

MONEY, INFLATION, AND INTEREST RATES

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Since early 1980 economic activity in the nation has been sluggish. Real output of goods and services in the fourth quarter of 1981 was no greater than in the first quarter of 1980. Real production declined in the second quarter of 1980, rose in the next three quarters, remained stable in the second and third quarters of 1981, then fell sharply in the fourth quarter of 1981.

Sluggish Economy Reflects Public Policy Actions

This sluggishness in economic activity and the accompanying inflation can be traced to ill-advised public policies. The problem began in the mid-1960s with rising federal budget deficits and excessive monetary growth. The federal budget deficits placed upward pressure on interest rates as the securities to finance the deficits were marketed. The rising interest rates in turn led to excessive monetary growth as the Federal Reserve System attempted to moderate the upward pressure by purchasing and monetizing a portion of the debt. Excessive monetary growth in turn led to a rising demand for goods and services, and to inflation, and, as inflationary expectations rose, to further increases in interest rates.

Excessive Monetary Growth Caused The Inflation

This view holds that inflation is caused by the interaction of the demand for and the supply of money. The demand for money arises as a result of the services that money provides; that is, money facilitates transactions and serves as a means of storing wealth. The quantity of money that people desire to hold depends on income, wealth, interest rates, prices and price expectations. On the other hand, the supply of money is largely under the control of the Federal Reserve System. The System through its open market operations can control the trend growth of the money stock.

If the quantity of money held by the public is greater than desired, the rate of spending will increase until income, wealth, prices, interest rates and other factors that determine money demand adjust to the larger stock of money. During this period of adjustment, total demand for all types of assets, including goods and

services, will rise. Production and employment will be stimulated as inventories decline to less than desired levels and inventory holders attempt to replenish their stocks.

Prices Move With Monetary Growth

The interaction of the stock of money, prices and economic activity is shown in Chart 1. You will note that from early 1957 until mid-1962 the stock of money (shown in the upper portion of Chart 1) rose at the relatively slow annual rate of 1.4 percent. However, since mid-1962 monetary growth has accelerated, rising 3.8 percent per year from mid-1962 until late 1966, 5.7 percent per year from late 1966 until early 1970, 7.1 percent per year from early 1970 until mid-1973, then slowing to a 5.1 percent rate until mid-1976. Then monetary growth spurted, rising to an 8.2 percent rate until mid-1979 when it began to slow.

Soon after the increase in the rate of monetary growth, prices also accelerated. Consumer prices were relatively stable from 1952 to 1965, rising only 1.3 percent per year. However, from 1966 on, such prices accelerated, reaching a peak of 14.1 percent from late 1978 to March 1980. The general price index was likewise relatively stable until the mid-1960s, as shown in Chart 1, rising at a 1.6 percent rate from 1957 to late 1964, at a 3.4 percent from late 1964 to 1968 and eventually accelerating to an 8.7 percent rate from late 1977 to mid-1981.

The observed rate of inflation slowed in the early 1970s, reflecting both a temporary slowdown in money growth and wage-price controls. The controls, however, had only a temporary impact since they treat only the symptoms of inflation. Thus, in 1973 following the relaxation of the controls, the rate of inflation accelerated.

Not all of these price increases can be attributed to excessive demand caused by overly expansive monetary actions. Several other factors tended to reduce the output of goods and services in this period, thereby contributing to the inflation. First were the wage-price controls, which reduced the efficiency of production and the rate of growth in total output. The controls hampered resource adjustments, causing many bottlenecks in the production process. Another factor was crop failures in the early 1970s both here and abroad which, coupled with our depleted grain surpluses, resulted in sharp increases in prices of agricultural products and food. In late 1973

the supply situation was further aggravated by a sharp increase in energy costs as a result of the OPEC cartel.

Some of these factors were of a once-and-for-all nature. For example, most of the wage-price controls were eliminated by late 1974. Larger crops in 1975 and 1976 resulting from more favorable weather conditions also placed downward pressure on prices. Furthermore, the OPEC oil cartel's effect on prices may now be losing its thrust. Nevertheless, the underlying inflation resulting from an excessive rate of monetary growth during the last 15 years remains with us, and that problem cannot be corrected without a reduction in the trend rate of monetary growth.

Monetary Actions Affect Economic Activity In Short Run

Monetary growth began to decelerate in the third quarter of 1979 following an 8.2 percent rate in the previous year (Chart 2). This deceleration, which continued through 1981, led to the current economic sluggishness. As shown in Chart 1, real output (GNP) measured in 1972 dollars began to slow in 1979 and actually declined during some quarters of 1980 and 1981. This slowing in GNP, which reflected the rate of money and demand growth, was essential for a reduction in the underlying rate of inflation.

For an explanation of the association of monetary growth and economic activity, let's return to Chart 1. The vertical bars represent the recessions experienced by the nation since 1957. In each case you will note the close association between the recessions and a reduction in the growth rate of the nation's money stock. For example, after a slowdown in monetary growth in 1957 there was a recession which ended following an increase in the rate of monetary growth in 1958. Following a slowdown in monetary growth in 1959 we moved into another recession. Money growth slowed in mid-1966; however, that period was labeled a "credit-crunch" since the nation's economy didn't slow sufficiently to be classed as a recession. The rate of money growth slowed again in early 1969 and later in the year we moved into another recession. In late 1970 money growth accelerated and by the close of the year the economy had again turned up. The slowdown in money growth in mid-1973 was no doubt a factor in the 1974 recession. Similarly, the slower rate of money growth since 1979 contributed to the economic sluggishness which followed. This is the price that the nation must pay for a reduction in total demand and a return to price stability.

But, In Long Run Excessive Monetary Growth Damaging

Over the longer run, excessive monetary growth will result only in price increases, wealth transfers and inefficiencies caused by the implicit tax on money.

We have created excessive demand in the past in order to hasten the end of the recessions that were caused by a prior slowing in the rate of monetary growth and slackened demand. In our impatience to reduce unemployment and get the economy moving forward, we have overreacted to the problem near the trough of each recession since the mid-1960s. We have attempted through fiscal and monetary actions to maintain employment and output above normal levels. Fiscal and monetary actions have been taken on the assumption that a high rate of demand growth will assure an above-average level of employment and output. However, the evidence does not confirm a long-term relationship between a high rate of demand growth and a high level of employment and output. In fact, as shown in the lower sector of Chart 1, since the accelerating inflation began in the mid-1960s the national unemployment rate has been just as high on average as it was during the period of relative price stability from 1957 to the mid-1960s.

We can increase employment and decrease unemployment for a few quarters following the beginning of an unexpected and sharp increase in the stock of money which will cause a sharp rise in total demand. But, we pay a major price in inflation-related distortions for the small temporary gains that occur with such expansive policies.

The long-run solution to the problem is a balanced federal budget and a stable rate of monetary growth of about two percent per year. The return to price stability involves some unemployment and reduced production for a period of time. The overall rate of monetary growth during the past 12 months may be about the amount required as a first move toward price stability. As indicated in Chart 2 monetary growth has been slowing. For more than a year, a rate of increase of about 5 percent has been maintained. The resulting sluggish rate of economic activity may continue until the second or third quarter of this year if the slower growth of money is continued. We can, however, expect an upturn in economic activity before the year is over provided money growth continues at its current pace. I would hope, however, that we would not increase the rate of money growth and stimulate demand sufficiently to intensify the underlying inflation. Hence, I would suggest that public policy actions be taken that are consistent with a gradual return to stable prices. Such actions include smaller

federal budget deficits for another two or three years and a balanced budget thereafter and a gradually declining rate of money growth to about two percent per year after two or three years. With these actions we will have to live with a somewhat higher rate of unemployment for the next year or two than during the last decade, but relative price stability could be achieved. And once such stability is achieved, unemployment would average no higher over a period of years than with a high rate of inflation.

Excessive Monetary Growth Causes High Interest Rates

An important by-product of the excessive monetary growth and inflation is high interest rates. Interest rates are determined by the supply of and demand for loan funds, which in turn reflect the preference of individuals for current versus future consumption (willingness to save) and the productivity of capital (incentive to invest), respectively. Following an unexpected price increase (a reduction in the value of money), the supply of loan funds will decline as creditors are reluctant to lend at the reduced real rate of interest. They attempt to protect the real value of their wealth by increasing their lending charges. Demand for loan funds, however, will increase as borrowers expect the price level to rise which will permit them to repay the debt with depreciated dollars. This reduction in the supply and rise in demand for loan funds will continue until the expected rate of inflation becomes constant. Similarly, a reduction in the expected rate of inflation will cause interest rates to fall until no further decline in inflation is anticipated.

The movement of short-term rates in response to the anticipated inflation is shown in Chart 3. With the sharp increase in the expected rate of inflation during late 1973 and 1974, short-term interest rates rose rapidly. The federal funds rate reached 13 percent and the prime bank loan rate, 12 percent. The rates declined with the expected decline of the inflation rate in 1975 and 1976. They began to rise again, however, in 1977 and with the sharp increase in inflationary expectations the prime rate peaked at 21-1/2 percent and the federal funds rate at 19 percent last year.

The longer term rates, while not so volatile, generally followed the same pattern as the short-term rates (Chart 4). They peaked in 1974, declined in 1975 and '76 and rose sharply through the first half of 1981.

Both the short-term and long-term rates will likely continue on the downside if a non-inflationary monetary policy is maintained. In other words, if

monetary growth is gradually reduced over a period of years, we can expect to see interest rates declining to levels of the early 1960s prior to the inflation.

Farm Prices Move With General Price Level

Farm commodity prices and prices of farm inputs tend to rise or stabilize along with overall prices (Chart 5). Hence, agriculture fares just as well or better under a stable price regime as during inflation. Risks in farming are reduced with stable prices and plans for future production can be made with greater assurance. New farmers are especially vulnerable to sharp swings in land prices and interest rates. Stable average prices are the best solution to this problem.

Conclusion

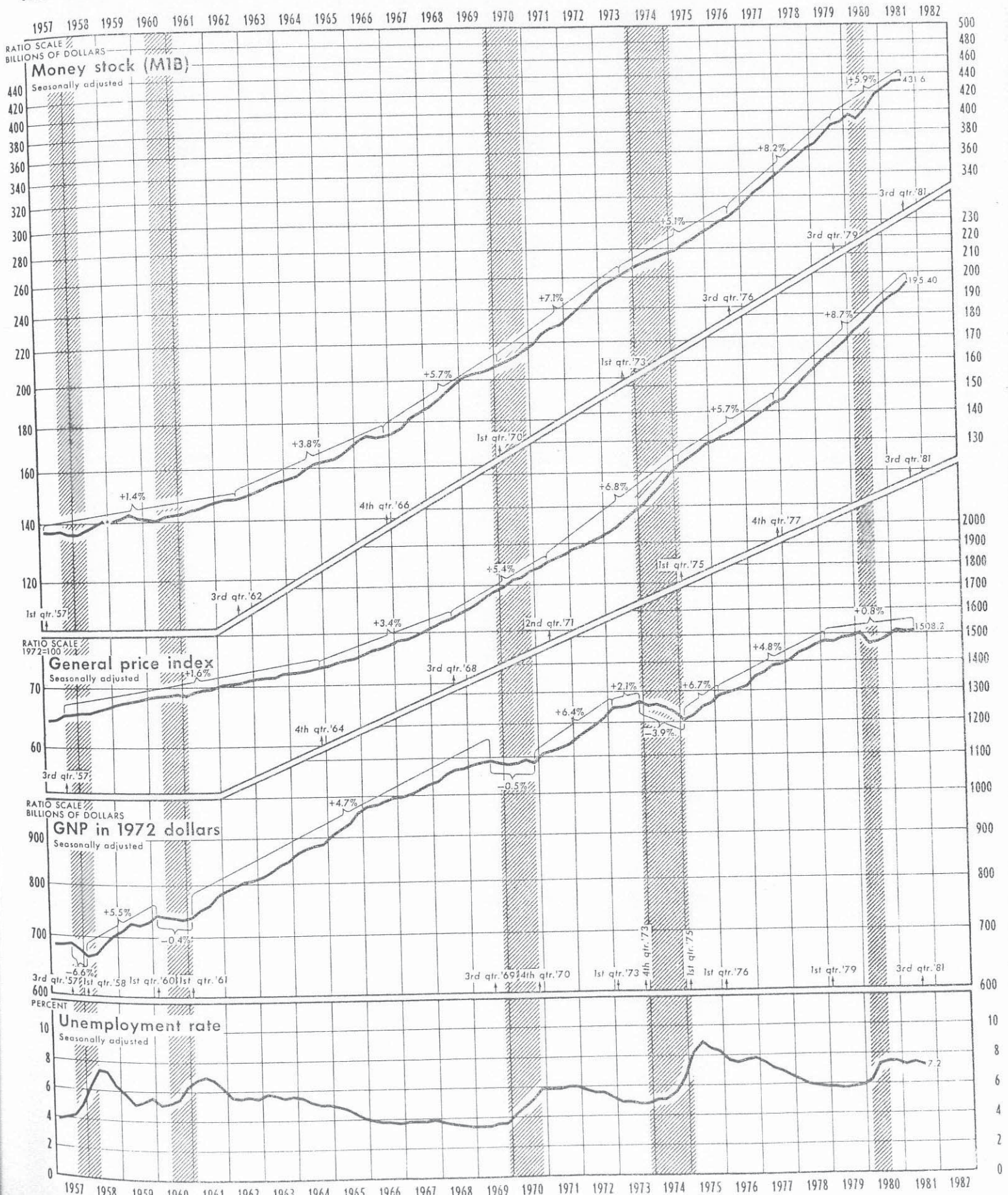
The stabilizing monetary policies that we have experienced for the past year, if maintained, will lead to a decline in the rate of inflation, and if followed by further reductions in the monetary growth rate in 1982, 1983 and 1984 could lead to relatively stable prices by the mid-1980s. To attain these stable prices it will be necessary to reduce the rate of monetary growth to about one or two percent per year over the next three years.

With these actions we will have to live with a somewhat higher rate of unemployment than the average of the past decade for a year or two, but economic growth will likely accelerate within two or three quarters, unemployment will eventually decline to its normal rate, and interest rates will decline to pre-inflation levels.

In the absence of stabilizing fiscal and monetary policies we are likely to see further inflation and periodic higher rates of unemployment as restrictive measures are taken from time to time to resist price rises. But of even greater concern is the likelihood of further efforts to control prices and wages through direct actions. Such controls could very well lead to a breakdown in the free enterprise system and an erosion of the people's confidence in free government.

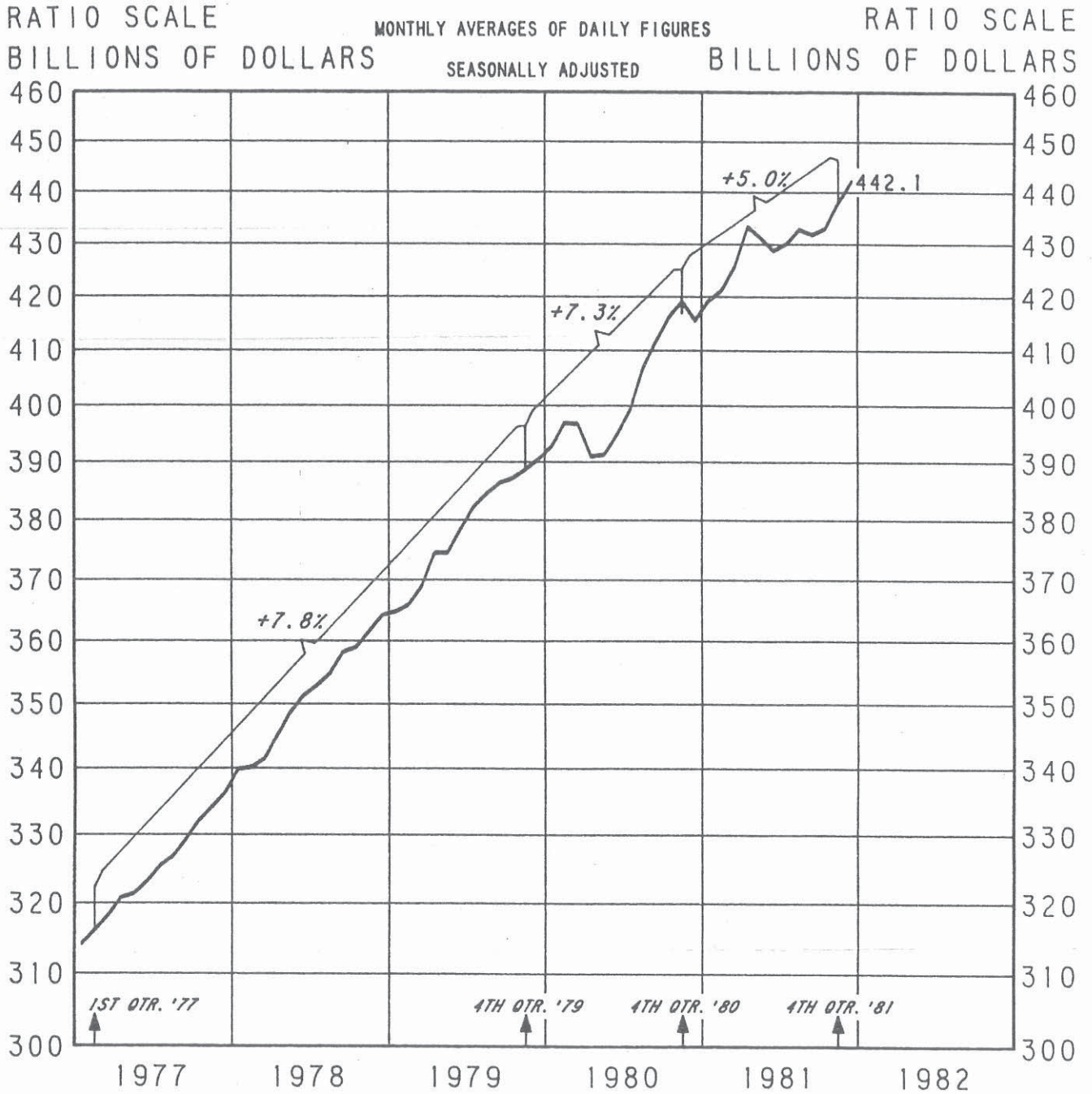
CHART 1

Influence of Money on Prices, Output, and Unemployment



*Data prior to 1959 are MI.
 Shaded areas represent periods of business recessions.
 Percentages are annual rates of change for periods indicated.
 Latest data plotted are preliminary.

MONEY STOCK (M1) ^{LL}



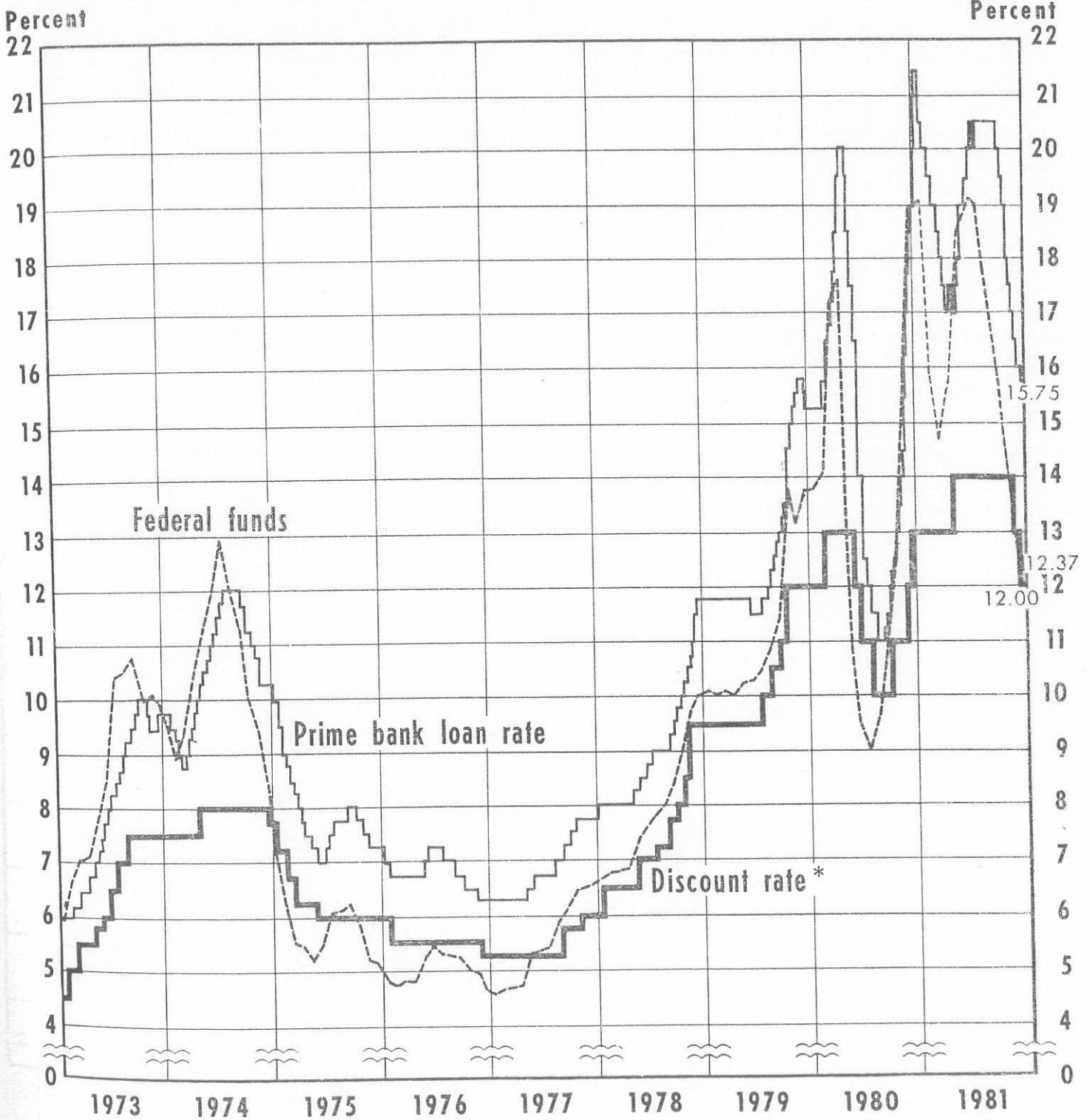
LLM1 CONSISTS OF CURRENCY HELD BY THE NONBANK PUBLIC PLUS COMMERCIAL BANK DEMAND DEPOSITS HELD BY THE NONBANK PUBLIC (EXCLUDING THOSE HELD BY FOREIGN BANKS AND OFFICIAL INSTITUTIONS) AND OTHER CHECKABLE DEPOSITS OF ALL DEPOSITORY INSTITUTIONS PLUS TRAVELER'S CHECKS.

PERCENTAGES ARE ANNUAL RATES OF CHANGE FOR PERIODS INDICATED.

LATEST DATA PLOTTED: DECEMBER

PREPARED BY FEDERAL RESERVE BANK OF ST. LOUIS

Short-Term Interest Rates



*Rate changes when one of the twelve Federal Reserve Banks has the approval of the Federal Reserve Board to change its discount rate. Data used is the day that rate is in effect.

Latest data plotted: December

Date of latest rate change: Discount Rate-December 4, 1981; PBLR-December 1, 1981

Prepared by Federal Reserve Bank of St. Louis

Selected Interest Rates



¹ FHA 30-year mortgages. Dashed lines indicate data not available.

² Monthly averages of Thursday figures.

³ Average of yields on coupon issue due or callable in ten years or more, excluding issues with Federal estate tax privileges. Yields are computed by this Bank.

Latest data plotted: December

Prepared by Federal Reserve Bank of St. Louis

Price Trends

CHART 5

