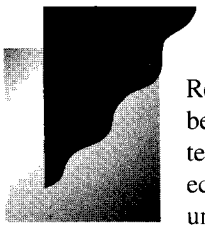
Indicators, performance, and policy in the 1930s and today

Robert D. Laurent



Recent economic growth has been sluggish despite persistent attempts to stimulate the economy. The apparently unresponsive nature of the economy is quite unusual in recent history, leading observers to search back in history for similar periods that might help explain the anomaly of the present. This article compares monetary policy and economic performance in the current period with monetary policy and economic performance in the 1930s. The article argues that the current period is in a number of important respects qualitatively, if not quantitatively, similar to the early 1930s. In particular, the last three years are similar to the early 1930s in having the absence of strong economic growth, sharply lower short term interest rates, widening spreads between long term and short term interest rates, and stronger growth in the monetary base (a narrow monetary aggregate) than in the broader aggregates (M2 and M3).[1] Of course, these two periods are also quite different in a number of respects. For example, the decline in national income was much steeper in the 1930s and broad velocity (the ratio of GNP to broader monetary aggregates) declined in the 1930s but not in the current period. This article argues that the aforementioned similarities between the two periods suggest that in the current period, as in the 1930s, there is likely to be a stronger correlation between economic growth and the broader aggregates, such as M2 and M3, than either the narrow aggregates, such as the monetary base and M1,[2] or interest rates and interest rate spreads. Hence, in the current period, the broader aggregates probably deserve greater weight than the narrower aggregates, the short term interest rate level, or interest rate spreads in the formation of monetary policy.

The present environment

Recent years have witnessed unusual economic weakness, though not because the episodes of actual economic decline have been unusually severe. Three consecutive quarters of falling real GNP is not at all unusual in the post-World War II period, nor is the total decline of 1.9 percent in real GNP from the second quarter of 1990 to the first quarter of 1991 especially severe. Indeed, the cumulative decline in real GNP over that period is actually milder than the average decline of 2.6 percent experienced in the preceding six recessions. Rather, the period has been unusual because of the length of time over which there has been an absence of strong economic growth. Eleven consecutive quarters of real GNP growth of less than 3 percent annually has not occurred in the entire period since 1947 when quarterly GNP data was first available.

The recent economic weakness is even more unusual because it has persisted despite actions by the Federal Reserve that would have usually stimulated the economy. Since April 1989, the Fed has made 24 consecutive cuts in

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its target fed funds rate, reducing it by 675 basis points to its current level of 3 percent. The funds rate has been lowered by nearly as much at other times in the post-World War II period, but never to its present low levels. As Figure 1 shows, the funds rate has not only fallen sharply, it is presently at its lowest level in nearly 30 years.

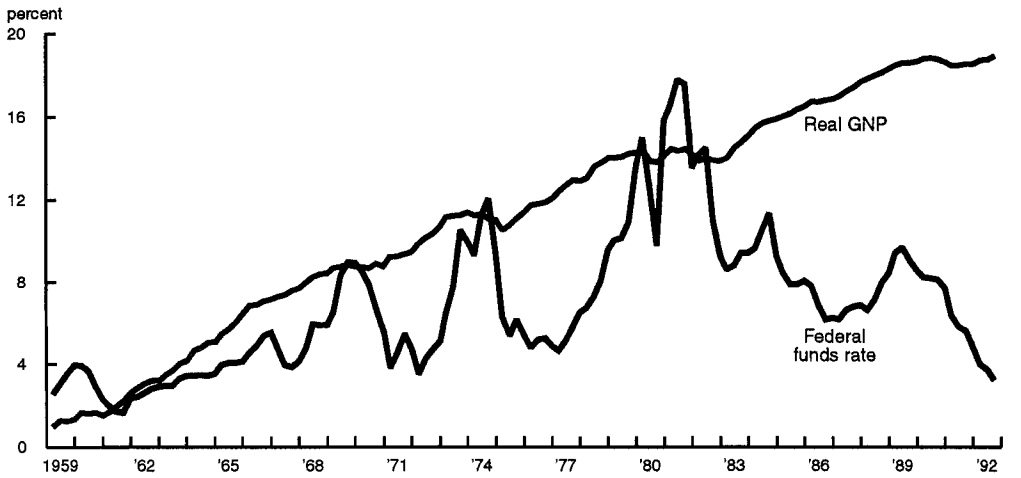
The recent behavior of the funds rate in the post-World War II era is unusual in yet another respect. As Figure 1 also shows, every previous recession in this period began with the funds rate either rising or close to its peak level, indicating that the Fed was seeking to tighten monetary policy at the time these recessions began. In contrast, the recent recession began more than a year after the Fed had started to lower the fed funds rate from its February 1989 peak (the NBER dates the cyclical peak in the economy at July 1990). This indicates that not only was the most recent recession not the result of intentional Fed actions but that Fed moves that would otherwise have produced a stronger economy were offset by other factors.

Figure 2 reveals another aspect of interest rate movements that has been unusual. The reduction in short term interest rates has been accompanied by a relatively minor decline in long term rates. As the Figure indicates, while the fed funds rate has fallen nearly 700 basis points since spring 1989, the 30 year Treasury bond rate has declined only about 140 basis points. As a consequence of these relative movements, the spread between the long term Treasury bond rate and the short term overnight fed funds rate has expanded to over 450 basis points, the widest level in the entire post-World War II period, and most likely in all U.S. history. Typically, the wider the spread, the greater the subsequent growth in economic activity, so the recent exceptionally wide spread in combination with generally weak economic activity is also unexpected. The weak recovery from the recent recession relative to the recovery from other recessions, despite the historically wide spread, can be seen clearly in Figure 1.

During the last three years there has also been rapid growth in some of the narrower measures of money. The monetary base and M1 (both relatively narrow measures of money compared to the broader measures M2 and M3) have grown at annual rates of 9.3 and 8.5 percent respectively over the last three years. These growth rates are above the average growth of 7.2 and 6.6 percent for the monetary base and M1, respectively, in the last three decades. The growth in M1 has been particularly rapid in the last two years, when it grew by 10.7 percent while the monetary base grew by 9.3 percent. Typically, one would expect rapid growth in the monetary aggregates to be associated with strong growth in the economy. So once again, the combination of the rapid growth rates in the narrow monetary aggregates and the absence of strong growth in the economy is very unusual.

FIGURE 1

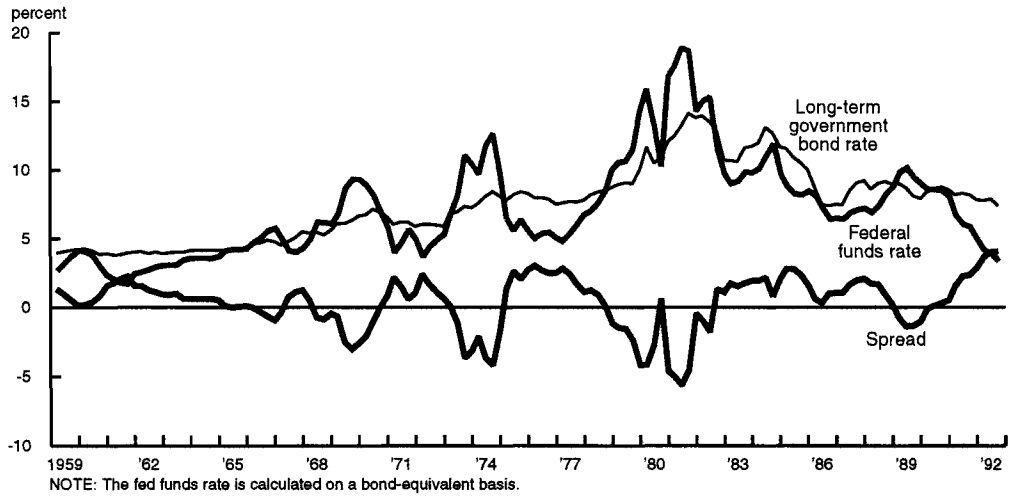
Fed funds rate versus real GNP (1959Q1-1992Q3)



NOTES: Real GNP is plotted in natural logs scaled to match interest rates.
Shaded areas indicate recessions.

FIGURE 2

Recent term spread (1959Q1-1992Q3)



NOTE: The fed funds rate is calculated on a bond-equivalent basis.

Similarity to the 1930s

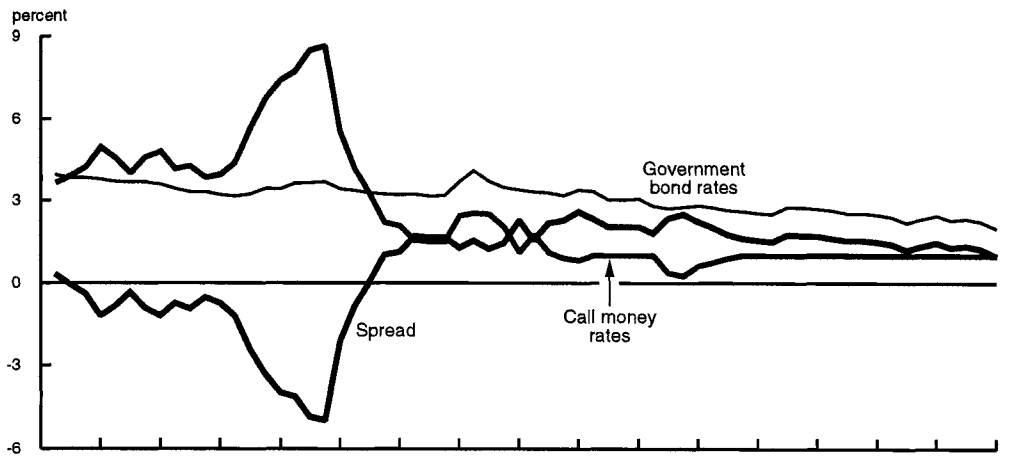
The analysis above indicates that the most unusual aspect of recent economic performance is the combination of the absence of strong economic growth along with a sharp reduction in short term interest rates and rapid growth in the narrow monetary aggregates (the monetary base and M1), conditions that one might ordinarily associate with a stimulative monetary policy and strong economic growth. As already noted, the eleven consecutive quarters since first quarter 1989 of less than 3 percent annual GNP growth is unique over the period in which quarterly GNP data is available. It is likely that one would have to go back to the 1930s, and specifically the years from 1929 to 1933, to find such an extended period without at least one quarter of strong growth. This is not to say that the economy has experienced, or will experience, an economic decline like the 1930s. While both periods lacked strong growth, the actual performance was substantially different in the two periods. The magnitude of the decline experienced in the early 1930s dwarfed the 1.9 percent decline in real GNP from third quarter 1990 to first quarter 1991. As the name sometimes given to the earlier period—the Great Depression—implies, this period may well have been the most severe episode of economic decline in U.S. history. From 1929 to 1933, real GNP fell by more than 30 percent. The decline in income during the current period was much less severe than during the 1930s, in part because of government programs started after the Great Depression, such as unemployment insurance and social security. These programs should keep expenditures up during periods of slower economic growth, thus helping to dampen economic downturns.

Figure 3 shows that, like the present period, a sharp fall in short term rates was also a characteristic of the early 1930s. Monetary policy of this period did not focus on the federal funds rate, because, among other reasons, the interbank market for overnight funds was not well developed at the time. Consequently, Figure 3 plots the overnight call rate on security loans. From a level of more than 8.5 percent in the third quarter of 1929, the rate declined to a level of less than 1.0 percent in the second half of 1933. The focus of monetary policy in this earlier period was much more directed towards the discount rate. Over this same time span, the discount rate was lowered from 6.0 percent to 2.0 percent, and in the interim had briefly gone as low as 1.5 percent. In the 1930s, as in the recent period, the decline in short term rates was not only sharp, but took rates to historical lows. Indeed, both the call money rate and the discount rate were taken to lows that had not been seen before in U.S. history and, with the exception of the late 1930s, have not been seen since.

Also similar to recent experience, the sharp decline in short term rates in the 1930s was not matched by a decline in long term rates. From fall 1929 to spring 1933, while call money rates were declining by more than 750 basis points,

FIGURE 3

1930s term spread (1925Q1-1940Q4)



SOURCE: *Banking and Monetary Statistics.*

government bond rates declined by only 48 basis points to 3.20 percent. As can be seen in Figure 3, this had the effect of steeply widening the term spread. The term spread in 1933 was wider than it had been at any time in the previous 80 years.

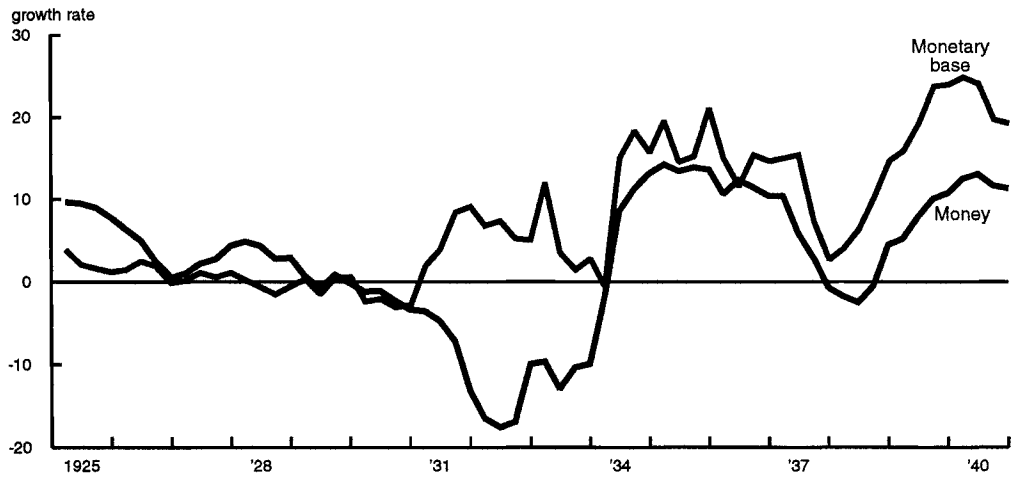
Perhaps the most important similarity between the current period and that of the 1930s is the combination of sharply reduced short term rates and weak economic performance. If one assumes, as the great majority of observers do, that the effect of monetary policy can be gauged by looking at movements in short term interest rates produced by the monetary authority, then a very important conclusion emerges. Monetary policy in these two periods must have been ineffective, since short term rates were lowered so much and the economy remained weak. In the period of the 1930s this is exactly the conclusion that most observers drew from the sharp fall in short term rates to very low levels and the very, very weak performance of the economy. This view of the time that monetary policy was ineffective was captured in the aphorism that "you can't push on a string" and came to dominate monetary economics for decades after the 1930s.

In the present period as well, some observers have concluded that monetary policy is ineffective against the problems presently afflicting the economy. Viewed from the point of view of interest rates, this view seems reasonable, given the fact that the reduction of 675 basis points in the fed funds rate has not resulted in strong economic growth and that this interest rate now stands at only 3 percent.

Besides the similarity in interest rate behavior between the present period and the early 1930s, there was also rapid growth in the monetary base, one of the narrow monetary aggregate measures. Figure 4 plots the growth rate of the monetary base and a broader measure of money comparable to the current M2 over the period from 1925 to 1940. Note that after 1930, growth in the monetary base was very rapid. Both in the 1930s and in the recent period some have interpreted the rapid growth in the monetary base as an indication that monetary policy was stimulative, perhaps too stimulative. Since the monetary base includes reserves held by depositories (banks and S&Ls), some observers interpret the monetary base as containing the "raw material" out of which depositories are able to extend credit by making loans or buying securities. In this view, rapid growth in the monetary base increases the possibility of subsequent rapid, perhaps too rapid, expansion in money and economic activity.[3] It was just such a view that prompted the Fed in 1936 and 1937 to double reserve requirements in three steps, thereby initially cutting sharply the high level of excess reserves and reducing the possibility of any potentially excessive future expansion in money. As Figure 4 shows, the monetary base and money in fact slowed sharply in late 1937 and early 1938. However,

FIGURE 4

Year over year growth in money and the monetary base (1925Q1-1940Q4)



SOURCES: *Monetary Statistics of the United States* and *A Monetary History of the United States, 1867-1960,* Milton Friedman and Anna Schwartz.

it is possible in the current period, as well as in the 1930s, to explain the more rapid growth in the narrower monetary aggregates in a way that does not imply monetary policy has been too stimulative, or even stimulative at all.

Gauging the effect of monetary policy

The previous discussion makes it clear that while there are many similarities between the behavior of interest rates and narrow monetary aggregates in the 1930s and the present period, the conclusion that monetary policy was ineffective in these two periods depends crucially on the assumption that the effect of monetary policy (that is, its impact on future economic activity) can be accurately gauged by looking at interest rate movements or movements in the narrow monetary aggregates. In particular, a key assumption, both now and in the 1930s, in the prevalent view that monetary policy is ineffective in stimulating the economy is that the effect of monetary policy can be accurately gauged simply by looking at the level, or changes in the level, of short term interest rates. It is clear that the monetary authority uses the short term federal funds rate as a tool to implement monetary policy. It is also clearly true that a lower fed funds rate means a more stimulative monetary policy than a higher fed funds rate *under the same set of economic conditions.* But it does not necessarily follow that a lower fed funds rate necessarily means an easy, or even easier, monetary policy if other economic conditions change as well. There are other possible gauges of the effect of monetary policy for which there is substantial support, and which do not necessarily indicate that an easier, or more stimulative, monetary policy was implemented in these two periods and found ineffective. For example, broad money growth is probably the most prominent alternative in monetary theory to interest rates as a gauge of the effect of monetary policy. In this view the monetary authority uses movements in the short term federal funds rate as a tool to implement monetary policy, but growth in broad money is a better gauge of the effect of monetary policy on future economic activity.

Indeed, in the decades following the 1930s, one of the major debates in macroeconomics was the issue of how to gauge monetary policy and its effectiveness. A major issue in that debate was whether money or interest rates provided a better gauge of the effect of monetary policy. Today, a measure of growth in real M2—a broader aggregate than M1 or the monetary base—is included in the index of leading indicators,[4] and the Fed presents targets for growth in the broader money measures (M2 and M3) in reporting to Congress on its future plans for monetary policy. If one looks at growth in these broader monetary aggregates, it is possible to argue that monetary policy was not as easy as an examination of interest rates or narrow money measures would indicate in either the more recent period or in the 1930s.

Recent money behavior

Figure 5 shows the year over year behavior of three money measures over the last three decades. The data in the Figure indicate that, for most of the period since 1959, growth rates in all three of the money measures have fluctuated together. However, in the period since 1980, the behavior of money has varied considerably, depending on the measure one examines. The narrow measure of money (M1) has recently shown one of its highest growth rates while the broader measures (M2 and M3) have shown the weakest growth in the more than thirty years plotted. Even among advocates of gauging monetary policy by money growth rates, there has been some debate as to which of these money growth rates is more indicative of the effect of monetary policy.[5]

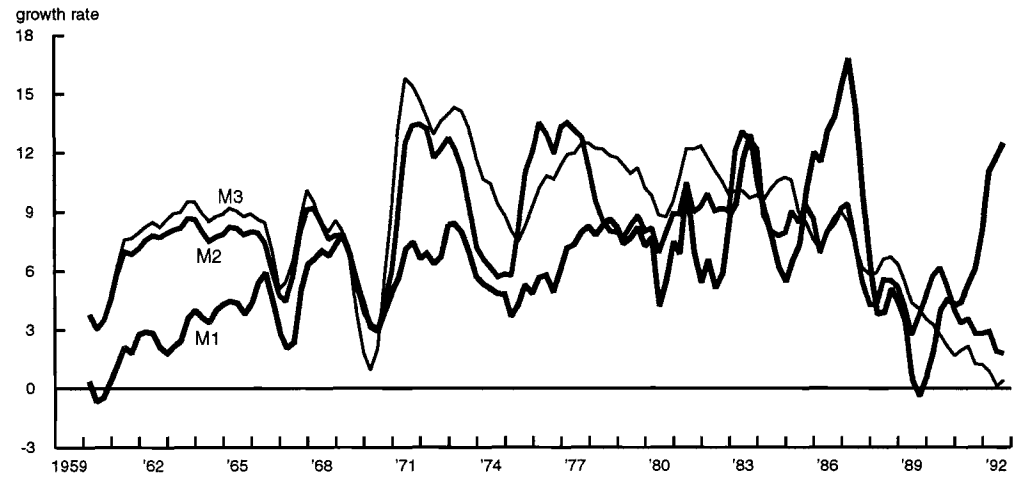
There are some reasons to believe that the broader aggregates may be better indicators of the effect of monetary policy than the narrow aggregates, particularly under current conditions when interest rates have declined sharply. First, as already noted, the presumption appears to be that the broader aggregates are better indicators since real M2 is included in the index of leading indicators and the Fed chooses targets for M2 and M3, but not M1. Recent experience also indicates that the broader aggregates are likely to be better indicators. Since 1991, M1, the narrow aggregate, has grown at a much faster rate than M2 or M3, while the economy has experienced very slow growth. This already suggests that M2 and M3 have been better indicators of economic growth than M1 during the recent period.[6]

Theoretical considerations also suggest that in the current situation of sharply falling short term interest rates, the broader money measures are likely to provide better gauges of the effect of monetary policy than the narrow money measure. Its advocates accord money a prominent role in monetary policy because changes in money are usually considered to be changes in supply impacting on an unchanged demand for money. In this view, an increase (decrease) in money represents an excess (deficiency) of money balances and leads to an increase (decrease) in spending and economic activity. However, if the change in money is produced (or matched) by a change in the quantity of money demanded by the public under current economic conditions, then the change in money balances would not represent an excess or deficiency and would not affect spending. This makes it important to understand whether a change in a money measure might have been produced (or matched) by a change in the demand for that money measure.

Notice in Figure 5 that M1 growth has become quite erratic in the 1980s. It has tended to be high when short term rates are falling (for example, 1985-1986, 1989-1992) and low when short term rates are rising (for example, 1987-1989). To understand this, consider the impact of a fall in short term interest rates on the various monetary aggregates. The fall in short term interest rates lowers the opportunity cost of holding very liquid deposits like transaction deposits,

FIGURE 5

Year over year growth in M1, M2, and M3 (1960Q1-1992Q3)



inducing holders of investment type deposits (for example, time deposits) to switch into transaction type deposits (for example, demand deposits or other checkable deposits). This shift in demand toward transaction type deposits has the effect of raising M1, however, since the increase in M1 was in response to increased demand, it does not increase economic activity, according to the above view. Notice, however, that the shift in demand to transaction type deposits does not affect a broad aggregate that includes both transaction type and investment type deposits. This suggests that a shift in demand between transaction type and investment type deposits is likely to affect the quantity of a narrow aggregate more than that of a broader aggregate. For this reason, one would expect movements in the broader aggregates to be more insulated from these shifts in demand produced by interest rate movements, and hence provide more accurate gauges of excesses or deficiencies in deposit balances and more accurate indicators of future spending and economic activity.

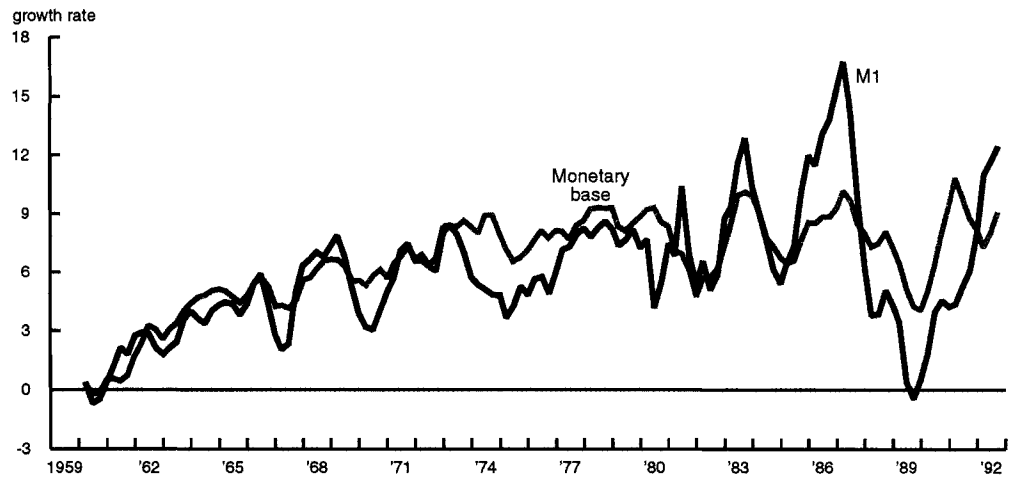
A shift in demand by the public, as described above, from investment type deposits (which typically have no reserve requirements) to transaction type deposits (which typically have reserve requirements) increases required reserves. If the Fed is trying to achieve a level of the fed funds rate, then it must increase reserves in response to this shift to prevent an increase in the funds rate. The data in Figure 6 show that growth in the monetary base has tended to move with growth in M1 (the deviations that occur primarily reflect discrepancies between the growth rates of currency and transaction type deposits). As already noted, some observers have interpreted the recent strong growth of the monetary base as an indication of a very expansionary monetary policy, but this strong growth is merely the necessary consequence of a shift from investment type deposits into transaction type deposits and the fact that the Fed is trying to achieve a certain level of the fed funds rate. If, as indicated above, the increase in transaction type deposits resulting from a shift in demand is not expansionary, then neither is the resulting expansion in reserves. So, the rapid growth in the monetary base does not indicate an expansionary policy in this situation.

Money in the 1930s

Data on most measures of money were not available during the 1930s, but numbers constructed since then indicate that again there are a number of monetary policy parallels between the earlier period and the present. The data presented in Figure 4 show that the period from 1929 to 1933 was one of very weak growth in money. Over this period a broad monetary aggregate, roughly comparable to M2, declined by nearly a third. Even after taking account of falling prices, the real value of the money stock declined from 1929 to 1933. So, as at present, despite the sharp fall in short term interest rates over this period, broad mon-

FIGURE 6

Year over year growth in M1 and the monetary base (1960Q1-1992Q3)



ey measures suggest that monetary policy was not at all easy.

The data in Figure 4 also show, as noted earlier, that while broad money was falling in the earlier period, the monetary base was actually rising. From 1929 to 1933, this measure increased by slightly more than 20 percent. Though it is not clear that anyone at the time argued, as at present, that the growth of the monetary base indicated an expansionary monetary policy, it is illuminating for the present situation to examine the circumstances of the earlier deviation between growth in broader money measures and the monetary base. Just as in the present situation described above, the earlier deviation arose out of a shift in public preferences. The source and consequences of the shift in the public's money holding preferences was even clearer then than it is now. A massive wave of bank failures caused the public to sharply shift its preferences from bank deposits to currency. This shift can clearly be seen beginning in 1931. Given this increased desire for currency, the increases in the monetary base (where currency accounts for a much larger component than it does in broad money) were not indicative of an expansionary policy. But the shift in the composition of the monetary base from reserves to currency, and the threat of possible future bank runs, had the effect of inducing banks to reduce the supply of bank deposits and the broad aggregates. This supply effect, reducing the broad aggregates, was, in the theoretical framework of money advocates described earlier, a sign of a tighter monetary policy.

A factor which affects the relation between money and income marks an important distinction between the 1930s and the present period. In the early 1930s, prices were falling sharply, which meant that the real return to saving by holding currency or deposits was high, even at the low levels of nominal interest rates at the time. This increased the public's desire to save in the form of money, which reduced spending and income, resulting in a decrease in velocity (the ratio of GNP to money) even for a broad aggregate that includes both currency and bank deposits. This meant that in the 1930s, income declined even more than broad money did. In the recent period, velocity has not declined, that is, income has not declined relative to the broader monetary aggregates as it did in the 1930s.[7]

Condition of the banking system and deposit insurance

Even if the weak growth in broader money explains the sustained weakness in economic activity in these two episodes sixty years apart, the question remains why such sharp cuts in short term interest rates failed so uniquely and dramatically in these two episodes to produce stronger money growth. The most likely answer lies in a factor, introduced just above, that is perhaps the fundamental underlying similarity between the present period and 1930s: the amount of pressure on the banking system. The depositories that create money are under more pressure now than at any time since the 1930s. More depositories (banks and thrifts) have been closed in the last three years than at any time since the 1930s. In addition, increased capital requirements and tighter regulation have made even solvent depositories less willing to provide credit (and therefore create money) than would typically be the case under the same economic and interest rate conditions. This pressure on the depositories that create money has the effect of working in opposition to the stimulative thrust on money of lower short term interest rates. This means that the same reduction in the funds rate does not have as great an impact on money and, therefore, economic activity as it typically would.

The greatest difference for monetary policy between the present situation and the 1930s is unquestionably the existence of deposit insurance. By removing the risk of depository failure from depositors, it has prevented any shift by the public from deposits into currency and the potential problems such a shift could create for monetary policy. But deposit insurance has also helped to hide the economic forces at work in the current period. It does this by essentially removing the pain previously felt by depositors in the closing of insolvent depositories and the contraction in the money stock, and by separating in time the point at which an institution goes insolvent and the point at which the money stock contracts. The closing of an insolvent institution still contracts money as it did in the 1930s, but the cause and effect relationship is more difficult to see.

The absence of deposit insurance in the 1930s explains one other great difference between that period and the present. As a result of bank runs that occurred in the absence of deposit insurance, banks in the 1930s sharply

increased their demand for excess reserves in order to convince depositors not to withdraw their funds. Excess reserves increased from about 60 million at the end of 1930 to about 6.8 billion a decade later. This sharp increase, along with the very low level of short term interest rates, helped lend credibility to the view that monetary policy was ineffective during this period. One could argue that even if the monetary authority had tried to increase the money stock, any increase in reserves would have gone into excess reserves without increasing the money stock. Whatever the merits of the argument in the 1930s, it is clear that such an argument is not credible now. Because of deposit insurance, depositories do not need to worry about runs, thus they have no reason to increase excess reserves as banks did during the 1930s. At present there appears to be a no more than normal demand for excess reserves on the part of depositories, and so a further increase in reserves, other things being equal, would lead to both a lowering of the fed funds rate and an further increase in the money stock.

Conclusion

The analysis above indicates that, from a monetary policy perspective, the present period seems somewhat unusual within the post-World War II era, and that it bears more qualitative, if not necessarily quantitative, similarities to the period of the early 1930s. The most immediate apparent similarity between the two periods is the combination of sharply lower short term rates and the absence of strong economic growth. If one believes that the effect of monetary policy can be determined simply by movements in short term interest rates, then it is easy to conclude that monetary policy has been ineffective in both of these periods. However, there are measures of broad money growth that can be interpreted as indicating that monetary policy was not easy over these two periods. In both of these periods there was substantially stronger growth in the narrow monetary aggregates than in the broad aggregates. The article argues that shifts in demand induced by the sharp fall in short term interest rates are particularly likely to render the narrow monetary aggregates less reliable than the broader monetary aggregates as gauges of monetary policy in such periods of sharply falling short term rates. However, unexpected shifts in demand for money (whether broad or narrow) remains a problem in interpreting the impact of given money changes on economic activity. By producing changes in velocity (the ratio of GNP to money) these unexpected shifts in money demand produce unexpected shifts in GNP. The velocity of narrow money measures decreased in both the 1930s and the recent period, but velocity of the broader money measures in the two periods differed sharply. In the 1930s, the velocity of broad money fell, while in the recent period it has risen. To the extent that the demand for money (whether broad or narrow) is difficult to predict, velocity is difficult to predict and, consequently, it is difficult to predict income using broad money. Nevertheless, while there is considerable uncertainty in the use of any indicator, recent experience and historical analysis suggest that the broad monetary aggregates deserve greater weight than either the narrow aggregates or the level of short term interest rates in predicting future economic growth.

This still leaves open the question of why such sharp reductions in short term interest rates failed to stimulate broad money growth in only these episodes, some 60 years apart. The article argues that the fundamental similarity between these two periods was the severe stress experienced by money creating depositories. The closing of insolvent depositories, the increased regulatory pressure, and increases in the demand for capital all combined to weaken the normal stimulative impact of a given cut in short term interest rates. Achieving the same growth in the broad monetary aggregates requires much sharper cuts in short term interest rates in these circumstances. This article also argues that the existence of deposit insurance in the current period is the most important difference between the current period and the 1930s and has caused the consequences of depository pressures to manifest themselves in much different ways than they did in the 1930s.

FOOTNOTES

[1]The monetary base is the sum of currency and reserves held at the Fed. Another narrow monetary aggregate, M1, is the sum of currency, demand deposits, other checkable deposits, and travelers checks. M2 is M1 plus savings deposits, small denomination time deposits, general purpose and broker/dealer money market mutual funds, and overnight repos and eurodollars. M3 is M2 plus large time deposits, institution-only money market funds, and longer term repos and eurodollars.

[2]M1 is the sum of currency, demand deposits, other checkable deposits, and travelers checks. M1 is smaller than M2 or M3 but larger than another narrow aggregate—the monetary base.

[3]For such a view, see the Shadow Open Market Committee (1991).

[4]Initially (May 1975) real M1 was the monetary aggregate inserted into the index of leading indicators, but since March 1979 real M2 has replaced real M1.

[5]In contrast to the view of the Shadow Open Market Committee already noted in footnote 3, Milton Friedman (1992) advocates M2 as an indicator of the effect of monetary policy.

[6]Two recent studies that appear to support the superiority of M2 over M1 in the recent period are Hess and Porter (1992) and Eugenie, Evans and Strongin (1992).

[7]A number of recent studies examining the behavior of velocity (income relative to M2) have been published in the Federal Reserve system. See Feinman and Porter (1992), Carlson and Samolyk (1992), Carlson and Byrne (1992), Duca (1992), Higgins (1992), and Motley (1992).

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