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THE UNITED STATES ECONOMY AND MONETARY POLICY

By

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It is a great pleasure to be with you here at St.Gallen University and I am particularly pleased to speak to you on "The United States Economy and Federal Reserve Policy". Having spent many years in a university environment, and now being immersed in policy matters, I am always delighted to bring a policy making perspective to academic forums.

In order to set the stage for the primary focus of my talk, I will discuss the current economic situation of the United States before moving on to the monetary policy making process. With regard to the latter, I will address our present policy stance in the broader context of formulating and implementing monetary policy at the Federal Reserve.

THE ECONOMIC SITUATION

As you know, the United States is enjoying one of the longest economic expansions in its history. In 1988, the economy registered yet another year of solid 3 percent economic growth. The strength of the economy was somewhat surprising because it occurred against the backdrop of a serious erosion in financial wealth stemming from the October 1987 stock market crash,

a reduction in agricultural output owing to severe drought conditions, a stagnant construction sector, severe problems in the savings industry, lower government purchases, and monetary restraint through most of 1988.

This record peacetime economic expansion has raised fears in some quarters that inflation is bound to increase; while others argue that a recession must finally be imminent. Let me suggest to you that neither alternative is inevitable as long as we pursue well balanced policies and the private sector avoids excesses as well.

Nobody argues that the path ahead will be easy, but neither is there an inevitability of falling into the inflationary or recessionary trap. You in Switzerland know the joys of a "Gipfelgradwanderung" -- as well as the dangers associated with it. But giving up and not trying to make progress is definitely not an acceptable alternative either. Both the Federal Reserve and the new administration are determined to move ahead.

Growth Can Continue

First of all, there is no magic economic growth number below which we will be safe from inflationary pressures

and above which inflation must accelerate. Both the United States and other countries have experienced stagflationary periods, when growth stalled and inflation surged. Many Latin American countries have found themselves in this unfortunate set of circumstances as well.

On the other hand, we have many examples of countries that attained high growth in a non-inflationary environment. You in Switzerland have done so for many years; the United States did so in the mid-eighties; and Japan and Korea are doing so right now.

The key to high growth in a non-inflationary environment is high investment by the private sector and supportive government policies. Let me mention three governmental policies that are essential to fostering a healthy investment climate: one, low marginal tax rates that offer economic rewards and incentives to enterprising people. Switzerland has always recognized this premise, and now the United States does so as well. Two, a non-intrusive regulatory climate that does not erect artificial barriers to progress, but focuses on establishing rules of conduct that foster equality of opportunity for all competitors. Three, monetary policy must be geared toward attaining overall price stability, so that

businessmen and consumers do not have to contend with the uncertainties attendant to an inflationary environment.

With these principles in mind, let me return to the current economic situation in the United States and the sustainability of the expansion.

There are many encouraging signs that the current U.S. expansion can and will continue. The composition of growth has shifted in a direction which is favorable for the economy. A significant proportion of growth is now attributable to continued robust investment activity and strong export performance. This altered composition of growth is indeed required under current circumstances. On the other hand, increased investment in plant and equipment will augment much needed capacity and enhance productivity. Export growth will continue to help reduce our external imbalances. On the other hand, the subdued growth in consumption and governmental expenditures will enable the economy to devote more resources to the investment and export sectors.

I am also confident that an adjustment toward lower inflation and sustainable real growth can take place without precipitating a recession. At present, the

conditions that traditionally precede a recession are not apparent. Labor market conditions, though tighter, have not triggered a wage-price spiral. In 1988, compensation per hour increased 4.5 percent, the same as in 1985. At present, there is virtually no strike activity and major collective bargaining agreements, do not call for large wage increases. Capacity utilization, while high, is below its previous peak. One can also argue that due to the increase in international competition, high capacity utilization rates today do not result in the same degree of price pressures as they did in the past.

Budget Deficit Must Be Reduced

Any discussion of the U.S. economic situation these days is incomplete without mention of the fiscal deficit. The federal deficit peaked in 1986 (CY) at \$206 billion, amounting to 5.5 percent of GNP. It has since then been on a downward course, and for 1988 (CY) is estimated at \$138 billion, or 3.5 percent of GNP. At the same time, the state and local governments ran a surplus, so that the consolidated government deficit amounted to only 2.5 percent of GNP - about equal to the European average. While this is an encouraging trend, the deficit is still substantial in relation to domestic savings and uses up funds that are needed for

private sector investment.

Thus far the U.S. economy has enjoyed the confidence of foreign investors, preventing a serious "crowding out" of the private sector in financial markets. Foreign investors have flocked to the U.S., not only in pursuit of higher returns, but also because of the fundamental strength of our economy, the size of our market, a relatively unencumbered regulatory environment, and because of their confidence in our policies. But this reservoir has its limits, even though we are far from reaching them. In the future, as the margin of relatively profitable opportunities diminishes, it may become increasingly expensive for the U.S. to attract funds from abroad. Moreover, as more and more American assets are owned by foreigners, returns to them will also accrue to foreigners, constituting an ever increasing mortgage on our future.

In recognition of the potentially adverse consequences of the budget deficit, the Gramm-Rudman-Hollings legislation was enacted which calls for a deficit of \$100 billion in fiscal 1990 and a balanced budget by 1993. In accordance with this legislation, President Reagan submitted a budget with a deficit of \$93 billion for 1990. It is encouraging that the new administration is moving to forge a bipartisan

consensus to stick to this course and to reduce the fiscal gap. Let me also remind you that the Gramm-Rudman-Hollings legislation provides for automatic expenditure cuts if the deficit target is not achieved. That will be a powerful incentive to bring the budget negotiations to a positive conclusion.

The External Situation

The belated recovery in our external accounts began last year. The U.S. trade deficit is now averaging around \$10 billion per month compared to \$15 billion a year ago. The primary reason for the improvement so far have been impressive gains in exports, reflecting the considerably improved competitiveness of our export sector. Our performance with respect to relative unit labor costs and manufacturing productivity has been encouraging, so there is good reason to be optimistic that our trade deficit can be further reduced at prevailing exchange rates.

While it seems sensible to assume that the U.S. will continue to make good progress in reducing its external imbalances, the reduction of surpluses in Germany and Japan may be less certain. Both nations continue to post ever increasing surpluses, and, as a result, new imbalances are now emerging in the world economy. To

quite an extent, these new deficits are concentrated in Europe, where they may create fresh problems and tensions just as Europe is ready to embark upon its historic integration effort.

MONETARY POLICY

Let me turn now to monetary policy. It may be useful to consider the current policy stance in the context of the broader institutional setting and the process of monetary policy formulation and execution in the United States.

Institutional and Conceptual Background

Monetary policy in the United States is the domain of the Federal Reserve System which was established under the Federal Reserve Act of 1913. It comprises a centralized Board of Governors in Washington and twelve decentralized Federal Reserve district banks. In principle, the System can influence monetary conditions through three main instruments, namely, the discount rate, reserve requirements, and open market operations. Reserve requirements have not been changed for monetary policy purposes since 1980*, and have consequently lost

* Garn-St Germain law changes in 1982 and phase-ins to Monetary Control Act were not "for policy purposes".

their importance for policy implementation.

The discount rate is set by the Board of Governors upon recommendation by the Boards of Directors of the various Reserve Banks. Because the discount rate is seen as an important signalling device, it is changed only at infrequent intervals.

On a day-to-day basis, monetary policy is implemented through open market operations in government securities markets, which are determined by the Federal Open Market Committee (FOMC). The FOMC is composed of the seven members of the Board of Governors and five of the twelve Presidents of the Federal Reserve District banks, four of whom serve on the Committee on a rotating basis. The President of the New York Reserve Bank is a permanent member.

The primary policy objective of the Federal Reserve is to achieve sustainable economic growth in an environment of price stability. Price stability is a paramount objective because it helps to establish a framework for maintainable economic growth.

By reducing uncertainty, price stability also promotes stability in the financial and foreign exchange markets and contributes to overall efficiency.

In pursuit of these objectives, the Federal Reserve places much emphasis on the relationship between the money supply and the price level and economic activity. This emphasis has been well justified by theoretical as well as empirical research.

Monetary theory has long held an explicit link between the money supply and economic activity and prices. Given stable velocity, the ratio of GNP to money stock, an increase in the money supply leads to proportional increase in nominal GNP, with its short-run effect on real activity and prices dependent upon the economic environment and the time horizon under consideration.

As shown in Exhibit 1, through most of the postwar period, the evidence broadly seemed to support this reasoning -- particularly for those measures of the money supply closely representing its medium of exchange function. Consequently, the narrow monetary aggregate, M1, consisting of currency and demand deposits, became the Federal Reserve's primary intermediate target through which the ultimate policy objectives were pursued.

However, at the beginning of this decade, the short-run relationship between nominal GNP and the money stock became more tenuous. This was a period of considerable

financial deregulation and innovation. For the first time, many transactions deposit accounts were permitted to pay interest, which reduced the opportunity cost of holding these deposits, while at the same time contributing to their greater sensitivity to interest rate changes. Furthermore, the unprecedented run-up in interest rates in the early 1980s made depositors more aware of the opportunity costs of holding liquid balances. All these factors added to the greater volatility of money velocity.

This change in the behavior of M1 velocity is depicted in Exhibit 1. The velocity pattern for the broader aggregate, M2, (consisting of M1, savings deposits, money market mutual funds and deposit accounts, small time deposits, and other miscellaneous items) has been more stable. Interest rates on many balances included in M2 are readily adjusted to market rates which tends to reduce the variability in average M2 opportunity cost. Furthermore, as Exhibit 2 indicates, movements in M2 velocity are strongly influenced by the changes in opportunity cost that continue to occur as market rates change.

As a result of this high interest sensitivity of the monetary aggregates, research has intensified in identifying alternative intermediate targets for

monetary policy. Some have argued in favor of targeting the monetary base, consisting of currency and reserves. Proponents of this approach contend that the base can be effectively controlled by the Federal Reserve. But because of its sizable currency component, and susceptibility to movements in transactions deposits through reserve requirements, the monetary base is subject to instability similar to M1. Moreover, with respect to its relationship with the ultimate objectives of monetary policy, the base does not outperform the narrow aggregates.

Others have argued in support of targeting some form of a credit aggregate. They have based their case on empirical findings indicating a strong correlation between credit measures and real and nominal GNP through the 1990s. However, the explosion of credit relative to nominal GNP in the 1980s, has rendered studies in this area more inconclusive than they first appeared. Therefore, a credit aggregate can not serve as reliable basis for policy formulation, though the Federal Reserve does announce a monitoring range for domestic nonfinancial debt.

With the key short-run link between the monetary aggregates and nominal GNP in doubt, it became necessary to adopt a flexible approach to monetary

policy, while still bearing in mind the long-run linkages between money and prices. Moreover, in a period characterized by greater uncertainty resulting from rapid structural change and various imbalances, the range of policy objectives widened, and exchange rate stability along with financial and credit market conditions was accorded at times an increasing weight in policy deliberations and actions.

Thus, since late 1982 the Federal Reserve has pursued an eclectic approach which has served us well. We have de-emphasized the narrow aggregate M1 relative to M2 and M3 as intermediate targets. We have also given increasing attention to other indicators, such as commodity prices, the yield curve, and the exchange rate.

Operating Procedures

To permit this flexibility, and in recognition of the looser relationship between monetary aggregates and economic activity, our day-to-day operating procedures were also modified by early 1983 to focus on the borrowing component of total reserves. This procedure effectively accommodates unpredictable shifts in money demand as long as such an accommodation is consistent with the achievement of our ultimate objectives. To

clarify, it may be instructive to briefly discuss the various alternative operating procedures. I will focus on the Fed-funds procedure, the nonborrowed reserve procedure, and the borrowed reserves procedure.

The supply and demand for reserves determines the Fed funds rate. The demand for reserves is determined by the amount of reservable deposits, the reserve requirements imposed, and the bank's desired holdings of excess reserves.

The supply of total reserves is influenced primarily by the open market operations of the trading desk.

Through such operations the Federal Reserve can directly influence the supply of nonborrowed reserves and hence the conditions in the reserves market. Also affecting the reserve supply is the amount of borrowed reserves, which in turn depends on the spread between the discount rate and the Fed funds rate. The discount rate is the rate at which banks can borrow from the Federal Reserve to meet reserve shortfalls, while the Fed funds rate is the rate at which banks lend reserves to each other. As this spread widens, it tends to increase borrowed reserves and add to reserve supply, given any level of nonborrowed reserves.

At every meeting, the FOMC issues a directive to its trading desk in New York which guides its operations during the inter-meeting period. This directive identifies the path of a key controllable variable through which the committee seeks to achieve its intermediate target and thereby its long-term objectives. Underpinning the directive are key behavioral relationships between the supply and demand for reserves.

Under a Fed funds targeting procedure (shown in Exhibit 3), the policy directive identifies a Fed funds rate deemed consistent with the intermediate targets. The desk's open market operations are then geared so as to attain the Fed funds rate objective. Thus, if pressures in the reserves market act toward pushing the rate up, the desk would add reserves through open market purchases in order to bring the funds rate back to its target. Likewise, if the funds rate dropped below the objective, open market sales would withdraw reserves.

It is intuitive that such an operating procedure will lend stability to the Federal funds rate, but may subject reserves to considerable variability. The experience of the 1970s corroborates this as shown in Exhibit 3. As the exhibit shows, the deviations of the

funds rate from its trend were modest compared to the deviations of reserves from its trend values through much of the 1970s, when this operating procedure was in place.

The inflationary spiral of the 1970s brought the realization that funds rate targeting might fail to accomplish the monetary growth consistent with price stability. Therefore, the FOMC altered its operating procedures in 1979. Non-borrowed reserves became the main control instrument. (See Exhibit 4) Ranges were established for the growth of monetary aggregates consistent with price stability and, simultaneously, appropriate objectives were set for non-borrowed reserves. Adherence to the non-borrowed reserves target meant a non-accommodative approach, which permitted wide swings in the Federal funds rate. The aim was to achieve a desired level of money stock growth. It is clear that under the reserve targeting procedure there is likely to be greater interest rate variability and lesser reserve variability. This is confirmed by the evidence in Exhibit 4, which depicts the period from October 1979 to October 1982, when the reserve targeting procedure was in effect.

The usefulness of the reserve targeting procedure in attaining the ultimate objectives of policy rests both

on the reliability of the money multiplier process and the connection between the intermediate reserve target and economic activity and prices. In recognition of the deterioration in the money-GNP relationship in the early 1980s, the FOMC moved to a borrowed reserves-based operating procedure in 1983. Under the borrowed reserves procedure, the Committee establishes a target for borrowing at the Federal Reserve discount window, taking the discount rate set by the Board of Governors as given. The FOMC then specifies the amount of borrowing thought to be consistent with the expected demand for reserves. The greater the borrowing amount specified, the greater will be the premium of the Fed funds rate over the discount rate. (See Exhibit 5)

The flexibility of the procedure is due to the fact that any unexpected shifts in the demand for reserves will be accommodated by corresponding supply shifts in the supply of nonborrowed reserves, while holding borrowing and hence the wedge between the discount rate and the Fed funds rate constant. As a consequence, unexpected shifts in the demand for money are prevented from causing movements in interest rates incompatible with the Committee's economic objectives. However, the Federal Reserve will feel the pressure of having to supply more or less reserves and thereby gain useful

market feed-back.

In addition, the operating directive to the trading desk allows for discretionary changes in the borrowing target, should economic or financial market developments warrant such changes. The conditions occasioning such changes in the borrowing target are identified in the policy directive. As shown in Exhibit 6, they have included: the behavior of the monetary aggregates, the strength of economic activity, inflationary pressures, financial market conditions and the foreign exchange value of the dollar.

Present Policy Stance

This brings me to our recent experience and the current stance of monetary policy. After the easing in monetary policy in response to the stock market crash, successive tightening steps were taken since March 1988 to forestall any pickup in inflation. Such inflationary pressures might well have been triggered by the previous depreciation of the dollar and the increased level of resource utilization. In any case, the Federal Reserve tried to move quickly to preempt any buildup in inflationary pressures by restricting reserve availability and raising the discount rate. Since March 1988, short-term interest rates rose more

than 2.5 percentage points, and the growth in the monetary aggregates slowed, so that we finished 1988 right around the middle of the monetary target ranges.

The increase in short-term interest rates has not carried over into longer maturities, which have remained virtually unchanged. This has given rise to an inverted yield curve - a plot of yields on instruments versus the length of their maturities. That configuration of the yield curve demonstrates that long-term inflation expectations remain rather subdued. One recent survey of market participants also showed that inflationary expectations over the next ten years are now the lowest level in the last 15 years.

Some view the inverted yield curve as a possible precursor of a recession. However, monetary restraint has in years past resulted in inverted yield curves without producing a recession. Moreover, recessions often are brought on by sharp declines in monetary growth. This is not our current policy stance as monetary growth proceeds in accordance with the specified targets.

Looking to the future, the 4th quarter 1988 average levels of the monetary aggregates will serve as the basis for the 1989 target ranges. These target ranges

have been tentatively lowered by a full percentage point to 3 to 7 percent for M2 and by one half point to 3.5 to 7.5 percent for M3. These tentative reductions in monetary growth are in line with our commitment to lower monetary growth over time so that it will be consistent with our goal of price stability. Next week, the FOMC will review the monetary target ranges for 1989.

To conclude, I have found that the task of formulating and implementing monetary policy is indeed challenging. It forces me to draw upon all the knowledge that I gained in my days as a student and professor. In addition, it requires continued adaptation to evolving economic and financial conditions without losing sight of the ultimate policy objectives.

The United States now experiences one of the longest economic expansions and inflationary pressures are in check. I am optimistic that these trends will continue.

Exhibit 1
Velocity of Money

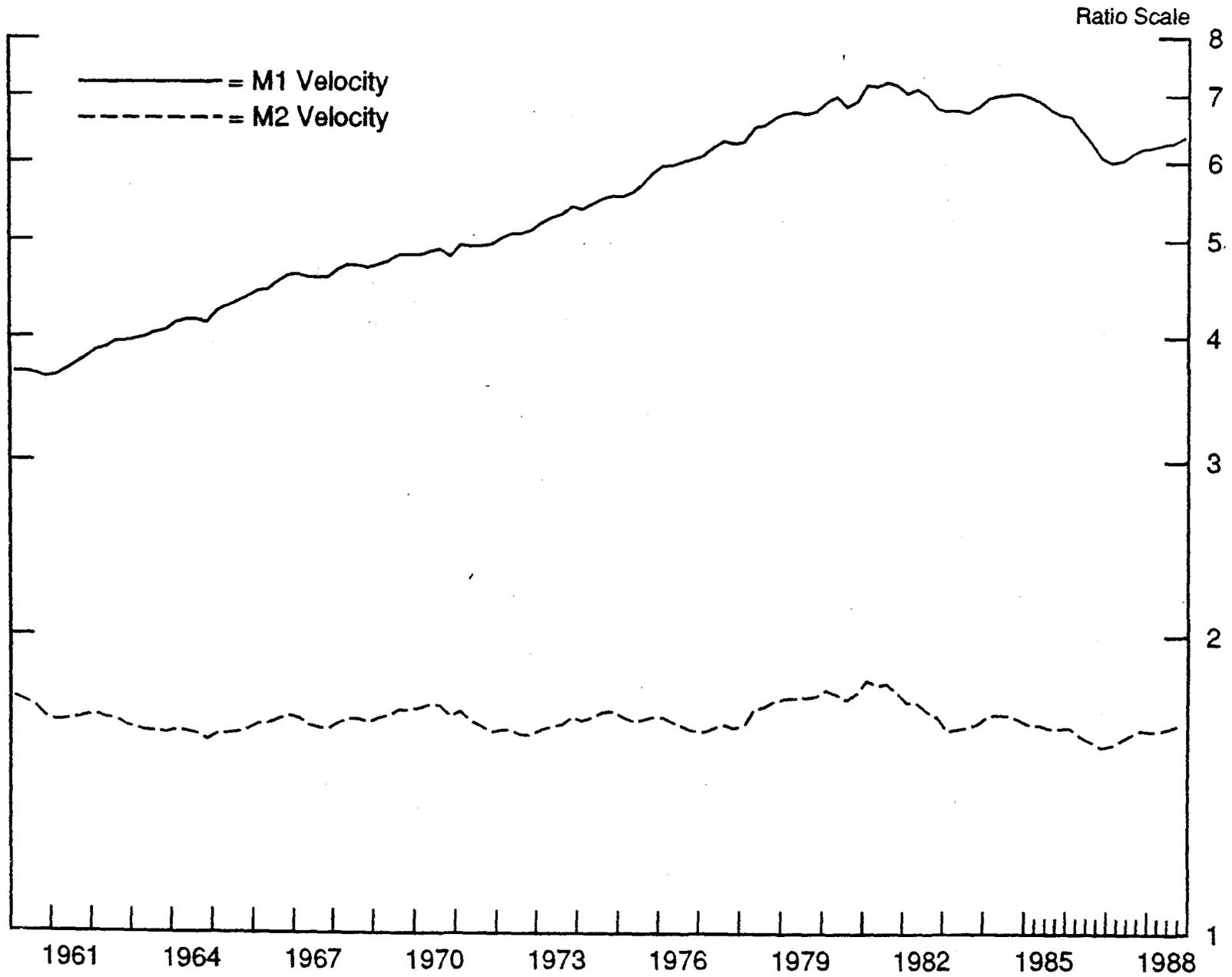
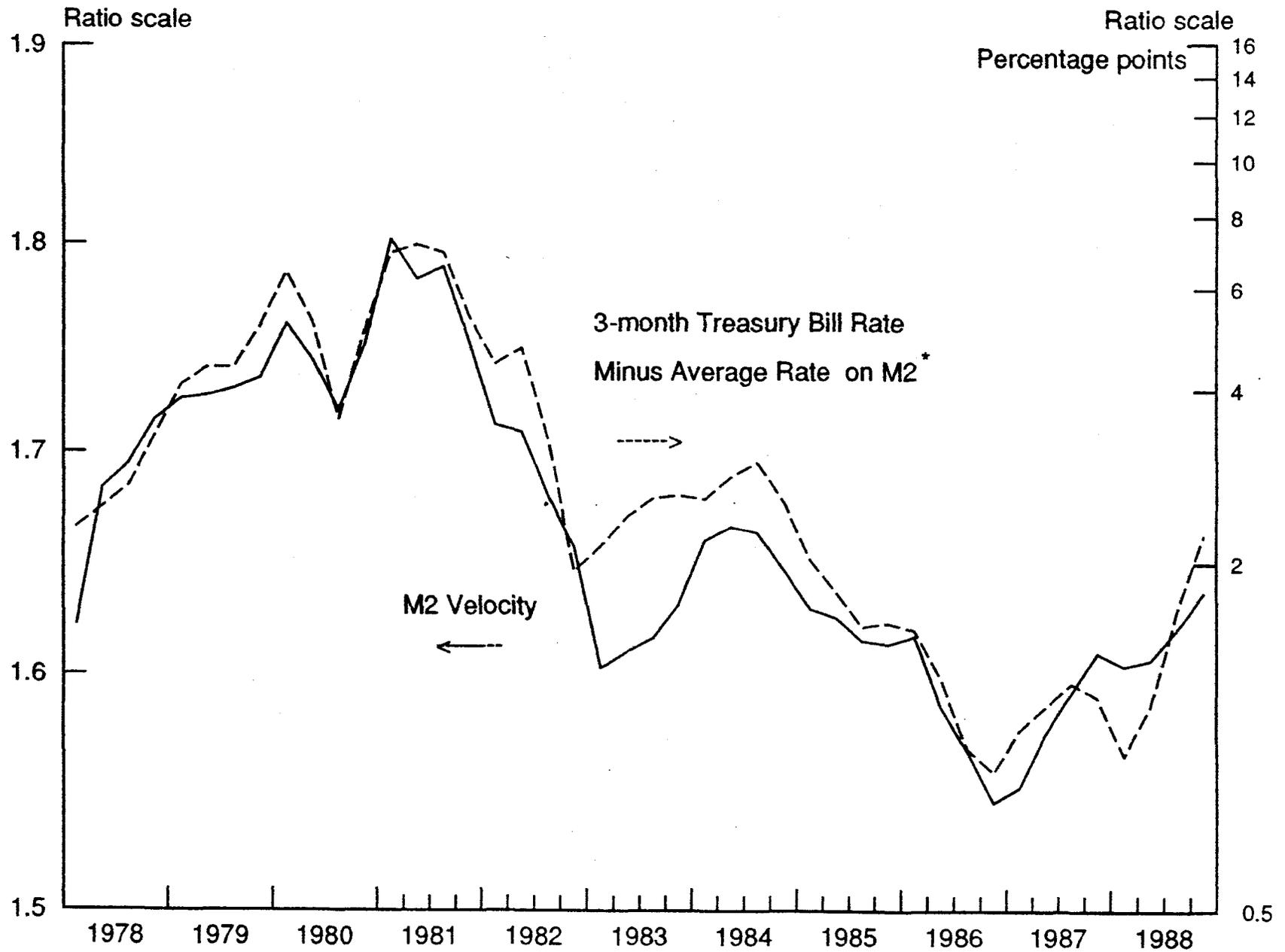
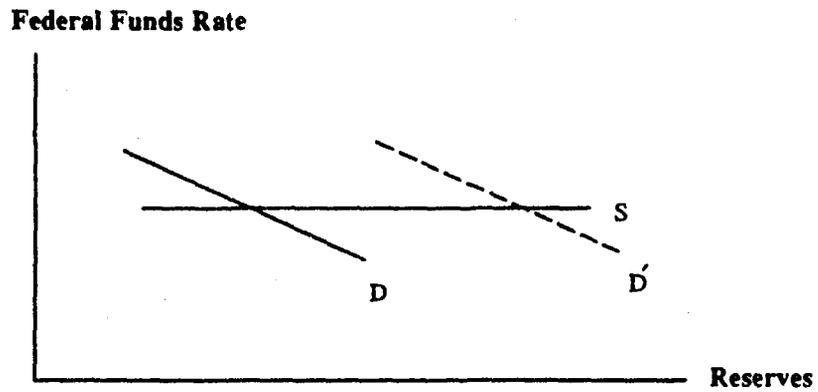


Exhibit 2
M2 Velocity and Average M2 Opportunity Cost

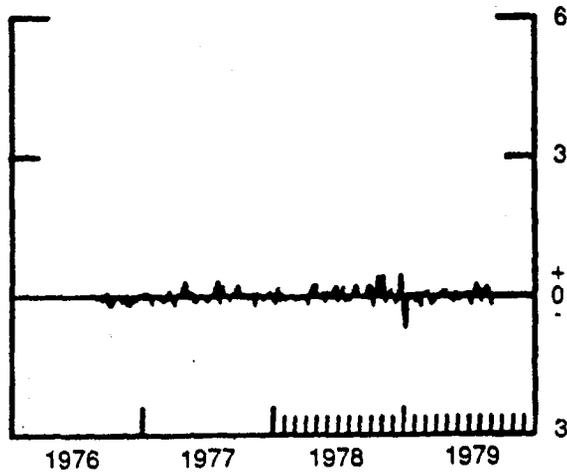


*Two-quarter moving average.

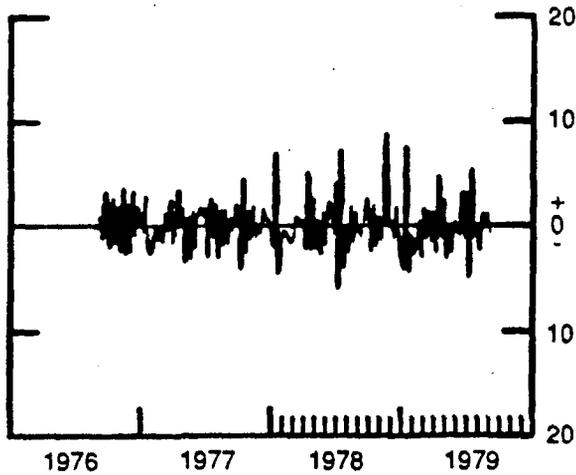
Exhibit 3 Federal Funds Targeting



Variability of
Federal Funds
Rate*



Variability of
Total Reserve
Growth**

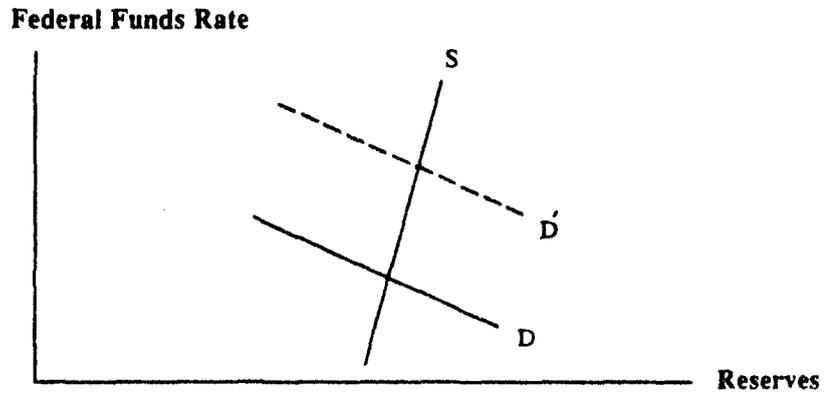


Key: S = Supply of total reserves
 D = Demand for required plus excess reserves

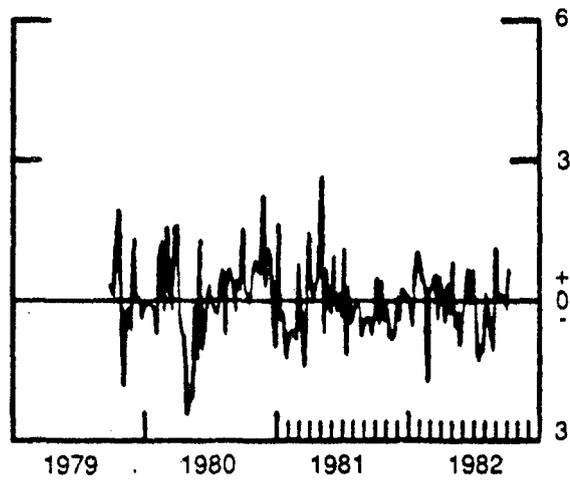
*Changes in the average weekly federal funds rate (in %) are plotted as deviations from the mean change over the period.

**The weekly growth rates of total reserves (in %) are plotted as deviations from the average weekly growth rate over the period.

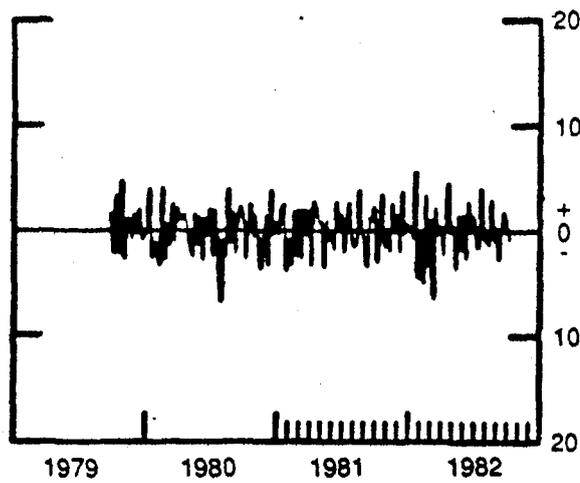
Exhibit 4 Nonborrowed Reserve Targeting



Variability of
Federal Funds
Rate*



Variability of
Total Reserve
Growth**

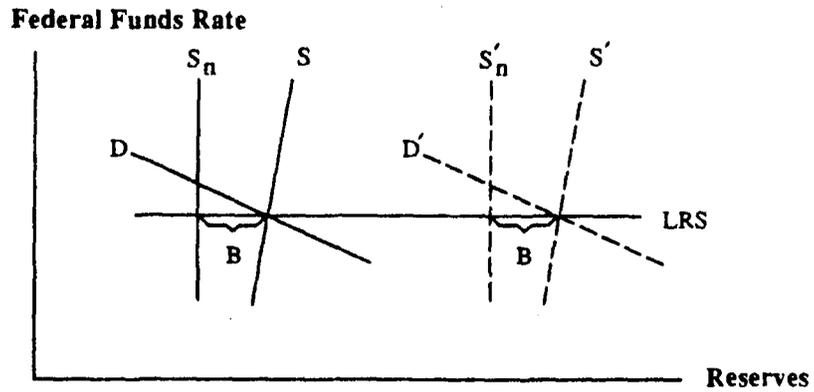


Key: S = Supply of total reserves
 D = Demand for required plus excess reserves

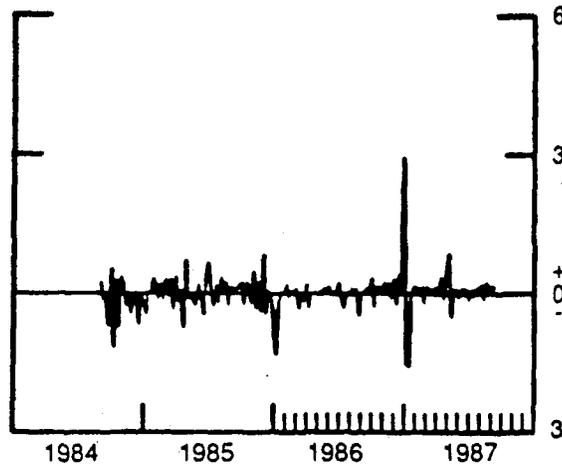
*Changes in the average weekly federal funds rate (in %) are plotted as deviations from the mean change over the period.

**The weekly growth rates of total reserves (in %) are plotted as deviations from the average weekly growth rate over the period.

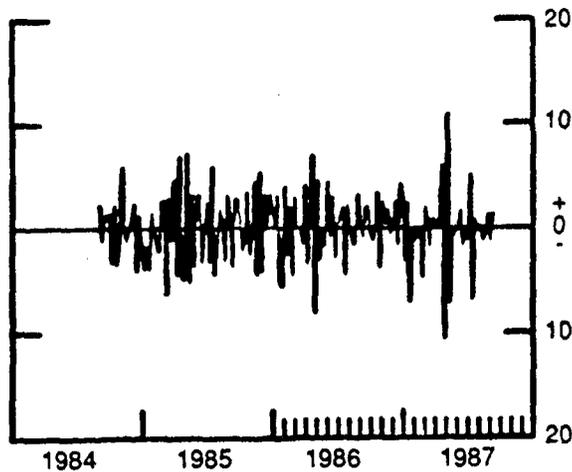
Exhibit 5 Borrowed Reserve Procedure



Variability of
Federal Funds
Rate*



Variability of
Total Reserve
Growth**



Key: S_n = Supply of nonborrowed reserves LRS = Long-run supply
 S = Supply of total reserves B = Borrowed reserves
 D = Demand for required plus excess reserves

*Changes in the average weekly federal funds rate (in %) are plotted as deviations from the mean change over the period.

**The weekly growth rates of total reserves (in %) are plotted as deviations from the average weekly growth rate over the period.

EXHIBIT 6

Order in which Policy Variables Conditioning Reserve Pressure Appeared in the FOMC Directive

MEETINGS	FIRST	SECOND	THIRD	FOURTH	FIFTH
3/85 to 7/85	MONETARY AGGREGATES	STRENGTH OF EXPANSION	INFLATION	CREDIT MARKET CONDITIONS	EXCHANGE RATES
8/85 to 4/86	MONETARY AGGREGATES	STRENGTH OF EXPANSION	EXCHANGE RATES	INFLATION	CREDIT MARKET CONDITIONS
5/86	MONETARY AGGREGATES	STRENGTH OF EXPANSION	FINANCIAL MARKET CONDITIONS	EXCHANGE RATES	--
7/86 to 2/87	MONETARY AGGREGATES	STRENGTH OF EXPANSION	EXCHANGE RATES	INFLATION	CREDIT MARKET CONDITIONS
3/87	EXCHANGE RATES	MONETARY AGGREGATES	STRENGTH OF EXPANSION	INFLATION	CREDIT MARKET CONDITIONS
5/87	INFLATION	EXCHANGE RATES	MONETARY AGGREGATES	STRENGTH OF EXPANSION	--
7/87	INFLATION	MONETARY AGGREGATES	STRENGTH OF EXPANSION	--	--
8/87 to 9/87	INFLATION	STRENGTH OF EXPANSION	EXCHANGE RATES	MONETARY AGGREGATES	--
11/87	FINANCIAL MARKET CONDITIONS	STRENGTH OF EXPANSION	INFLATION	EXCHANGE RATES	MONETARY AGGREGATES
12/87 to 5/88	FINANCIAL MARKET CONDITIONS	STRENGTH OF EXPANSION	INFLATION	EXCHANGE RATES	MONETARY AGGREGATES
6/88	INFLATION	STRENGTH OF EXPANSION	EXCHANGE RATES	FINANCIAL MARKET CONDITIONS	MONETARY AGGREGATES
8/88 TO 11/88	INFLATION	STRENGTH OF EXPANSION	MONETARY AGGREGATES	EXCHANGE RATES	FINANCIAL MARKET CONDITIONS