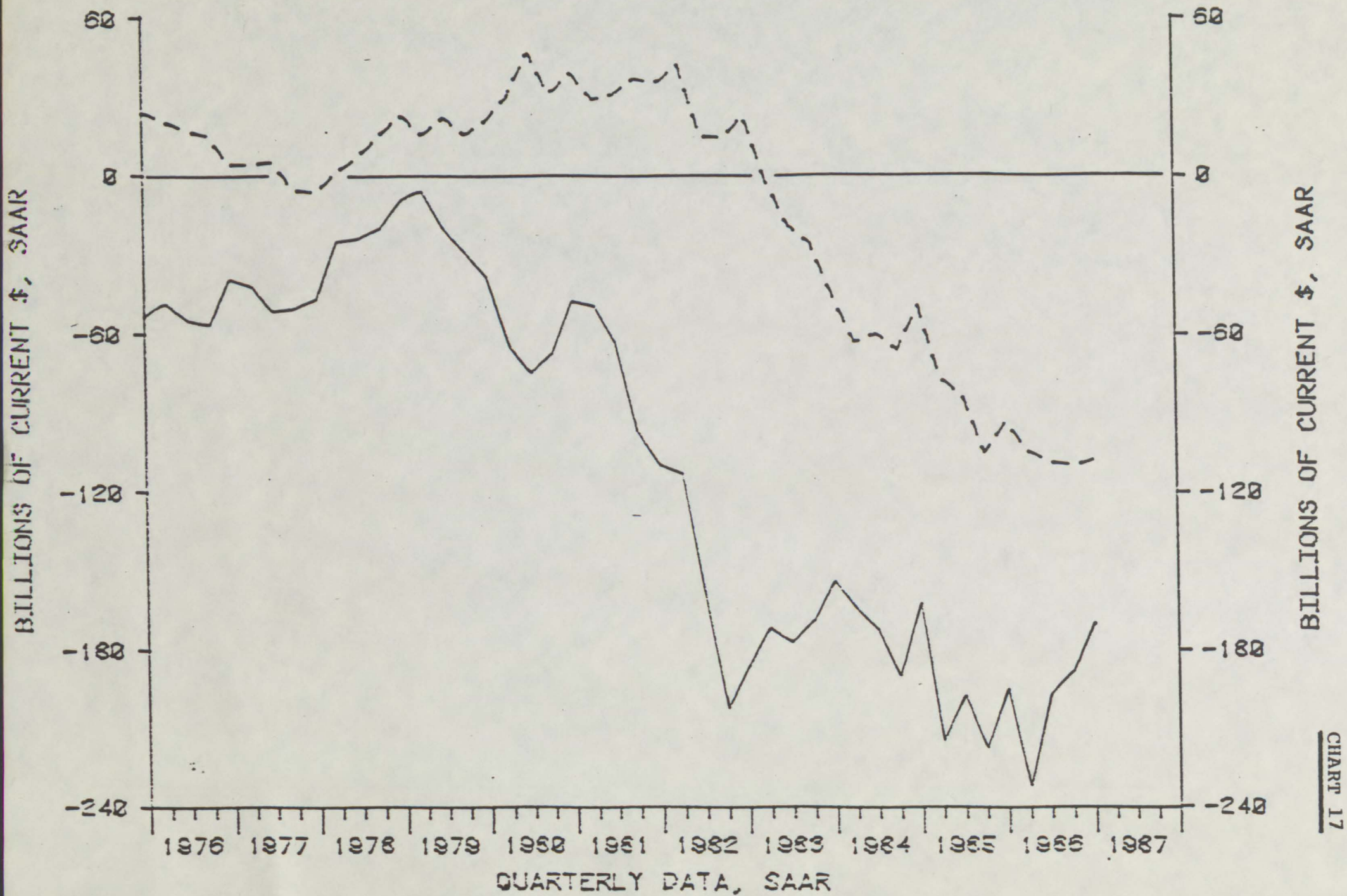


CHART 17

the following calculations:⁵⁸

(Percent of GNP)

	<u>Government</u> <u>Deficit</u>	+	<u>Private</u> <u>Investment</u>	=	<u>Private</u> <u>Savings</u>	+	<u>Current Account</u> <u>Deficit</u>
1975-84 (average)	1.9	+	16.3	=	17.8	+	0.4
1985	3.5	+	16.5	=	17.0	+	2.9
1986	3.2	+	16.3	=	16.2	+	3.3

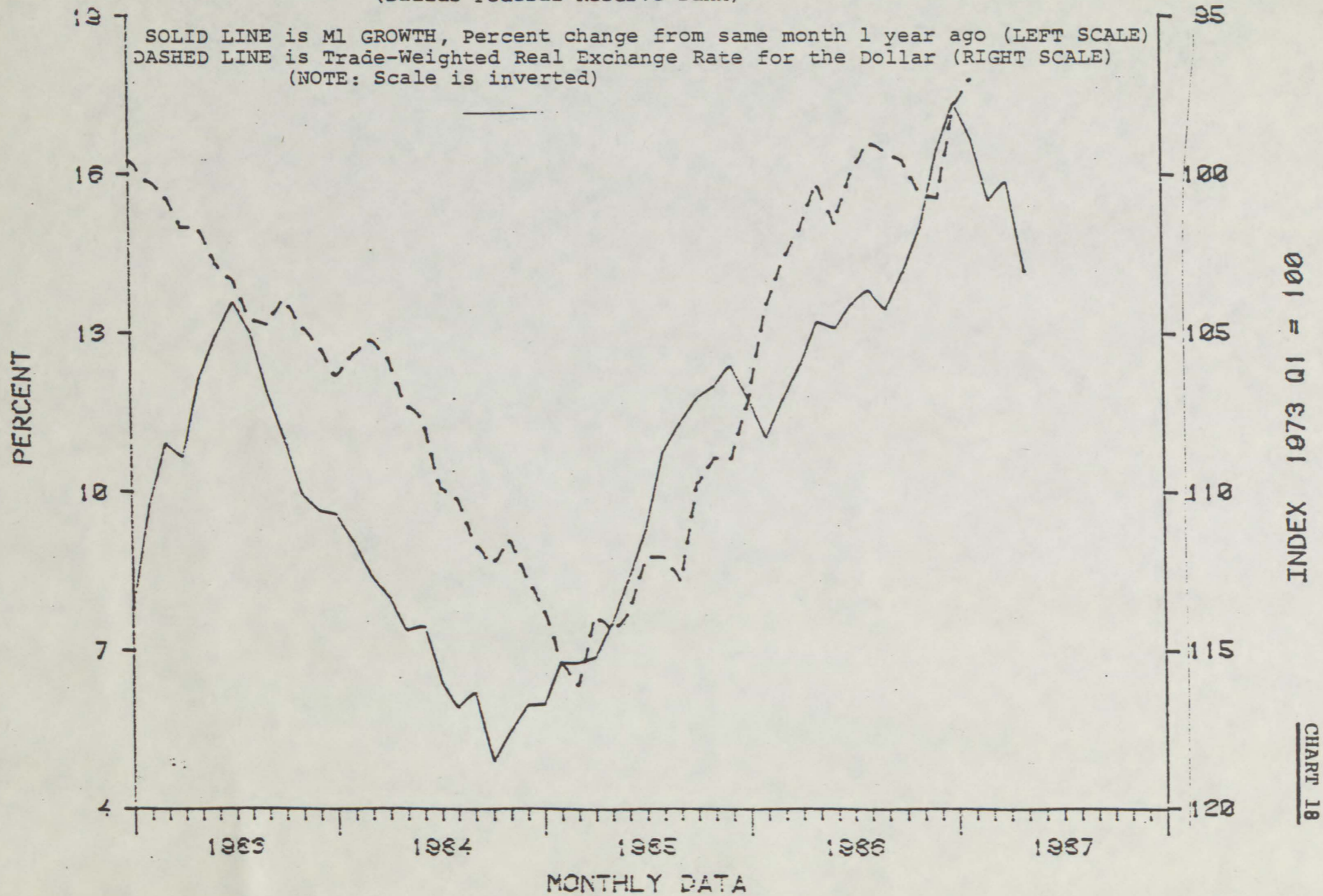
This basic macroeconomic equation relates the demand for credit, from the government to cover the budget deficit and from the private sector to finance investment, to the supply of credit, from the savings of the private sector and from the current account deficit (a somewhat broader and more accurate measure of the inflow of funds than the trade deficit per se). The average budget deficit between 1975 and 1984 was substantially lower than the deficits of 1985 and 1986, but private investment was virtually the same. Clearly private investment was not "crowded out" in 1985-86, even though private savings did not rise, compared to the previous decade, to satisfy the additional governmental demand for credit. (In fact, private savings fell somewhat.) Clearly the foreign inflow of funds, through the current account deficit, filled the gap.

This configuration has made it easy for monetary policy to avoid painful choices. But it cannot endure. The seeds of its unraveling were planted in 1985, when the dollar commenced a major real depreciation. That depreciation appears to be the product of major policy shifts by the Administration and the Federal Reserve. The Administration explicitly promoted a drop in the dollar, and the Federal Reserve shifted to a much more expansive monetary policy in 1985 and 1986. As chart 18 reveals, monetary growth tracks the rise and fall of the dollar uncannily well over the past four years.

Why would the Administration and Federal Reserve shift to policies the explicit purpose of which is to deny the U.S. economy the inflow of foreign funds so critically needed to neutralize the

⁵⁸Source: International Monetary Fund, World Economic Outlook, April 1987, p. 14. Totals may not add exactly due to rounding. 1986 estimates are preliminary.

M1 MONEY SUPPLY GROWTH
 &
 TRADE-WEIGHTED REAL EXCHANGE RATE FOR THE DOLLAR
 (Dallas Federal Reserve Bank)



impact of budget deficits on our credit markets? Because that neutralization, combined with the impact of decelerating inflation on the farm sector and falling oil prices on the energy sector, has created sharp regional and sectoral imbalances. The neutralization appears benign in terms of the overall macroeconomic numbers. But it is achieved at great cost to the "traded goods" sector -- those industries that export and compete with imports. Pressure for protectionism from the traded goods sector threatened to explode. It could be relieved by monetary expansion to depreciate the dollar. Pressure from the agricultural and energy sectors was also rising, and could also be relieved by monetary expansion to reflate the economy:

The uneven economic performance of the country... has also created, in some regions of the country, constituencies who favor reflation.... The dramatic increase and subsequent plunge of world energy prices and, similarly, the substantial rise in the foreign exchange value of the U.S. dollar, followed by an even larger drop, have exerted highly uneven effects on the nation's regional economies.... On a national average basis, 1987 will be the fifth year of the current expansion. However, many states, such as Alaska and those in the Rocky Mountains, Great Plains, and South Central Regions of the country, are only hoping that their economies will stop shrinking during the current year. An activist fiscal policy of the traditional type -- which would consist of public works or other job-creating programs or tax relief for the hard-hit energy, agricultural, and real estate sectors of the economy -- is not possible in view of the large federal budget deficit. Consequently, the blunt instrument of monetary policy is being relied upon to stimulate the depressed regions of the country.... the opinion of key policymakers in the Executive and Legislative branches of government and at the Federal Reserve is that the public is willing to accept somewhat higher inflation as part of the price to be paid for greater prosperity in the short run.⁵⁹

Depreciating the dollar will eventually help shrink the trade deficit to the point where foreign funds no longer finance a substantial portion of the budget deficit. What then?

If the current account deficit had vanished in 1986, removing 3.3 percentage points from the right-hand side of this equation, what adjustments would have occurred to keep the equation in balance? It is extremely implausible to expect that private savings would provide much, if any, of the required adjustment. If, on the left-hand side of the equation, the government deficit fell more or less in line

⁵⁹Jordan, op. cit.

with the declining current account deficit, private savings and investment could remain relatively stable. If not, however, the adjustment would come in private investment. That would require a recession to depress investment so that the excess of savings over investment would finance the budget deficit.

Monetary policy would then be faced with the dilemma it has, so far, escaped. It could accept recession, or attempt to forestall it through inflation:

The key is that the fundamental imbalance between domestic saving and domestic borrowing that has resulted from the shift in Federal fiscal policy will only be resolved by a return to Federal budget balance, a recession, or inflation - or some combination of the three. Washington has shown little resolve when it comes to reducing the deficit, and recession has been judged unacceptable, at least for now. That leaves inflation, and the process of rekindling inflation in the U.S. is well underway.⁶⁰

CONCLUSIONS

(1) Inflation is not just a serious threat, it is a current reality. By May the CPI had risen in 1987 at an annualized rate of 5.6%. Though it might subside over the rest of the year, its sharp jump in early 1987 should be taken seriously as a warning signal.

(2) This jump in inflation is no surprise. Given the falling dollar and rising oil prices, some impact on inflation was inevitable. But it should not be dismissed as purely transitory, a one-time-only adjustment to the inevitable. It occurs in a context of economic problems for which substantial inflation could, eventually, become the only politically acceptable solution.

(3) The inevitable must be accepted, but a resurgence of inflation analogous to that of the 1970s is not inevitable and should not be accepted. The time to stop inflation is before it begins. After it develops momentum it can only be stopped at the cost of a recession or a painful, prolonged slowdown of real economic growth. Undue complacency at the outset guarantees that this cost will

⁶⁰Annable, op. cit.

eventually have to be paid. Current complacency about the threat of inflation is unacceptable.

(4) Economic buffers against an imminent surge of inflation are present, in today's economy, but plausible arguments suggest they could prove to be weaker than generally estimated, especially if inflation, however modest at the outset, develops some momentum.

(5) The major threat is not rampant inflation within the next year or so. The major threat is that, without serious and sustained reductions in the budget deficit, the degree to which monetary policy can err, without causing recession or inflation, will shrink to the point of disappearing. It may not entirely disappear, but the Federal Reserve cannot always fine-tune its policies, perfectly estimating and taking full account of time lags and shifting velocities so as to never stray from the narrow path between recession and inflation. That narrow path can only be widened by substantial budget reductions.

(6) Velocity underwent a major shift in the early 1980s. At present the Federal Reserve appears to have navigated that shift adroitly. But money acts with a lag, so future shocks could well be in store.

(7) Even if the money explosions of 1985 and 1986 carry no inflationary momentum into coming years, continued monetary expansion at that pace would be exceptionally risky. The factors adduced to explain the recent downward shift in velocity imply no guarantees of a continuing downward trend. They also suggest that when velocity turns it could rise quickly, and could remain more volatile than in the past. With rising interest rates -- which will surely result from a substantial decline in our trade deficit unaccompanied by a similar decline in our budget deficit -- velocity could turn up very sharply. To avoid an inflationary explosion the Federal Reserve would then have to reduce monetary growth very quickly, which could be politically difficult in the face of the rising interest rates.

(8) Monetary policy in 1987 indicates that the Federal Reserve appreciates the inflationary danger of overdoing its past pace of monetary expansion. M1 growth slowed from a rate of 16.5% in 1986 to