# Trends and Cycles in the Money Supply: 1959-78

*By David B. Foster*

The behavior of the nation's money supply has received an increasing amount of attention in recent years. Most economists believe that monetary developments have important implications for the economy, and the Federal Reserve System has increasingly emphasized monetary growth in the implementation of monetary policy. As a result, information on the behavior of the money supply is continually analyzed by large segments of the public to discern its implications for economic developments and monetary policy trends.

A number of financial innovations occurring over the past several years appear to have altered the behavior and usefulness of the monetary aggregates as currently defined. In response to these developments, the Federal Reserve is considering alternative definitions of the monetary aggregates that are more consistent with current financial practices.

This article reviews and analyzes the behavior of the major money supply measures over the period 1959 through 1978. The analysis focuses on trends and cycles in the monetary aggregates and their components. In addition to the major money supply measures, the article also discusses an alternative set of aggregates that has been proposed by the staff of the Federal Reserve Board to replace the traditional measures. The first section deals with trends in the major monetary aggregates, while the second section discusses the cyclical behavior of the money supply measures. The proposed aggregates are discussed in the third section.

## TRENDS IN THE MONEY SUPPLY

The secular movement, or trend, of an economic time series is the long-run underlying movement of the series. The trend ignores the shorter run cyclical, seasonal, and irregular variations in a series in order to focus on the behavior of the series over the long run. The steady upward trend of the money supply is shown in Chart 1, which contains the actual levels and the estimated trend levels of **M1**, the narrowly defined money supply.[1]

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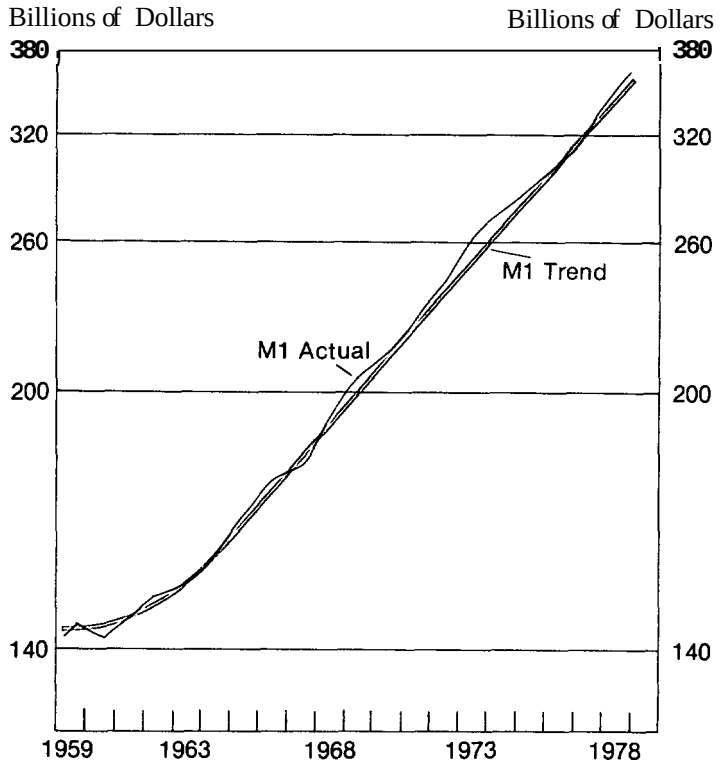
[1] The actual values are seasonally adjusted quarterly average data. Estimated trend values are obtained by regressing the natural logarithms of the seasonally adjusted quarterly average levels of the aggregates and components on fourth order polynomials in time. The order of each polynomial is set at four to allow for changes in trend due to the four business cycles that occurred over the same period. The growth rates are calculated from the trends estimated in this way. Specifically, each growth rate is calculated as the difference in estimated natural logarithms of the trend level.

**Chart 1**
**ACTUAL AND TREND LEVELS OF M1**




The calculated growth rates of the trend values of the three major monetary aggregates—Ml, M2, and M3—are contained in Table 1.[2] As shown in the table, the growth rates of all three aggregates accelerated during the 1959-78 period. During the last half of the period, 1969 through 1978, the trend growth rate of M1 was 5.9 per cent, compared with 3.3 per cent between 1959 and 1968. Similar increases occurred in the trend growth rates of M2 and M3.

The acceleration in the growth rates of M1, M2, and M3 reflects an acceleration in the trend growth rates of the four major components of the monetary aggregates--currency, demand deposits, time and savings deposits at commercial banks other than large negotiable CD's, and time and savings deposits at nonbank thrift institutions. The trend growth rates of each of the four components, also shown in Table 1, were higher during the 1969-78 period than in the 1959-68 period.

The broader aggregates—M2 and M3—have grown more rapidly than M1 in the past 20

**2 The monetary aggregates to be discussed in this article are M1, M2, and M3. M1 consists of currency and demand deposits (checking account balances) held by the nonbank public. M2 is equal to M1 plus time and savings deposits of commercial banks other than large negotiable certificates of deposit at weekly reporting banks. M3 is equal to M2 plus deposits at nonbank thrift institutions.**

**Table 1**
TREND GROWTH RATES IN SELECTED VARIABLES
**(Averages of quarterly percentage changes)**

| Variable | 1959-68 | 1969-78 | 1959-78 |
|---|---|---|---|
| M1 | 3.3 | 5.9 | 4.6 |
| M2 | 6.0 | 8.7 | 7.4 |
| M3 | 7.2 | 9.7 | 8.4 |
| Currency | 4.1 | 8.2 | 6.2 |
| Demand deposits | 3.1 | 5.2 | 4.1 |
| Time and savings deposits in M2 | 10.4 | 11.1 | 10.8 |
| Time and savings deposits at nonbank thrift institutions | 9.4 | 11.2 | 10.3 |
| Real GNP* | 4.1 | 2.9 | 3.5 |
| GNP deflator† | 2.3 | 6.3 | 4.3 |
| Interest rate on commercial paper* | 3.8 | 2.0 | 2.9 |
| Interest rate on time and savings deposits§ | 6.7 | 1.8 | 4.2 |

*Real GNP is GNP adjusted to exclude the effect of changes in the price level.
†The GNP deflator is a measure of changes in the price level.
‡The 4- to 6-month commercial paper rate is used as a measure of market interest rates.
§The commercial bank passbook savings rate is used as a proxy for the rate on time and savings deposits.

years. Throughout the **1959-78** period, the trend growth of **M2 (7.4** per cent) was higher than the trend growth of **M1** (4.6 per cent). This occurred because time and savings deposits at commercial banks, which are included in **M2** but not in **M1,** increased more rapidly than either demand deposits or currency. Similarly, M3 grew more rapidly than **M2** over the past **20** years because the interest-bearing component comprises a larger percentage of **M3** than of **M2.**

The patterns observed during the **1959-78** period in the trend growth rates of the monetary aggregates may be analyzed by reference to either demand or supply forces. A supply analysis would focus mainly on factors controlled by monetary policy. A demand analysis, on the other hand, would examine factors affecting the public's demand for monetary assets. The analysis in this article is demand-oriented, focusing on factors that influence the public's demand for the aggregates and their components.

A demand-oriented analysis indicates that movements during the **1959-78** period in the trend growth rates of the monetary aggregates and their components-currency, demand deposits, and time and savings deposits—were closely related to movements in real income, inflation, and interest rates. Traditional theories indicate that the demand for monetary assets is positively related to real income, the price level, and their own rates of return, and negatively related to the expected yield on alternative financial **assets.**[3] Rising real income is generally

3 See, for example, William J. Baumol, "The Transactions Demand for Cash: An Inventory Theoretic Approach," *Quarterly Review* of Economics, Vol. **66,** November **1952, pp. 545-56.**

accompanied by increases in monetary assets, as the public attempts to keep a stable relationship between its monetary balances and its real income. Rising prices tend to be accompanied by increases in nominal monetary assets as the public seeks to maintain the purchasing power of its money balances. Rising market interest rates, on the other hand, generally result in declines in monetary assets, as the public shifts out of these assets and into alternative financial assets in order to maximize interest income. Increases in interest rates on time and savings deposits are associated with increases in some monetary assets—time and savings deposits—and with declines in other monetary assets—currency and demand deposits.[4]

The impact of changes in income, inflation, and interest rates on the demand for various types of monetary assets helps explain the secular behavior of the monetary aggregates and their components. For example, empirical analysis indicates that acceleration in the rate of inflation explains most of the acceleration in the growth of the aggregates and their components over the past 20 years. In other words, the more rapid growth in the money supply measures during the 1969-78 period compared with the 1959-68 period was associated with a higher inflation rate in the later period (Table 1). In addition, rising market interest rates depressed monetary growth between 1969 and 1978 less than in the period from 1959 to 1968, since interest rate increases were proportionately less in the more recent period. The factors contributing to more rapid growth of the monetary aggregates have been offset to some extent by less rapid growth in real income over the past decade, which has tended to dampen growth in the demand for monetary assets.

Differences in the responsiveness of various monetary assets to changes in interest rates and real income help explain differences in trend growth rates among the monetary aggregates during the 1959-78 period.[5] For example, the rapid growth of time and savings deposits and the broader monetary aggregates relative to the growth of M1 reflects in part the differential impact of interest rates on various monetary assets. The dampening impact of rising market interest rates on monetary growth was offset somewhat for M2 and M3 by the rise in rates on the time and savings deposit components of the broader aggregates. That rise in rates, however, reinforced the negative impact of higher market rates on the growth of M1, since the desirability of holding demand deposits and currency varies inversely with both market interest rates and rates on time and savings deposits.

The rise in real GNP also contributed to the relatively rapid growth of the more broadly

**4 The rates of return on most deposit components of the aggregates are subject to ceilings set by the regulatory authorities. The ceiling on demand deposits has been zero since the 1930s. However, the ceilings on time and savings deposits at commercial banks and at nonbank thrifts have increased, although generally not by as much as market interest rates.**

**5 The discussion in the remainder of this section is based in part on the results of regression analysis indicating the following elasticities, which measure the responsiveness of the demand for assets with respect to their determinants.**

| | With respect to | | | |
|---|---|---|---|---|
| Elasticity of the demand for | Price Level | Real GNP | Commercial Paper Rate | Rate on Time and Savings Deposits |
| Currency | 100 | .58 | −.03 | −08 |
| Demand deposits | 100 | 55 | −07 | −14 |
| Time and savings deposits in M2 | 100 | 175 | −.21 | 21 |
| Time and savings deposits at nonbank thrift institutions | 100 | 135 | −24 | .42 |

**The empirical methodology employed assumes unitary price elasticity of the demand for each monetary asset, which implies that the demand for assets changes proportionately with the price level. Thus, price behavior does not account for differential growth rates among aggregates. Changes in the rate of inflation can, however, help explain the variation in growth rates of a particular aggregate or component over time.**

defined monetary aggregates. Empirical analysis indicates that while the demand for currency and demand deposits increases less than proportionately to changes in real income, the demand for time and savings deposits increases more than proportionately to changes in real income. Thus, the positive impact of increases in real GNP on monetary growth over the period from 1959 to 1978 was more pronounced for monetary aggregates that include time and savings deposits than for the narrowly defined money supply, which includes only demand deposits and currency.

## THE CYCLICAL BEHAVIOR OF THE MONEY SUPPLY

Cyclical movements of an economic time series are recurring, although not necessarily periodic, variations related to fluctuations in general economic activity. To examine the cyclical behavior of a series, the trend movements in the series must be removed so that the shorter run variations can be identified. For example, while the trend level of M1 increases steadily, M1 falls below the trend at times and rises above the trend at other times. The cyclical component of M1 consists of these fluctuations around the trend. The percentage deviations of the actual levels from the estimated trend levels are used to represent the cyclical behavior of each series. Cyclical movements in M1, M2, and M3 are shown in Chart 2.[6]

The cyclical movements in each of the money supply measures tend to lead the general business cycle (Chart 2). Thus, the cyclical peaks in M1, M2, and M3 generally occur prior to the peak in business activity, and the trough in the monetary aggregates tends to occur before the trough in the business cycle. An exception to this pattern occurred in the vicinity of the trough of the 1973-75 recession, when M1 continued to decline cyclically following the trough in the business cycle. This atypical pattern may reflect a shift in the normal behavior of M1 in the mid-1970s.[7] Due to this shift, M1 grew less rapidly than it typically does following business cycle troughs.

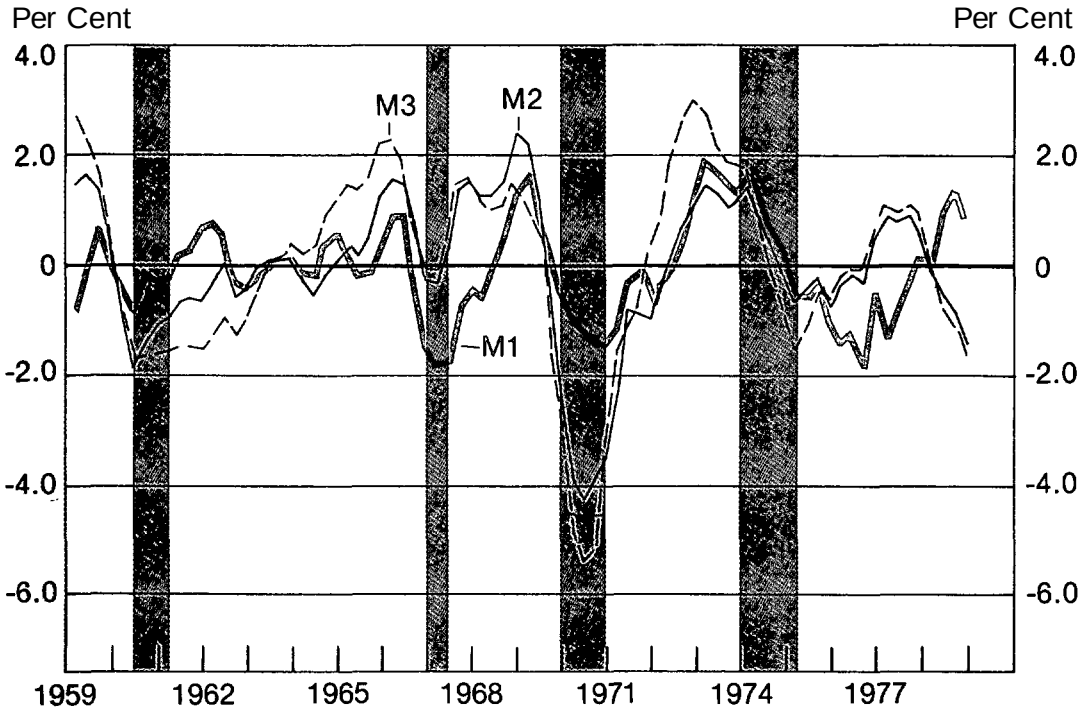
Although the cyclical behavior of the aggregates is similar in terms of timing, the various money supply measures differ noticeably in the degree of their cyclical variability. Table 2 presents the standard deviations, which are measures of the degree of variability, for the cyclical movements in the monetary aggregates and their components. These standard deviations show that cyclical movements in M1 are less volatile than cyclical movements in M2, and cyclical movements in M2, in turn, are less volatile than cyclical movements in M3. The differences in volatility between M1 and M2 reflect the impact of time and savings deposits at commercial banks, which are in M2 but not in M1. Cyclical movements in these deposits are much more volatile than those in M1. Similarly, the greater cyclical volatility of M3 than of M2 is due in part to the impact of time and savings deposits at nonbank thrift institutions, whose cyclical movements are more volatile than cyclical movements in either M1 or time and savings deposits at commercial banks.[8] In addition,

[6] Specifically, the residuals obtained from each trend estimation procedure are assumed to constitute the cyclical movement of each series. Any irregular variations not averaged out by using seasonally adjusted quarterly average data, however, are subsumed in the cyclical portion of the series estimated in this way.

[7] For a good empirical study of the apparent shift in the demand for money, see Stephen M. Goldfeld, "The Case of the Missing Money," *Brookings* Papers on Economic Activity, 1976:3, pp. 683-739.

[8] Part of the explanation for the greater volatility of time and savings deposits at nonbank thrift institutions than of the time and savings deposit component of M2 may be that the latter contains large negotiable CD's at banks other than weekly reporting banks. These large time deposits are

**Chart 2**
**ESTIMATED CYCLICAL MOVEMENTS OF THE MONETARY AGGREGATES**




**NOTE: Shaded areas represent recessions as dated by the National Bureau of Economic Research, except for the shaded area in 1966-67, which corresponds to a "mini-recession." For purposes of this article the peak of the mini-recession is dated at the fourth quarter of 1966, and the trough is dated at the second quarter of 1967.**

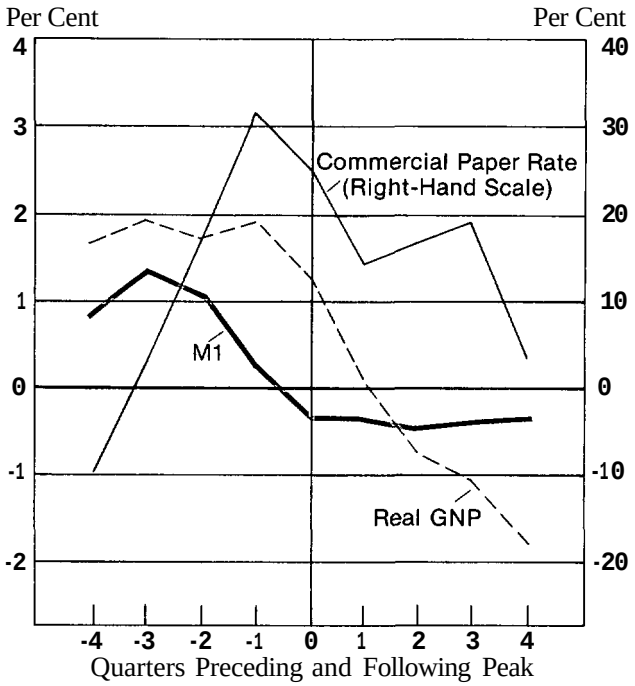
time and savings deposits, which tend to reflect the large cyclical movements occurring in market interest rates, comprise a larger percentage of **M3** than of **M2** and thereby contribute more to the volatility of **M3** than to that of **M2.**

The cyclical behavior of the money supply measures and their components is closely related to cyclical movements in real **GNP** and interest rates. The relationship between real **GNP,** interest rates, and **M1** in the vicinity of cyclical peaks is seen in Chart 3, which shows average cyclical movements in these variables in the vicinity of the peaks in general business cycles during the **1959-78** period. For example, on average, for the quarters in which cyclical peaks occur, the level of **M1** was below its trend by about 0.25 per cent.

As Chart **3** also shows, during the initial phases of a cyclical downturn in **M1,** there is a sharp cyclical increase in market interest rates. Interest rates undergo a sharp rise from the third quarter through the first quarter before the cyclical peak. During the same period, **M1** shows a cyclical decline, despite a generally

managed liabilities that are used by banks to offset movements in other deposits. Thus, the inverse relationship between large CD's and other deposits at commercial banks may contribute to the lower variability of the total time and savings deposit component of M2.

**Chart 3**
**THE BEHAVIOR OF SELECTED VARIABLES IN THE VICINITY OF BUSINESS CYCLE PEAKS**




stable real GNP. Thus, the decline in **M1** reflects the rise in interest **rates.**[9] However, beginning in the peak quarter and extending through the four quarters after the peak, both real GNP and interest rates move generally downward. Also, **M1** continues its cyclical decline during most of this period. In this latter stage, therefore, the cyclical decline in **M1** reflects mainly the cyclical downturn in real GNP. The decline in interest rates offsets some of the impact of real GNP, reducing somewhat the extent of the decline in **M1.**

**Table 2**
**STANDARD DEVIATIONS OF THE ESTIMATED CYCLICAL MOVEMENTS OF THE MONETARY AGGREGATES AND THEIR COMPONENTS**

| Aggregate or Component | Standard Deviation |
|---|---|
| M1 | 0.93 |
| M2 | 1.35 |
| M3 | 1.81 |
| Currency | 0.86 |
| Demand deposits | 1.27 |
| Time and savings deposits | 2.60 |
| Nonbank thrift deposits | 2.85 |

The broader money supply measures—M2 and **M3—as** well as the time and savings deposit components of these measures follow the same pattern as **M1** in the vicinity of cyclical

**[9] For purposes of exposition, the discussion of cyclical movements in the monetary measures attributes these movements to the current effects of interest rates and real GNP. However, other factors, including the lagged effects of income and interest rates, may also be important.**

peaks. That is, M2 and M3 decline sharply in the initial phase, with the decline being less pronounced after the cyclical peak has been reached. Moreover, the relationship between cyclical movements in the broader aggregates and real GNP and interest rates is similar to the relationship between **M1** and the other variables — that is, the initial downward movement reflects a sharp rise in interest rates, while the downward movement in the latter stages reflects the impact of the decline in real GNP.

The relationship between real GNP, interest rates, and **M1** in the vicinity of cyclical troughs in the general business cycle is shown in Chart 4. The chart shows that as **M1** declines during the initial stages of recessions there is an associated cyclical decline in real GNP. That is, in the third and second quarters prior to the business cycle trough, both **M1** and real GNP show cyclical declines. Interest rates are relatively stable during this period, so that the decline in **M1** reflects the decline in real GNP. The decline in **M1** slows in the quarter preceding and the quarter of the cyclical trough in response to the sharp drop in interest rates during this period. In the quarter following the trough, real GNP increases and interest rates register further declines. Thus, the upward movement in **M1** during this quarter reflects the positive influence of both variables. Subsequently, real GNP continues to rise and interest rates move in a mixed pattern, with the upward movement in **M1** primarily reflecting the rebound in the economy.

**Chart 4**
**THE BEHAVIOR OF SELECTED VARIABLES IN THE VICINITY OF BUSINESS CYCLE TROUGHS**

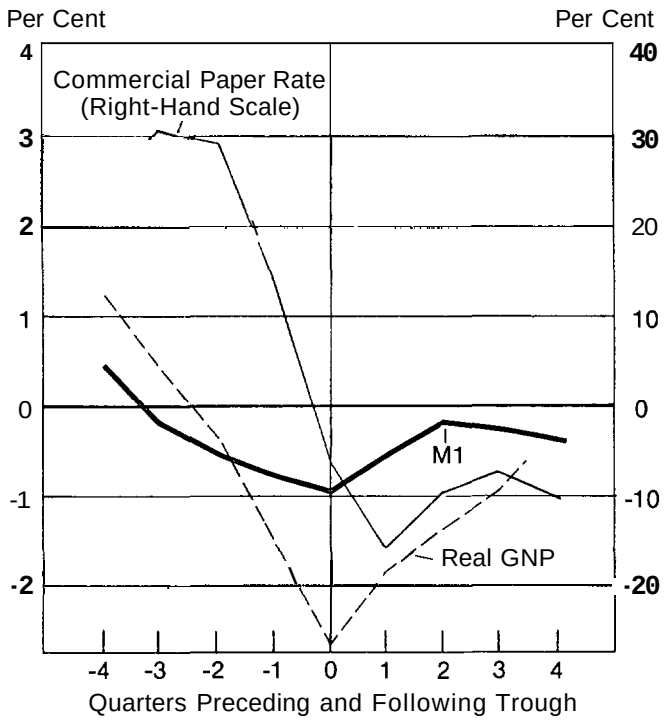


**Table 3**
**THE PROPOSED MONETARY AGGREGATES**

| Proposed Aggregate | Component. |
|---|---|
| M1 | Current M1 |
| | Plus: Negotiable order of withdrawal balances |
| | Credit union share drafts |
| | Demand deposits at thrift institutions |
| | Savings accounts subject to automatic transfer |
| | Less: Demand deposits of foreign commercial banks and official institutions |
| M2 | Proposed M1 |
| | Plus: Savings deposits at all depository institutions not otherwise included in proposed M1 |
| M3 | Proposed M2 |
| | Plus: All time deposits at all depository institutions |

## THE PROPOSED MONETARY AGGREGATES

As a result of recent financial innovations and regulatory changes altering the character of the public's monetary assets, the staff of the Federal Reserve Board has proposed revisions in the existing definitions of the monetary aggregates. These changes recognize the possibility that past relationships may not be a good guide to future behavior. In constructing the proposed aggregates, the emphasis is placed on combining deposits with similar liquidity characteristics rather than on the type of depository institution at which they are held. For example, the proposed definition of M2 includes all savings deposits, regardless of whether they are held at banks or at thrifts.

Table 3 presents the set of revised definitions proposed by the staff of the Board of Governors. Proposed M1 differs from current M1 in that it includes transactions-related balances at all financial institutions, while it excludes demand deposits of foreign commercial banks and official institutions. Proposed M2 equals proposed M1 plus savings deposits at all depository institutions not otherwise included in proposed M1. Unlike current M2, proposed M2 omits time deposits at commercial banks and includes savings deposits at nonbank thrift institutions. Proposed M3 adds time deposits at all depository institutions to proposed M2. Unlike current M3, proposed M3 includes large negotiable CD's at weekly reporting banks.[10]

As seen in Table 4, the relative trend growth rates of proposed M1, M2, and M3 followed the same general pattern as their current counterparts during the 1959-78 period. That is, for the period as a whole, proposed M3 grew more rapidly than proposed M2, and proposed M2 grew more rapidly than proposed M1. Also, for each of the proposed aggregates, their trend

[10] For a discussion of these recent financial innovations and regulatory changes as well as an explanation of the proposed monetary aggregates, see "Redefining the Monetary Aggregates," *Federal Reserve Bulletin,* Board of Governors of the Federal Reserve System, January 1979, pp. 13-42.

**Table 4**
**TREND GROWTH RAPES OF CURRENT AND PROPOSED MONEY STOCK MEASURES**
**(Averages of quarterly percentage changes)**

| | 1959-68 | 1969-78 | 1959-78 |
|---|---|---|---|
| Current M1 | 3.3 | 5.9 | 4.6 |
| Proposed M1 | 3.3 | 5.9 | 4.6 |
| Current M2 | 6.0 | 8.7 | 7.4 |
| Proposed M2 | 5.6 | 6.7 | 6.2 |
| Current M3 | 7.2 | 9.7 | 8.4 |
| Proposed M3 | 7.6 | 9.8 | 8.7 |
| Domestic demand deposits and other transactions balances | 3.1 | 5.2 | 4.1 |
| Savings deposits at all depository institutions | 7.5 | 7.3 | 7.4 |
| Time deposits at all depository institutions | 23.9 | 16.7 | 20.3 |

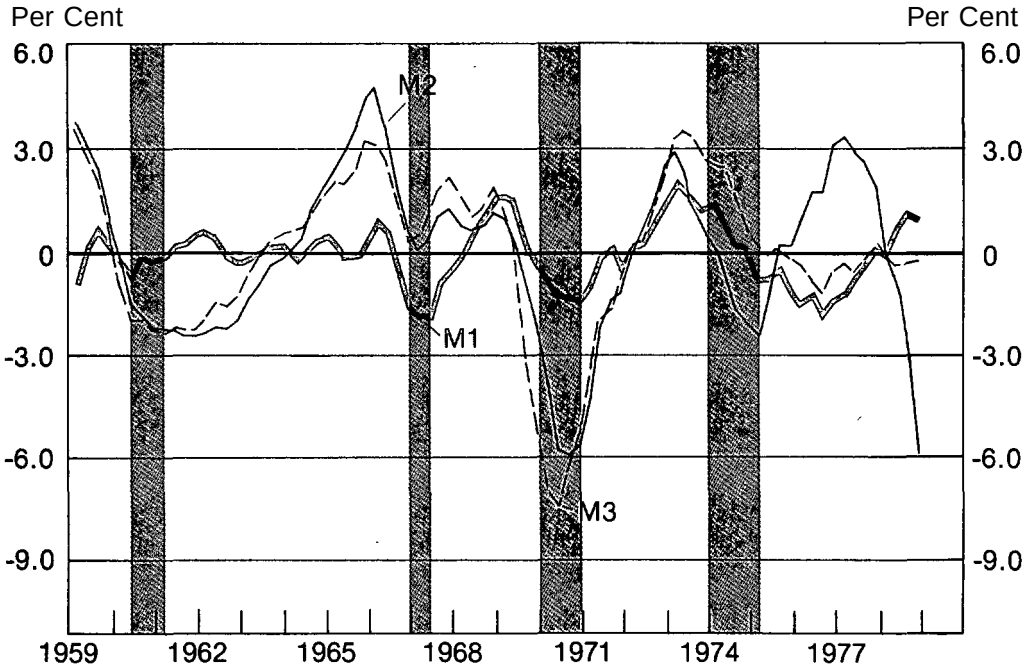
growth rates accelerated during the period, with growth rates in the 1969-78 period exceeding those in the 1959-68 period.

Between 1959 and 1978, there was no difference between the trend growth rates of current and proposed M1, but the trend growth rates of proposed M2 and M3 were somewhat different than those of current M2 and M3 (Table 4). The similarity in trend growth rates between proposed and current M1 reflects the fact that, during the 1959-78 period, the composition of proposed M1 differed little from that of current M1. Over the same period, proposed M2 grew less rapidly than current M2. The slower growth of proposed M2 reflects the slower growth of savings deposits at nonbank thrifts than of time deposits at commercial banks. Savings deposits at nonbank thrift institutions grew more slowly, in part because the ceiling rates on these deposits increased during the period less than ceiling rates on time deposits. Proposed M3 grew more rapidly than current M3 during the 1959-78 period, due to the rapid growth of large certificates of deposit, which are included in proposed M3 but not in current M3. The greater growth of CD's reflects the absence of ceiling rates on these large certificates.

The cyclical behavior of proposed M1, M2, and M3 is generally similar to the behavior of their current counterparts. As shown in Chart 5, all the measures decline in the vicinity of recessions and generally lead the turning points of the general business cycle. However, proposed M2 exhibits significantly more cyclical volatility than current M2 (Table 5).[11] Proposed M2 also exhibits slightly more cyclical

[11] **Predictability as well as variability may be important in assessing the usefulness of alternative monetary aggregates for monetary policy purposes. No attempt was made in this study to determine the degree to which the variability of the various aggregates and their components could be predicted.**

**Chart 5**
**ESTIMATED CYCLICAL MOVEMENTS OF THE PROPOSED MONETARY AGGREGATES**




NOTE: Shaded areas represent recessions as dated by the National Bureau of Economic Research, except for the shaded area in 1966-67, which corresponds to a "mini-recession." For purposes of this article the peak of the mini-recession is dated at the fourth quarter of 1966, and the trough is dated at the second quarter of 1967.

volatility than proposed M3, in contrast to the relationship between current M2 and M3.[12] This is because the savings deposit component of proposed M2 is more cyclically volatile than the time and savings deposit component of either current M2 or proposed M3. Because the ceiling rates on savings deposits remain relatively stable over the course of the business cycle, the wide fluctuations occurring in market interest rates cause savings deposits at banks and thrifts—all of which are included in proposed M2—to exhibit considerably more cyclical volatility than other monetary assets.

## CONCLUSION

The secular and cyclical behavior of the current and proposed monetary aggregates and their components have been examined in this article by analyzing the factors influencing the demand for various monetary assets. The analysis shows that the trend growth rates of the aggregates and their components have increased in the past several years despite an upward trend in market interest rates and declining growth in real income. More rapid inflation accounts for most of the increased growth in the demand for monetary assets, as

[12] This occurs in spite of the fact that time deposits at all depository institutions are the most volatile of the various components. The reason is that the cyclical movements of time deposits and of savings deposits tend to behave inversely: Whenever one increases, the other tends to decrease. Thus, their sum is less volatile than either taken separately.

households and businesses have attempted to maintain the real purchasing power of their money balances. The broader aggregates, which contain a large interest-bearing component, have increased more rapidly than the more narrowly defined aggregates, both because rates on time and savings deposits have moved upward with market interest rates and because the broader aggregates are more responsive to changes in real income.

Cyclical movements in each of the current and proposed money stock measures tend to lead the business cycle. The cyclical movements of the broader aggregates are generally more volatile than cyclical movements in the narrower measures, however, because the time and savings deposit component of the broader aggregates are relatively more responsive to cyclical fluctuations in income and interest rates. For example, M2 and M3 typically decline more than M1 in the vicinity of a recession—initially because of high market interest rates and later because of declining real income.

**Table 5**
**STANDARD DEVIATIONS OF THE ESTIMATED CYCLICAL MOVEMENTS OF THE CURRENT AND PROPOSED MONEY STOCK MEASURES**

| Aggregate or Component | Standard Deviation |
|---|---|
| Current M1 | 0.93 |
| Proposed M1 | 0.93 |
| Current M2 | 1.35 |
| Proposed M2 | 2.46 |
| Current M3 | 1.81 |
| Proposed M3 | 2.38 |
| Domestic demand deposits and other transactions balances | 1.32 |
| Savings deposits at all depository institutions | 4.18 |
| Time deposits at all depository institutions | 5.53 |

Over the 1959-78 period, the secular and cyclical behavior of proposed M1 differed little from that of current M1. Greater differences have emerged recently as a result of rapid growth in ATS, NOW accounts, and share drafts. For example, in the first quarter of 1979, proposed M1 increased at an annual rate of 2.0 per cent, while current M1 declined at an annual rate of 2.1 per cent. On April 20, 1979, a Federal Appeals Court ruled that current law does not authorize ATS, NOW accounts, and credit union share drafts. Therefore, the extent to which current and proposed M1 differ in the future will depend largely on action by Congress delineating the types of accounts that can be offered by banks and thrifts.

Proposed M2 and M3 exhibit significantly different behavior than current M2 and M3. Due to its greater responsiveness to movements in market interest rates, proposed M2 exhibits greater cyclical variability than current M2. Therefore, proposed M2 shows greater weakness during periods of high interest rates than current M2. Proposed M3, on the other hand, reveals greater strength than its current counterpart during periods of high interest rates because it includes large negotiable CD's at weekly reporting banks, which are not subject to regulatory interest rate ceilings. It is important to recognize these differences in evaluating the usefulness of the proposed aggregates for monetary policy purposes.