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Review and Outlook: A New Approach to Solving Old Problems

by J. A. Cacy and Glenn H. Miller, Jr.

In discharging its responsibility to help control inflation and promote a healthy economy, the Federal Reserve System in recent years has sought to control the growth of the nation's supply of money and credit. The System, however, has not always been successful in controlling monetary growth. In particular, during much of 1979, the money supply increased at a rapid pace. This rapid monetary growth was accompanied by accelerating inflation and recurring weakness in the international position of the dollar.

In response to these developments, and in an effort to slow monetary growth, the Federal Reserve took action at various times during 1979 to bring about increases in interest rates. As of the end of September, though, these efforts had not been effective in bringing monetary growth under control. For this reason, the Federal Reserve introduced additional measures in early October, one of which involved a change in the System's approach to monetary control. The Federal Reserve decided to focus on controlling the availability of money and credit directly, rather than controlling money indirectly through changes in interest rates.

This article describes the economic and monetary developments in 1979 that led up to the monetary policy measures instituted on October 6. An analysis of the Federal Reserve's new approach to monetary control is then presented. Following that analysis, the economic and financial outlook for 1980 is discussed.

ECONOMIC CONDITIONS IN 1979

Following the recession of 1974-75, the United States embarked on an economic expansion that became, during 1978, the second longest in the nation's post-World War II history. The expansion was propelled primarily by vigorous growth in consumer spending and residential construction activity, with business spending for new plants and equipment contributing more strongly as the expansion matured. The balanced performance of the private domestic economy was rounded out by well-controlled growth in inventories, as businessmen kept their stocks of goods and materials in close check. As the expansion proceeded, however, accelerating inflation tended to overshadow the balanced nature of improving economic activity. In 1978, the increase in the general price level was—with the exception of 1974—the largest in 30 years.

During 1978, the influence of inflation and the dynamics of the business cycle led many

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observers to believe that the expansion period was drawing to a close and that a downturn was imminent. Yet, in the fourth quarter, total real output grew strongly, buoyed by robust spending on final purchases by both businesses and consumers. Thus, as 1979 opened, expectations for at least a general weakness in economic activity, if not an actual downturn, had not yet been realized.

Economic Activity

Weakness in economic activity did, though, appear in the first quarter of 1979, when total real output grew at only a 1 per cent annual rate. All of that small increase was in final sales, as inventory investment remained unchanged from the fourth quarter. Personal consumption spending was weak, real residential construction spending declined substantially, and government purchases fell slightly, leaving only business fixed investment and net exports as contributors to total real output growth in the year's first quarter.

The second quarter of 1979 brought a temporary cessation of the expansion, as real GNP dropped at a 2.3 per cent annual rate. Only in retrospect will it be known whether that decline marked the beginning of a recession. Nevertheless, a general downturn in economic activity did occur, with real final sales falling in every major spending sector of the economy with the sole exception of purchases by state and local governments. As a result, total final sales fell by about 4 per cent. The difference between the declines in final sales and in real GNP was accounted for by a fairly substantial increase in business inventory investment, largely involuntary in nature because of the drop-off in sales.

If the nation was not yet in a recession at midyear, expectations of its imminent appearance were strengthened by the economy's performance in the first half of

1979. But the ambiguities of economic experience in the 1970s reasserted themselves in the third quarter of the year: total real output resumed its upward movement at an annual rate of 3.5 per cent. Real final sales rebounded sharply to grow nearly twice as rapidly as real GNP, an increase partly offset by a much reduced rate of inventory accumulation. In the third quarter, the earlier decline in real government purchases ceased, the decline in residential construction spending slowed, and business fixed investment spending increased substantially. Most important, however, was the comeback of the consumer after two quarters of nonspending behavior. In spite of a further drop in real disposable income, consumer purchases of both goods and services rose markedly. This performance was accomplished by means of a reduction of the personal saving rate to its lowest level in more than 25 years.

Labor Market Developments

Labor market developments in 1979 generally paralleled the performance of economic activity, with employment growth slowing in the first half and strengthening in the third quarter. Total employment, which had grown steadily for 15 quarters through the first quarter of 1979, fell slightly in the second quarter, and the overall **employment-population** ratio also declined. Payroll employment growth, which maintained its post-recession average growth rate in the first quarter, slowed significantly in the second quarter. Labor force growth showed no change in the second quarter following rapid expansion in the year's first three months. Consequently, the growth rate of the labor force in the first half of 1979 was considerably below the growth attained earlier in the expansion period. These movements in employment and labor force growth resulted in virtual stability of the overall unemployment

rate in the first half of 1979, following 14 quarters of steady decline.

As was the case with economic activity, however, total employment rebounded in the third quarter and the employment-population ratio moved upward again. Labor force growth continued and the overall unemployment rate remained virtually unchanged from its second quarter level. It may be noteworthy, however, that disaggregation of the overall unemployment rate shows increases in the third quarter in the unemployment rates of adult men; married men, spouse present; and full-time workers.

Prices and Costs

The rate of increase in the cost of living, as shown by changes in the Consumer Price Index for All Urban Consumers (CPI-U), was considerably greater in the first nine months of 1979 than in the high inflation year of 1978. The total CPI-U rose at an annual rate of 13.2 per cent during the first three quarters of 1979. Large boosts in the prices of energy items, particularly gasoline and fuel oil, contributed to the overall rise, as did the accelerating cost of shelter, especially the sharp rise in the cost of financing, taxes, and insurance. Food prices, on the other hand, rose at substantially decreasing rates from the first quarter to the third quarter of the year.

Other measures of price change show patterns of movement for 1979 somewhat different from the fairly steady rate of increase in the CPI-U. Prices of finished goods at wholesale (including capital equipment as well as consumer goods) rose more rapidly in the third quarter (+15 per cent) than in the first half of the year (+11 per cent). Consumer foods and energy prices both contributed to this pattern, while the rate of increase in producer prices of capital goods declined over the three quarters. Finally, the broadest measure of price

change—the implicit deflator for gross national product (**GNP**)—rose at an annual rate of about 8.9 per cent from the close of 1978 through the third quarter of 1979. This measure not only shows a somewhat lower inflation rate than either the CPI-U or the Producer Price Index (**PPI**), it also shows some deceleration of the inflation rate from 9.3 per cent in the first quarter to 8.0 per cent in the third quarter of 1979.

Changes in unit labor costs, which are composed of changes in compensation per hour and in output per hour, are perhaps the most important influence on changes in prices, reflecting as they do changes in fundamental real economic forces. The annual rate of increase in unit labor costs in the economy's nonfarm business sector through three quarters of 1979 (11.8 per cent) was considerably greater than in 1978 (7.9 per cent). The return to real output growth in the third quarter of 1979 slowed the first half declines in productivity, and slowed the rise in unit labor costs and in prices as measured by the deflator. Labor compensation payments, as measured by compensation per hour in the nonfarm business sector or by average hourly earnings in private nonfarm industries, have remained relatively stable through the first three quarters of 1979 and as compared with 1978.

A three-quarter pattern of slow growth, decline, and rebound in business activity thus added up to nine months of general weakness for the economy through September 1979. At the same time, however, the general price level—however measured—rose at an exceptionally rapid rate.

FINANCIAL DEVELOPMENTS AND MONETARY POLICY IN 1979

During most of 1979, the financial scene was dominated by rising interest rates, weakness of the dollar in foreign exchange markets, and

rapid growth in money and credit that exceeded the monetary growth objectives of the Federal Reserve.

Monetary Growth Objectives and Experience

In developing its objectives for 1979, the Federal Reserve wanted to establish growth rate ranges for the monetary and credit aggregates that would be consistent with moderate growth in economic activity during the year and a reduction in inflationary pressures that had begun to intensify in 1978. Early in the year, at its February meeting, the Federal Open Market Committee (FOMC) established a growth rate range of 3 to 6 per cent for **M1**, the narrowly defined money supply, for the period from the fourth quarter of 1978 through the fourth quarter of 1979.¹ Growth ranges were also established for M2 and M3, broader money supply concepts, and for bank credit. **M2**'s range was 5 to 8 per cent, and **M3**'s range was 6 to 9 per cent. The range for bank credit was 7.5 to 10.5 per cent. This set of growth rate ranges was reconfirmed in July at the FOMC's mid-year review of monetary growth objectives.

During the first part of 1979, the monetary aggregates were very sluggish. For example, **M1** actually declined in the first quarter of the year at an annual rate of 2.1 per cent. (See Table 1.) During the spring, however, monetary growth accelerated and **M1** grew at an annual rate of 7.6 per cent in the second quarter. Even greater growth developed in the third quarter, with **M1** increasing at a rate of 9.7 per cent in the three months ending in September.

¹ The range actually established at the February meeting for M1 was 1½ to 4% per cent. This range reflected an allowance for the impact of automatic transfer payments (ATS) introduced in November of 1978, which were expected to reduce M1's growth rate. However, it subsequently became evident that ATS were having a smaller downward impact on the growth of M1 than originally expected. Due to this smaller impact, M1's range has been adjusted to 3 to 6 per cent.

These rapid monetary growth rates of the spring and summer greatly exceeded the Federal Reserve's monetary growth rate ranges. Monetary policymakers became increasingly concerned, feeling that the excessive growth in the money supply, if allowed to continue, would add to inflationary pressures. The rapid monetary growth, moreover, was contributing to weakness in the dollar in foreign exchange markets. The dollar had strengthened in late 1978 in response to a new support program introduced in November of that year. However, its foreign exchange value dropped sharply in January 1979, and, after recovering somewhat, began declining again in June. By the end of September, the dollar's value had declined to the level prevailing in October 1978, prior to the introduction of the November support package.

Policy Actions

The decline in the dollar's value and the rapid monetary growth, along with the

Table 1
GROWTH RATES OF
MONETARY AND CREDIT AGGREGATES

(Per Cent Change
at Seasonally Adjusted Annual Rate)

	<u>M1</u>	<u>M2</u>	<u>M3</u>	<u>Bank Credit</u>
1977	7.9	9.8	11.7	11.1
1978	7.2	8.4	9.3	13.5
1979 ¹	5.1	7.6	7.9	13.3
1978: Q4	4.1	7.6	9.3	13.9
1979: Q1	-2.1	1.8	4.7	13.7
Q2	7.6	8.6	7.9	11.3
Q3	9.7	12.0	10.5	13.4
Sept.	11.2	12.2	10.9	21.7
Oct.	2.5	8.6	7.5	7.6

¹First three quarters.

acceleration of inflation, led the Federal Reserve to adopt an increasingly restrictive monetary policy during the year. In July the discount rate was raised, and further increases occurred in August and September. Also, the Federal Reserve took actions to bring about increases in market interest rates. Due in part to these actions, the interest rate on Federal funds had increased from around 10 per cent in January to around 11½ per cent by the end of September. Other short-term interest rates rose in line with the Federal funds rate. Long-term rates also increased during the July-September period. (See Chart 1.)

Despite the restrictive monetary policy actions taken in the spring and summer, the monetary and credit aggregates continued to grow rapidly, inflation continued to accelerate, and the dollar continued to weaken. Moreover, by the end of September, the economy was showing unexpected signs of strength. Under these circumstances, the Federal Reserve felt that additional strong policy actions were needed. On October 6, the Federal Reserve increased the discount rate one full percentage point to 12 per cent, placed a marginal reserve requirement of 8 per cent on managed liabilities, and decided to adopt a different approach to conducting monetary policy. Under the new approach, which may be referred to as the reserve aggregate approach, greater emphasis is placed on controlling the availability of money and credit.

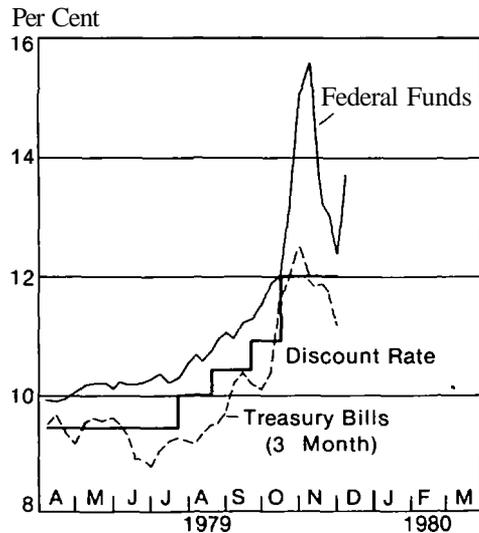
When the demand for money and credit is expanding rapidly, as it was in early October, the new approach of controlling the availability of money and credit will place strong upward pressure on interest rates. Thus, interest rates rose sharply following the October 6 monetary policy actions. (See Chart 1.)

THE NEW APPROACH

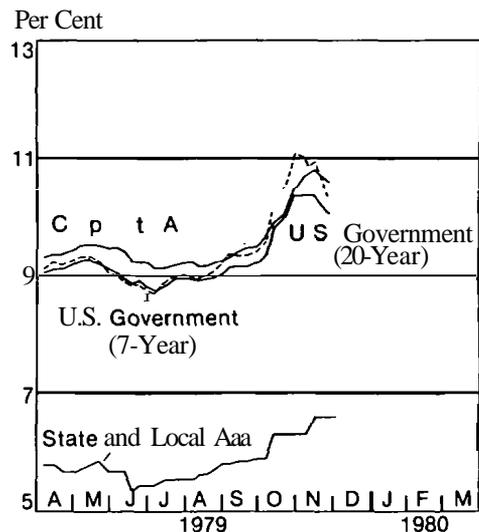
The new approach to conducting monetary policy consists essentially of three steps. The

**Chart 1
SELECTED INTEREST RATES**

MONEY MARKET RATES



CAPITAL MARKET YIELDS



first step is to establish objectives for the behavior of money and credit. The second step is to estimate the behavior of "reserve aggregates"—such as member bank reserves and the monetary base—that will be consistent with achieving the monetary objectives. The third step is to undertake those monetary policy actions that will bring about the required behavior of the reserve aggregates.

The first step in the new approach is the same as in the previous approach. In both cases, the Federal Open Market Committee establishes target growth rate ranges for the **monetary** and credit aggregates. Thus, at the October 6 meeting, the FOMC reconfirmed the targeted ranges for 1979 that were first announced in February and confirmed in July.

Estimating the Required Behavior of Reserve Aggregates

The second step of the new approach—estimating the behavior of reserve **aggregates**—differs from the earlier approach, although the two have common elements. Both agree that the money stock is affected by both demand and supply factors. The earlier approach—known as the interest rate approach—is demand oriented and relies heavily on the concept of the demand for money. This concept refers to a relationship between the amount of money demanded (that is, the amount of money that households and businesses want to hold) and the variables, such as income and interest rates, that affect the amount demanded. Specifically, the interest rate approach focuses on the relationship between interest rates and the demand for money. Estimating the behavior of interest rates that will be consistent with achieving monetary growth objectives is the second element in the interest rate approach.

The reserve aggregate approach is supply oriented and relies on the relationship between

the amount of money supplied by the Federal Reserve and the banking system and the variables that determine the amount supplied. The relationship between the money supply and its determinants may be summarized in the following way:

$$M = Rm,$$

where M represents the money stock, R represents a reserve aggregate, and m is a "money multiplier." The equation indicates that the money supply is affected by a reserve aggregate and a money multiplier. Specifically, the level of the money supply is equal to a reserve aggregate multiplied by the level of a money multiplier. In terms of growth rates, the growth rate of the money supply is equal (approximately) to the growth rate of a reserve aggregate plus the growth rate of a multiplier. That is:

$$\dot{M} = \dot{R} + \dot{m},$$

where the dots over the variables indicate growth rates.

The second step in the reserve aggregate approach—estimating the required level or growth rate of reserve aggregates—is equivalent to estimating the expected level or growth rate of the money multiplier. Thus, the required growth rate of a reserve aggregate is as follows:

$$\dot{R}^* = \dot{M}^* - \dot{m}^e,$$

where M^* is the targeted money supply growth rate, m^e is the expected growth rate for the money multiplier, and R^* is the required growth rate for the reserve aggregate.

The reserve aggregate approach requires that multipliers be estimated—either explicitly or implicitly—for each money supply concept that is targeted and for each reserve aggregate that is controlled. For example, if $M1$ and $M2$ are targeted and member bank reserves and the monetary base are controlled, four multipliers would be estimated—the **M1-reserves multi-**

plier (**m1R**), the **M1-base multiplier (m1B)**, the **M2-reserves multiplier (m2R)**, and the **M2-base multiplier (m2B)**. In theory, if the estimates of the money multipliers were accurate, only one reserve aggregate would be needed. Since the estimates may not be accurate, the monetary policy authorities may wish to focus as a precaution on more than one measure.

In estimating the expected growth rates of the money multipliers and the required growth rates of the reserve aggregates, the Federal Reserve will likely find it useful to observe the past behavior of these variables. A review of past behavior indicates that the two reserve aggregates—member bank reserves and the monetary base—have followed an upward trend over the past several years. Reserves have increased from \$36.9 billion in the fourth quarter of 1974 to \$41.4 billion in the third quarter of 1979. During the same 1975-79 period, the monetary base—which includes member bank

reserves plus currency in circulation outside member banks—rose from \$106.5 billion to \$148.8 billion (Chart 2). The reserve-money multipliers also increased during the 1975-79 period. By the third quarter of 1979, **m1R** had increased to 9.0 and **m2R** had increased to 22.3. The **M2-base multiplier (m2B)** also increased, rising to 6.2 in the latest quarter, while **m1B** trended downward in the 1975-79 period, declining to 2.5 in the third quarter of 1979 (Chart 3).

In terms of growth rates, member bank reserves increased at an annual average rate of 2.3 per cent during the 1975-79 period, while the monetary base grew at an average rate of 7.3 per cent. (See Table 2.) The reserve multipliers grew at rates of 3.7 per cent for **m1R** and 6.6 per cent for **m2R**. The **M2-base multiplier's** growth rate was 1.7 per cent, while **m1B** declined at an average annual rate of 1.1 per cent.

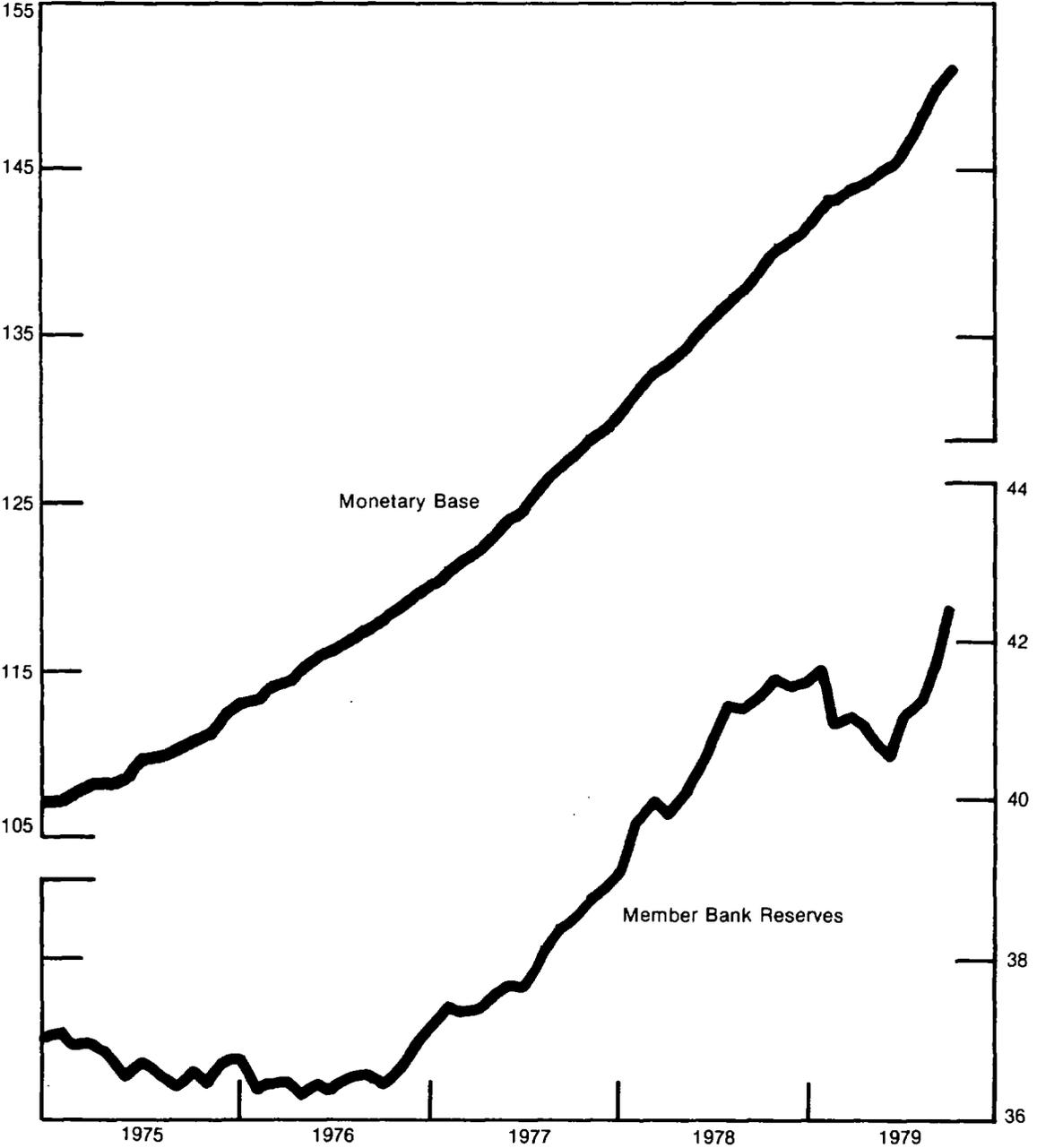
Table 2
GROWTH RATES OF RESERVE AGGREGATES AND MONEY MULTIPLIERS
(Per Cent Change at Seasonally Adjusted Annual Rate)

	Reserve Aggregates		Multipliers			
	Total Reserves	Monetary Base	M1		M2	
			Total Reserves	Monetary Base	Total Reserves	Monetary Base
1975	-0.5	5.7	5.1	-1.0	8.9	2.6
1976	0.7	6.7	5.0	-0.8	10.1	3.9
1977	5.3	8.3	2.4	-0.3	4.2	1.4
1978	6.7	9.1	0.4	-1.8	1.6	-0.6
1979 ¹	-0.6	6.5	5.7	-1.4	8.2	1.0
1975-79 (average)	2.3	7.3	3.7	-1.1	6.6	1.7
1978: Q4	2.4	8.5	1.8	-4.2	5.2	-0.8
1979: Q1	-3.0	5.6	0.8	-7.5	4.7	-3.8
Q2	-5.0	4.0	12.7	3.5	13.8	4.7
Q3	6.3	9.8	3.3	-0.2	5.6	2.1

¹First three quarters.

Chart 2
RESERVE AGGREGATES
1975-79

Billions of dollars



The task of estimating the required behavior of reserve aggregates would be greatly simplified if the money multipliers could reasonably be assumed to behave in the future as they have in the past. For example, suppose the growth rate of $m1_R$ is estimated to be the same in the fourth quarter of 1979 as it was on average during the 1975-79 period. Under this assumption, the required growth rate for reserves that would be consistent with achieving the targeted fourth quarter M1 growth rate would be equal to the targeted rate minus 3.7 per cent, the average annual increase in $m1_R$ during the 1975-79 period.

Policymakers, of course, cannot reasonably assume that the money multipliers will behave in the future as they have in the past. The growth rates of the multipliers vary considerably. Thus, during the 1975-79 period, the annual growth rate of $m1_R$ varied from 0.4 per cent in 1978 to 5.7 per cent in 1979. (See

Table 2.) The quarterly variation is even more pronounced. Over the past four quarters, for example, the growth rate of $m1_R$ varied from 0.8 per cent in the first quarter of 1979 to 12.7 per cent in the second quarter of the year.

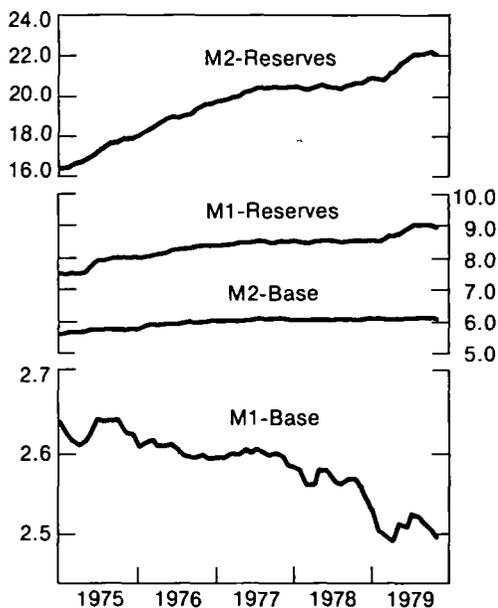
Due to the variability of the money multipliers, policymakers cannot reasonably estimate their expected future behavior by a simple reference to past behavior. The estimates must be based on an analysis of the economic and financial conditions that may be affecting the behavior of the multipliers. Nevertheless, a review of past behavior provides a useful starting point in the task of estimating the likely future course of the money multipliers.

Controlling the Reserve Aggregates

The third step in the new reserve aggregate approach also differs from the interest rate approach. In the third step of the previous approach, monetary policy actions were directed toward bringing about predetermined levels of interest rates, particularly the Federal funds rate. The third part of the reserve aggregate approach is to undertake monetary policy actions that will bring about the required growth rates of the reserve aggregates. Interest rates are allowed to vary, within limits established by the FOMC, in accordance with the demand for the reserve aggregates.

Monetary policy actions that affect the reserve aggregates include establishing reserve requirements, making loans to member banks and setting the discount rate on these loans, and undertaking open market operations. On a continuous basis, the most important instrument for controlling the reserve aggregates is open market operations, which refers to the buying and selling of U.S. Government securities. Purchases of securities by the Federal Reserve increase bank reserves and the monetary base, while sales of securities

Chart 3
MONEY MULTIPLIERS
1975-79



reduce reserves and the base. Thus, the volume of securities held by the Federal Reserve is an important determinant of the reserve aggregates. Other things equal, a high or low level of securities results in a high or low level of reserves and the base.

The reserve aggregates are also affected by member bank borrowings from the Federal Reserve, as a high or low level of borrowing is reflected in a high or low level of reserves and the base. In addition, the level of the reserve aggregates depends on currency outside of member banks and on a number of technical factors such as Federal Reserve float.²

In controlling the level and growth rates of the reserve aggregates, the Federal Reserve adjusts its holdings of securities to take account of and, if necessary, to offset the impact of factors such as currency flows and float. For example, suppose the Federal Reserve wants reserves and the base to remain unchanged. Suppose further that float is expected to increase, which would, if not offset, cause reserves and the base to increase. In this case, the Federal Reserve would reduce its holdings of securities, thereby offsetting the impact of float and preventing the reserve aggregates from increasing.

While the Federal Reserve can, within reasonably precise limits, offset the impact of currency flows and technical factors, the System may not be able to offset member bank borrowing in the short run. For example, if the Federal Reserve, by reducing its holdings of securities, tries to reduce total reserves below the level that banks are required to hold, banks will borrow at the discount window to meet their requirements. The increased borrowing will tend to offset the impact on total reserves

² Currency outside of member banks does not affect the monetary base because the base includes such currency, as well as member bank reserves.

and the base of the reduction in securities and may, therefore, prevent the Federal Reserve from bringing about a reduction in total reserves.³

Due to the tendency for borrowing to offset open market operations during any short period of time, such as a week, the Federal Reserve works with a somewhat longer time horizon, undertaking to control the level and growth rates of the reserve aggregates over a period of weeks or months. In adopting a longer time horizon for total reserves, the Federal Reserve focuses on a week-to-week basis on controlling nonborrowed reserves. Nonborrowed reserves equal total reserves minus borrowing and represent the portion of total reserves that is not borrowed through the discount window. By controlling nonborrowed reserves on a week-to-week basis, the impact of borrowing on the reserve aggregates can be taken into account and offset over a period of weeks, thereby allowing control over total reserves and the monetary base over a longer time period.

For example, suppose the Federal Reserve wants total reserves to remain at a given level during a certain period of time. Suppose further that during the first part of the period, required reserves are above the given level of reserves. The Federal Reserve may respond by holding nonborrowed reserves below the level of required reserves, thereby creating a potential shortage of reserves. The shortage places upward pressure on short-term interest rates, as banks seek to meet their requirements by buying Federal funds and selling assets from

³ The tendency for borrowing to offset open market operations is especially pronounced under the system of lagged reserve accounting, now in operation. Under this system, the amount of reserves that must be provided to the banking system to meet requirements is given for any week by past deposit levels. If the given amount is not provided through provisions of nonborrowed reserves, banks will borrow the remainder.

their investment portfolios. Also, some banks will borrow from the Federal Reserve. The borrowing provides the banking system with the total reserves needed to meet requirements and temporarily keeps total reserves above the level sought by the Federal Reserve. At the same time, though, the decline in bank assets and the increase in interest rates will begin to reduce the level of bank deposits. In turn, the reduction in bank deposits will reduce the level of required reserves, thereby allowing the Federal Reserve to maintain the given level of total reserves.

ECONOMIC AND FINANCIAL OUTLOOK FOR 1980

Economic Outlook

The third quarter rebound in real GNP seemed to call into question the pronouncement of many analysts that a recession began in the second quarter of 1979, and perhaps earlier. A true recession may, however, be identified in retrospect even if it contains a quarter of real growth. Even with the third quarter rebound, the economy has shown very little real growth since the fourth quarter of 1978. Real GNP grew during the first three quarters of 1979 at an annual rate of about seven-tenths of one per cent. A view that the economy is exceedingly weak and recession-prone, and perhaps actually in a recession, is still supported by the behavior of most business indicators.

The outlook for 1980 is quite similar: continued recessionary tendencies well into the year, with the odds on economic activity falling somewhere in a range from mild recession to very slow real growth. The absence of prospective strength in nearly all major spending sectors, and the moves of monetary policy toward restraint, seem to assure such an outcome.

The limited data on business activity in the fourth quarter of 1979 give signals of weakness. Weakening in the labor market is indicated by a decline in October in the number of persons employed, and a rise in the overall unemployment rate to 6 per cent. The rise in the unemployment rate from 5.6 per cent in June is primarily attributable to an increase in the number of job losers. Housing starts declined, and the increase in personal income in October again lagged behind the increase in prices. Retail sales also fell sharply in October, primarily but not wholly due to a large decline in new automobile sales following good car sales statistics related to company sales incentive programs. Reflecting the drop in sales, auto manufacturers have continued to reduce their output plans for the fourth quarter. Nor are the inflation data encouraging. The PPI rose a little more slowly in October than in the preceding two months, as food prices edged down slightly and energy price rises slowed down somewhat. But the approximately 12 per cent annual rate of increase in the index for October indicates that inflation continues to move ahead on a broad front, in spite of modest improvement in food and energy prices.

Actual and potential weakness appear to permeate nearly all the major spending sectors of the economy. Although the level of activity of the housing industry has been surprisingly well maintained over recent months, it remains true that the residential construction sector has been a drag on total real output growth for over a year. Demand, well maintained for some time by demographic factors and the view of home ownership as a hedge against inflation, now appears to be softening. More importantly, the supply of funds for construction and mortgage financing is being rapidly reduced as a result of the recent tightening of monetary policy. How much those recent changes will worsen the outlook for housing is not yet clear, but few observers believe that the total decline from

peak to trough in housing starts will reach the **60** per cent slide that occurred in the previous housing cycle.

Further weakness in residential construction will have a negative influence on related industries, including furniture, appliances, and home goods of all kinds. But that is not the only reason for expecting weakness in the personal consumption expenditures sector. Most importantly, household income continues to be ravaged by inflation, leaving consumers' ability to buy in a weak state. Real disposable personal income fell in both the second and third quarters of **1979**, bringing the third quarter level to below that of the fourth quarter of **1978**. No rapid increase in disposable income is in sight. Moreover, there is small likelihood that the personal saving rate will be reduced further to support consumption increases. Indeed, the saving rate is more likely to rise and thus provide another weakening influence on the growth of consumer spending in the months ahead.

Nor is business fixed investment expected to be a driving force in total real output growth as the economy moves into **1980**. The most recent survey of business intentions to purchase new plant and equipment in **1980** shows an increase of 9.5 per cent over such spending in **1979**. Adjustment for expected inflation leaves real capital spending in **1980** virtually unchanged. The survey was taken before the October 6 actions of the Federal Reserve, and investment plans may be scaled back in the new financial environment. Other indicators suggest that cut-backs in capital spending programs were already under way before October. For example, manufacturers' new orders for nondefense capital goods industries peaked in March **1979**, and construction contracts for commercial and industrial buildings peaked in February of this year. The combined series on contracts and orders for plant and equipment also peaked in March **1979**. In spite of a surge

in September orders for nondefense capital goods, it seems unlikely that business fixed investment will grow very rapidly in the face of rates of utilization of existing capacity that have fallen significantly since spring and an expectation of sluggish demand.

Although business inventories were kept in a good relationship to sales during the expansion, the pattern of a substantial increase in inventories in the second quarter and a considerably smaller accumulation in the third quarter suggests that an adjustment of inventories is under way. Continued weakening of sales would further emphasize such a cyclical inventory correction, making inventory investment a source of weakness in real output growth.

The picture of general weakness in the private domestic economy is not likely to be much improved by the performance of net exports or government purchases of goods and services. Earlier optimism about relatively strong foreign demand for U.S. goods and services has succumbed to the impact of higher world energy prices, inflation, and an increasing priority given to inflation control by foreign governments. Thus, in spite of a reduced U.S. demand for imports accompanying slow growth in this country, net exports will probably not add much stimulus to U.S. economic activity. Neither are government purchases of goods and services likely to contribute much to total output growth.

If the various spending sectors behave as suggested above, the American economy is in for a period of significant weakness, which may well be identified in retrospect as a recession. In this period of slow growth or actual decline in real output, the economy's margin of unused resources will widen and unemployment rates will rise. As this occurs, there will be a reduction in the upward pressure of demand on prices. Experience and economic analysis both demonstrate that slow economic growth (and,

even more so, recession) tend, over some extended period of time, to reduce the rate of inflation. The beginnings of that amelioration of inflation should become apparent in 1980.

Financial Outlook

Turning to the financial outlook, a number of factors will be affecting interest rates in the period ahead. One very important factor will be the condition of the economy, and the sluggish economy will be a factor tending to reduce upward interest rate pressures in the period ahead. In addition to the prospective strength of the economy, another factor in the interest rate picture is the outlook for inflation—an important factor because a continuation of inflation at the current high level would reinforce and strengthen the inflationary premium in interest rates and would work against any tendency for interest rates to decline. As mentioned, the weak economy may lead to some reduction in inflationary pressures during the first part of next year.

An additional factor affecting interest rates in the period ahead will be the behavior of the nation's money supply. If the money supply continues to grow rapidly, the Federal Reserve will likely reduce further the availability of reserves to the banking system, which will lead to further upward pressures on interest rates. The growth rate of the money supply may of course moderate in the months ahead. A

moderation would be expected to accompany the sluggish economy and any deceleration in the rate of inflation that may develop.

Finally, the trend in interest rates in the period ahead will be influenced by the performance of the dollar in the foreign exchange markets. Any marked and significant weakness in the dollar could result in some additional firming in interest rates.

Bringing together all these factors that will be affecting credit conditions in the period ahead—monetary policy, the behavior of the supply of money, inflation, the dollar, and the economy—what is the probable outlook? A reasonable assessment is that at some point during the period ahead, interest rates may stabilize and, perhaps, begin to decline. If the economy weakens further in the period ahead and if the rate of price inflation decelerates, the demand for money and credit may begin to grow less rapidly. In this event, the Federal Reserve's efforts to maintain moderate growth in the availability of money would be accompanied by a lowering of interest rates.

Regardless of whether interest rates increase further or decline in the months ahead, any permanent decline in interest rates depends on bringing inflation under control. Moreover, in the long run, the health of the economy depends on success in the fight against inflation. Thus, it is important that the Federal Reserve continue its efforts to gain effective control over the growth of money and credit.

The Agricultural Outlook: Can Recent Income Gains Be Maintained?

By Marvin Duncan

Farm income levels during 1979 have been very favorable, enabling farmers to retain and add to their 1978 income gains. However, the likelihood that farmers and ranchers will enjoy similar increases in income during 1980 seem remote at this time. This article highlights agricultural developments during the past year and suggests the probable outcomes for production, prices, and income during 1980.

Strong prices for livestock during the first half of 1979 added substantially to cash receipts from farm marketings. And, although livestock prices declined somewhat in the second half of the year, they continued well above year-earlier levels, posting a nearly 20 per cent annual gain over 1978. This was true even though both pork and poultry prices declined substantially during 1979.

Crop producers during 1979 experienced the unusual, but welcome, situation of strong prices combined with record or near record production levels for major crops. Record feed grain and soybean production, along with the second largest wheat crop on record, swelled supplies at a time when strong export and domestic demand raised commodity prices above year-earlier levels. Consequently, crop

receipts are expected to increase substantially in 1979 for the first time since 1974.

As a result, gross farm income in 1979 (in current dollars) is expected to set a new yearly record. The rise in gross farm income over the past two years follows several years of rather slow growth. Although farm production expenses in 1979 were up substantially, net farm income is expected to increase about 10 per cent above 1978, because of substantial increases in cash receipts to farmers. Thus, 1979 net farm income would be the second largest on record (Chart 1).

The events of 1979 can serve as indicators for the 1980 farm outlook. Favorable weather and increased wheat and feed grain plantings in the United States next year suggest the probability of record or near record crops. Normal production weather in major producing areas of the world could cut back on export demand for U.S. crops during the latter part of 1980. Thus, despite expected price strength through mid-1980, grain prices in the second half of the year could average below 1979 levels. Possible record large meat supplies in 1980 and softer consumer demand because of a slowing economy could erode cash receipts from livestock marketings. Farm production expenses will continue to rise at uncomfortably high rates in 1980. Thus, the stage could be set for a reduction in net farm income of about 15 to 20 per cent from 1979 levels.

Marvin Duncan is an assistant vice president and economist with the Federal Reserve Bank of Kansas City.

Federal Reserve Bank of Kansas City

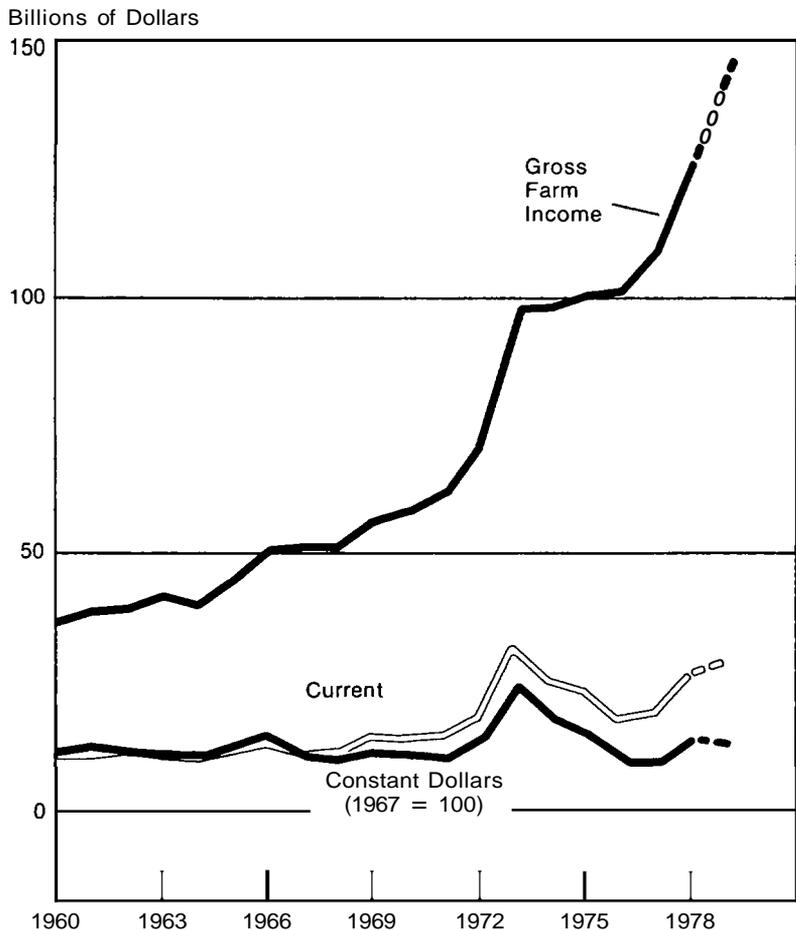
1979 HIGHLIGHTS

Farm prices improved rapidly during the early months of 1979, with the Index of Prices Received increasing 10.8 per cent during the first quarter. However, those rapid increases were not sustained throughout the year. By November, the Index of Prices Received by Farmers was 9.7 per cent above year-earlier levels. The Index of Prices Paid by Farmers also increased rapidly during the early part of

1979, up 7.5 per cent in the first quarter. That increase was due primarily to higher feeder cattle and energy prices. By November, the Index of Prices Paid was 13.8 per cent above year-earlier levels. Thus, farmers have seen a return this year to a distressingly common pattern in which prices paid for production items increased more rapidly than farm product prices.

Net farm income in 1979 is expected to reach the second highest level on record. Buoyed by

Chart 1
FARM INCOME TRENDS



SOURCE: U.S. Department of Agriculture.

substantial increases in gross farm income—to a new record of about \$145 billion—operator's net income is expected to reach \$31 billion. Cash receipts from farm marketings are expected to reach **\$129** billion, an increase of 16 per cent above 1978 and a welcome contrast to the anemic annual average increases of less than \$2 billion from 1973 to 1977. Government payments to farmers dropped to about **one-third** of the \$3 billion in 1978. Production expenses, paced by higher costs for most input items—especially feeder cattle, energy, and short-term interest rates—increased about 16 per cent to \$114 billion.

Crops

Favorable weather in 1979 enabled farmers to turn in near record and record levels of production, even with acreage set-asides in effect and a delayed spring planting season. Farmers harvested the second largest wheat crop ever: 2.1 billion bushels. A record crop of feed grain was also produced—229 million metric tons—with a record corn output of 7.6 billion bushels accounting for over 80 per cent that amount. Finally, a new record for soybean production of 2.2 billion bushels was established.

Demand for all grain crops was surprisingly strong during 1979, despite large supplies. Crop shortfalls in South America added to export demand for U.S. soybeans. The USSR commitment to increase livestock production in light of crop shortfalls added substantially to demand for U.S. feed grains and food grains, as well as for soybeans. A large and growing domestic feed use base in the U.S. commanded the major proportion of available feed and oil seed crops. Moreover, growing world population and income levels generally stimulated export demand for farm products. Consequently, 1979 was a year of unusually

favorable crop prices coupled with large supplies.

Livestock

Rebuilding of the U.S. cattle herd has resulted in sharply reduced nonfed slaughter and reductions in the numbers of fed cattle slaughtered. For the first nine months of 1979, numbers of cattle slaughtered were off substantially, but somewhat heavier slaughter weights for beef animals held the production of beef to a decline of 11 per cent in that period. Shortfalls in beef output have been more than offset by increased pork and poultry production during the first nine months of 1979. As a consequence, total meat supplies for the first three quarters of 1979 were up about 2 per cent from year-earlier levels.

Income and employment growth in 1979 supported a strong demand for food products. Although some concern has been expressed about the level of demand and consequent price for meat late in the year, generally strong consumer demand kept prices above levels that might have been expected in light of large total supplies.

The Farmer-Owned Grain Reserve

The farmer-owned grain reserve received a useful test this year. Concern had been expressed about how increasing reserve stocks could be released at the end of the three-year contracts without unduly depressing farm commodity prices. The reserve can properly be credited with some of the price strength which grain crops exhibited in 1978 and early 1979, as grain entering the reserve had the effect of reducing market supplies. The reduction in world grain output this year demonstrated that these reserves can also temper grain price increases, as the market price at which wheat and feed grains could be sold without penalty

from the reserve was reached. About 169 million bushels of wheat and 201 million bushels of corn were sold from the reserve by the end of October. While grain prices did increase significantly this year, neither wheat nor corn prices rose high enough to trigger a call for repayment of Commodity Credit Corporation (CCC) loans on the stored grain (Table 1). On balance, the reserve's usefulness in cushioning the price impact of supply changes has been demonstrated. Grain prices were successfully supported in periods of oversupply, and price increases were tempered in periods of sharply increased demand. If, during the 1980s, excess demand is more frequently a problem than is excess supply, the release and call prices for grain in the reserve may need to be adjusted to permit somewhat

higher prices before triggering removal from the reserve.

THE OUTLOOK FOR 1980: DEMAND AND SUPPLY

The prospective demand for agricultural products during 1980 is characterized by more than the usual amount of uncertainty. Record volumes of U.S. food and feed grain exports are likely in 1980. However, normal crops around the world could decrease the quantities of U.S. grains required in the latter half of next year, even though over the decade of the '80s the recent strong growth in export sales can be expected to continue. On the other hand, production problems with the 1980 world crop could be a strong stimulus to grain prices in

Table 1
FARMER-OWNED RESERVE:
STATUS ON OCTOBER 31, 1979

Commodity	Release*		Call†		Quantity in the Reserve		Quantity Redeemed
	Price*	Date	Price	Date	Originally	Oct. 31	Oct. 31
	Million Bushels						
Wheat	\$3.29	May 16	\$4.11	—	411	242	169
Feed Grains							
Barley	2.04	June 5	2.28	June 26	41	32	9
Corn	2.50	Oct. 3	2.80	—	739	538	201
Oats	1.29	Sept. 20	1.44	—	43	31	12
	Million Hundredweight						
Sorghum	4.24	§	4.75	—	43	26	17

SOURCE: U.S. Department of Agriculture.

*Release means farmers may repay CCC price support loans and redeem or sell grain without penalty, but are not required to do so.

†Call means farmers must repay loans 30 days after notification, unless extended because commercial storage or adequate transportation is not available. Assessments to determine extensions are made for each county.

‡Prices are per bushel except for sorghum, which are per hundredweight. Release price levels are 125 per cent of loan rates for the feed grains and 140 per cent of the loan rate for wheat. Call price levels are 140 per cent of the loan rates for the feed grains and 175 per cent of the loan rate for wheat.

§Sorghum release was ended November 1, 1979.

view of high world use rates and reduced grain stocks. Thus, the stage may be set for **greater-than-usual** uncertainty and price volatility.

Domestic demand for grain crops appears to be favorable. Wheat utilization may be relatively stable, as usual. But with a large and growing feed use base for feed grains and oil seed crops, demand for them should continue strong in the U.S. during 1980.

Less certain is the domestic demand for meat products. If, as is suggested by the accompanying business and financial outlook article, the economy moves to a substantially lower economic growth path during 1980, consumer demand for meat might falter and be reflected in lower livestock prices. Feed grain and oil seed crop prices would also be adversely affected by falling prices for livestock.

The supply of grain products in 1980 is likely to be abundant. Also, the supply of meat next year will probably exceed that of 1979 by a narrow margin. Higher production of major processing vegetables can be expected to result in increased supplies of canned and frozen vegetables in 1980. Milk production will probably slightly exceed the 1979 output, with the larger increases in output occurring during the first half of 1980. While abundant total food production appears likely, the usual qualifications with respect to weather and farmer responses to new price developments must be noted.

Exports

Rapid agricultural export growth in recent years has been a major factor in supporting farm product prices. The value of agricultural exports has increased by over four-fold since 1971. Export demand in 1979 has been particularly strong, having received additional support from crop shortfalls in the USSR. Total USSR grain production in 1979 is estimated to be down about one-fourth from

1978. That shortfall has affected fiscal 1979 exports and will have a substantial impact in fiscal 1980 as well.¹ Agricultural exports during fiscal 1979 amounted to about \$32 billion, with an agricultural trade surplus of about \$16 billion (Chart 2). Export volume of major commodities increased somewhat during the year as well.

Export growth in fiscal 1980 will be stimulated by USSR purchases of as much as 25 million metric tons (MMT) of food and feed grains from the United States. Moreover, an expected reduction in world grain stocks during 1979-80 should increase world trade of wheat, course grains, and rice. The value of U.S. exports could increase by up to 20 per cent in fiscal 1980 as a result of 1979 crop shortfalls and increased demand for animal feedstuffs. However, favorable 1980 world production could slow export **demand** somewhat by the end of the fiscal year. Animal product exports are expected to increase as well. Consequently, agricultural exports value may reach \$38 billion with a trade surplus of about \$20 billion. A critical determinant in reaching the upper range of export value will be the ability of the U.S. transportation and handling system to move record levels of export volume to ocean ports in a prompt and dependable manner.

THE OUTLOOK FOR CROPS

A number of uncertainties surround the outlook for 1980 crop production and pricing. Most obvious is the weather. The hard red winter wheat crop in the U.S. Southern Plains was planted under unusually dry conditions this fall. Rain and snow since seeding have partially alleviated the dry conditions, but the wheat stand will not be as vigorous as desired

¹ Fiscal year refers to the business year of the U.S. Government and runs from October 1 to September 30.

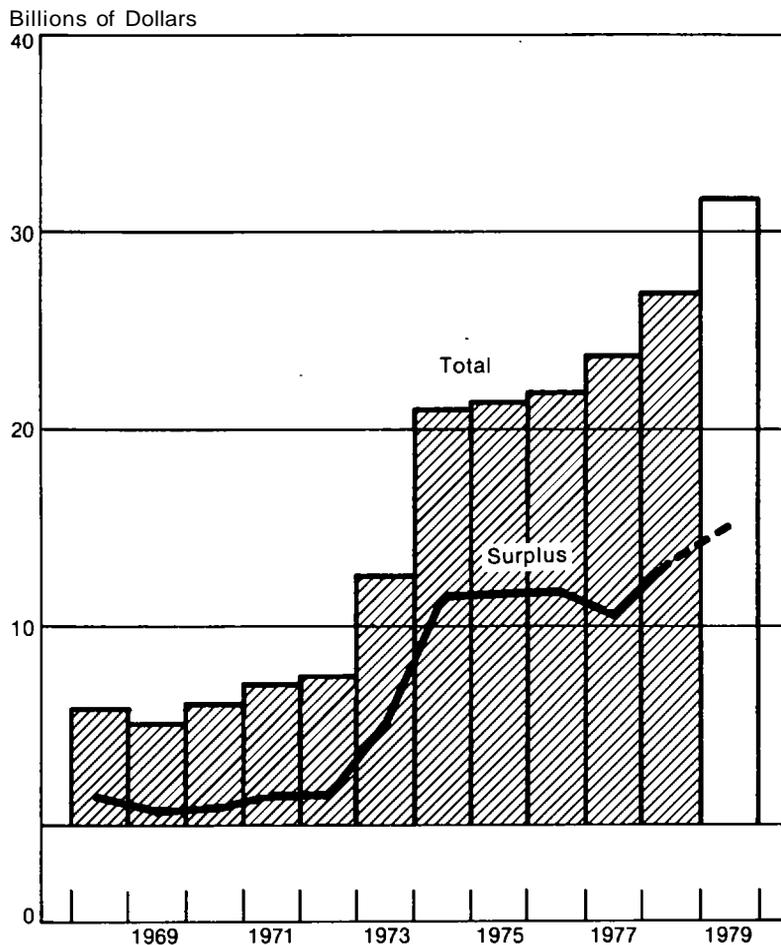
going into the winter. Weather will affect the output levels in other major grain producing areas, and any increased concern about weather conditions will increase price volatility in 1980.

Consumer demand for meat products will determine, in part, the price of feed grains and oil seed crops. Marketly slower economic growth during 1980 in the U.S., Japan, and

Western Europe could tend to depress prices for these commodities.

Producers of wheat and feed grains in 1980 will not be required to place part of their acreage in a set-aside program to qualify for CCC grain loans and target price payments. Evidence of tightening world grain supplies and domestic anti-inflation considerations are apparently behind this U.S. Department of

Chart 2
U.S. AGRICULTURAL EXPORTS AND THE
SURPLUS FROM AGRICULTURAL TRADE



SOURCE: U.S. Department of Agriculture.

Agriculture (USDA) decision. The decision means that producers can plant wheat or feed grains up to the limit of what was permitted for planting and set-aside acres in 1979. For 1980, national program acreages (NPA) for corn, sorghum, and barley are 82.1 million acres, 13.9 million acres, and 7.9 million acres, respectively. For wheat the NPA is 70 million acres.

A few changes, in addition to no set-aside acres, are in prospect for wheat and feed grain producers in 1980. The CCC loan rate has been increased to \$2.50 per bushel for wheat, thus resulting in an increase in both the release and call prices for grain in the farmer-owned reserve. CCC loan rates for corn will be unchanged in 1980 at \$2 per bushel, as will reserve release and call prices. For both wheat and corn, 1980 target prices revert to somewhat lower levels determined by the formulas specified in present farm legislation, unless Congress raises them with new legislation.

With no set-aside requirements, many producers will likely plant fence-row-to-fence-row, even though that could have adverse price implications. Total wheat acres for 1980 may turn out to be as high as 79 million acres. In addition to more total planted acres, switching of acreage among crops will occur. For example, corn acreage may expand at the expense of soybean acreage. Cotton and sorghum acreage may also decline.

Finally, the amount of wheat and feed grains from the 1978 and 1979 crop entering the three-year farmer-owned reserve program will affect free market supplies of these crops, and hence market prices. About 1.6 to 1.8 billion bushels of 1978 and 1979 corn are eligible for reserve entry, as are about 1.2 billion bushels of wheat from the same years. Additionally, decisions to broaden the range between the release price of grain in the reserve and the call price would tend to slow sales of grain from the reserve and provide room for additional price

strength after the release price was reached.²

Crop supplies will be abundant during the 1979-80 marketing year. With the exception of soybeans, large carryover stocks were on hand at the beginning of the new marketing year. To these stocks were added record and near record 1979 production (Table 2). Normally, such large stocks would bear heavily on market prices. Happily for producers, record export demand for wheat and feed grains coupled with strong and growing domestic demand for feed grains has kept prices well above last year's levels. In the case of soybeans, an expected doubling of carryover levels and sharply higher world production is weighing on prices.

The average farm level prices for wheat, corn, and sorghum in the United States during the 1979-80 marketing year are expected to exceed the \$2.94, \$2.20, and \$2.00 per bushel averages of the previous marketing year. Based on present supply and demand relationships, it appears reasonable to expect average prices to be in the range of \$3.60 to \$3.90 for wheat, \$2.25 to \$2.55 for corn, and \$2.15 to \$2.40 for sorghum. For soybeans, average prices may be in the range of \$5.75 to \$6.50 per bushel, compared to \$6.75 last year. There will be no target price payments to producers of wheat and feed grains this year, since average commodity prices during the early part of the marketing year will exceed target price levels.

THE OUTLOOK FOR LIVESTOCK

Livestock production will apparently be adequate to provide total meat supplies next year a little larger than in 1979. In fact, through the summer of 1980, total meat supplies may be of record size. The supplies

² The *release price* is the price at or above which grain may be redeemed—CCC loans repaid—without penalty. The *call price* is the price at which the CCC calls for repayment of the loans on grain in the reserve grain.

will consist of less beef, less lamb, less poultry, and markedly more pork than in 1979. Consequently, livestock prices will be very sensitive to consumer demand. Should the economy move to a significantly lower economic growth path in 1980, livestock prices could suffer.

The current cattle cycle has apparently bottomed out this year, and the yearend cattle inventory will likely post a 1 to 2 million head gain over the 111 million head of last year. Buildup of the cattle numbers on the upside of the cycle may occur in two stages. Traditional cattlemen will likely increase inventory numbers rather quickly. But new entrants, outside investors, and those who have shifted farming operations to other crops and livestock may return more slowly because of the high cost of breeding stock, high interest rates, limited credit, and the narrowed margin of profit in cattle.

Data for the 23 major feeding states indicate numbers of cattle on feed October 1 are down 13 per cent from a year earlier. Furthermore, third quarter placements were down substantially, by 19 per cent, from the large placements of a year earlier. Thus, beef production will likely continue to decline into the second quarter of 1980. However, 1980 output may be nearly equal to 1979 levels. Losses on fed cattle being marketed in recent months, coupled with higher production costs, have caused some feeders to delay refilling lots in hopes of better fat cattle prices, lower feeder cattle prices, or lower feeding costs. Consequently, choice steer prices may average in the range of \$67-70 per hundredweight during the first half of 1980 and a few dollars higher in the last half. Yearling feeder prices in 1980, not expected to exceed 1979 average prices, may average in the low-to-mid \$80 per hundredweight range.

Table 2
BALANCE SHEET FOR MAJOR CROPS
(Millions of Bushels or Tons)

	Corn (bu)		All Feed Grains (tons)		Soybeans (bu)		Wheat (bu)	
	Marketing Year Oct. 1-Sept. 30 1978-79	Marketing Year Oct. 1-Sept. 30 1979-80†	Marketing Year* 1978-79	Marketing Year* 1979-80	Marketing Year Sept. 1-Aug. 31 1978-79	Marketing Year Sept. 1-Aug. 31 1979-80	Marketing Year June 1-May 31 1978-79	Marketing Year June 1-May 31 1979-80
Supply								
Beginning Carryover	1,104	1,285	41.2	45.8	161	173	1,177	925
Production and Imports	7,083	7,586	217.6	229.6	1,870	2,236	1,800	2,116
Total	8,187	8,872	258.8	275.4	2,031	2,409	2,977	3,041
Demand								
Domestic	4,769	4,940	152.8	156.9	1,105	1,184	858	790
Exports	2,133	2,500	60.2	71.1	753	825	1,194	1,400
Total	6,902	7,440	213.0	228.0	1,858	2,009	2,052	2,190
Ending Carryover	1,285	1,432	45.8	47.4	173	400	925	851

SOURCE: U.S. Department of Agriculture.

*Marketing Year begins October 1 for corn and grain sorghum, July 1 for barley and oats.

†Preliminary USDA estimates as of November 1979.

Pork producers gave evidence in the September government survey of increased marketings and farrowings. In that report, producers indicated planned winter farrowings of 10 per cent above year-earlier levels. If these farrowing intentions are carried through, the fall and the winter crops will both be of record size—assuring record pork supplies through the summer of 1980. Such action probably means barrow and gilt prices in the low-to-mid \$30 per hundredweight range for the first half of the year. If not already begun, producers will likely begin to cut back on production increases in the first quarter of 1980, and by the fourth quarter improvement in slaughter hog prices will likely be noted. The yearly average price per hundredweight in the mid-to-upper \$30 range will be below the estimated average of \$42 for 1979, however.

FOOD PRICES—WILL THEY MODERATE?

Rapidly rising farm prices, as a result of meat, fresh fruit, and vegetable price increases, were primarily responsible for retail food prices increasing at a 17.7 per cent annual rate during the first quarter of 1979. Despite moderation in farm price increases during the last three quarters of the year, retail food prices will still average about 11 per cent higher than in 1978. Higher farm product prices will account for about 40 per cent of the yearly increase, with transportation, processing, and marketing charges adding another 50 per cent. Price increases for imported food add the final 10 per cent.

Farm level prices will not likely increase as much in 1980 as in 1979. Some farm product prices, such as meat, will fall during much of the year, reflecting declines in hog and poultry prices. Under a favorable weather forecast, the farm value of food may rise only about 1 per cent in 1980. Serious weather problems in important farming areas of this country or elsewhere, however, could cause the farm value

of food to increase up to 10 per cent next year. On balance, if price inflation is reduced in 1980 and if the increase in the farm-to-retail price spread can be reduced below 1979 levels, retail food price increases will moderate.

Thus, food price increases will likely be in the 7 to 11 per cent range for 1980. It is more likely that food price increases will be in the top half of that range than in the bottom half.

The pattern of price increases will differ from 1979, however. Larger supplies of pork and poultry, as well as some slackening in consumer demand, will moderate food price increases in the first half of 1980. Declining meat output and faster economic growth suggest more rapid food price increases during the second half of the year. Finally, the level of price inflation in the economy will be the major determinant of food price increases during 1980. Almost three-fourths of the expected price increase will result from higher food marketing costs.

WHY LOWER FARM INCOME?

The outlook for 1980 farm income is particularly clouded. Supply and demand factors affecting income early in the year seem to be in reasonably clear focus. However, a number of important supply factors later in the year are unknown at this time. How large will the Southern Hemisphere crops, especially soybeans, be? What will be the size of the U.S. winter wheat crop? Will there be favorable weather across the Northern Hemisphere in 1980? How soon will poultry and pork production turn down?

But supply isn't the only unknown. The growth path of the U.S. and other industrial economies in 1980 will have significant impacts on demand for farm products. Until the economy's 1980 growth path is known with more clarity, it is not possible to forecast demand with precision. U.S. consumer demand for meat products will be adversely affected by

rising unemployment and falling incomes. The level of price inflation and money-supply growth during 1980 will also affect farm product prices. Nonetheless, cash receipts from farm marketings in 1980 should be at least as large as the record high levels of 1979.

Production expenses are expected to increase in 1980 by about as much as the general rate of price inflation. Fuel expenses will probably increase by about a third, or possibly more. Fertilizer prices, after declining since 1975, have begun to increase and will likely rise by 15 per cent or more. Pesticide prices, farm equipment costs, and farm labor wage rates are all expected to increase substantially in 1980, as well.

Since net farm income represents an increasingly narrow residual between gross income and production expenses, relatively small changes in production, product prices, or production expenses have a magnified impact on net income. For reasons already discussed, the possible range of net farm income is very wide in 1980—\$20 to \$30 billion—with the most likely outcome centered on \$25 billion. There is probably a greater chance that net farm income will be above the mid-point of the

range, however. Nonetheless, this is a substantial decline from the 1979 level. The expected decrease in net farm income will fall primarily on cattle feeders, broiler producers, and pork producers. To a lesser extent, producers of soybeans, cotton, fruits, and vegetables will also feel the decline. Income levels for food and feed grain producers, ranchers, and dairy farmers may not be seriously reduced.

CONCLUSION

Farmers have come to expect government action to buoy farm income in election years. However, in 1980, concern over inflation in Congress and around the country would seem to make it unlikely that any sizeable legislative program would be undertaken to ease the impact to farmers of lower net income. It seems unlikely that net farm income will undergo the sharp reduction experienced in 1977. Nonetheless, a substantial retrenchment appears likely. Crop shortfalls in major producing countries or unexpected moderation in production cost increases could favorably alter that outlook, however.

Conduct of U.S. Monetary Policy: Recent Problems and Issues

by Roger Guffey

From my perspective as president of the Federal Reserve Bank of Kansas City during the past four years, and my association with the System in the previous decade, there is no doubt in my mind that the most serious problem facing monetary policy today—both in the United States and abroad—is the chronic inflationary environment that is now gripping the economies of the entire free world. As a consequence of this inflationary environment, the normal flow of financial savings into productive investment has been seriously reduced, economic growth and job opportunities have diminished, and the stability of the international monetary system has been periodically threatened. In sharp contrast to the period of the 1930s, when chronic unemployment was the No. 1 economic problem, chronic inflation is clearly the No. 1 economic problem of our day.

As a central banker, I find this situation to be highly disturbing. After all, it is generally agreed that the most fundamental task and responsibility of a central bank is to provide for the continued soundness and stability of its

nation's currency, both domestically and internationally. If this is true, however, it must be concluded that central bankers have not been as effective as they should be in coping with the inflationary problem.

In trying to rationalize this uncomfortable conclusion, it is very easy to come up with numerous nonmonetary causes of the inflation spiral. In the United States, for example, it is often claimed that a large part of the inflation is due to exogenous or uncontrollable shocks to the economic system—such as the worldwide crop failures and devaluations that occurred in the early 1970s, and the sizable oil price increases of recent years. It is also argued that the regulatory burden of government has become so pervasive as to discourage innovation and new investment which, in turn, have contributed to a slowdown in productivity and an upward ratcheting in unit labor costs.

On a more fundamental level it is said that, beginning in the mid-1960s, there was a marked upward shift in the demand for government services on a broad social level. And, as part of that shift, there was a renewed emphasis placed on government policies designed to attain full **employment—even** at the cost of incurring an increase in the degree of inflation. The net effect of this shift in the role and emphasis of governmental policies was to impart an inflationary bias to the economy

Roger Guffey is president of the Federal Reserve Bank of Kansas City. This article is taken from a speech Mr. Guffey made November 9 before the Swiss-American Chamber of Commerce in Zurich.

which, it is claimed, the Federal Reserve, as a public institution, found difficult to resist in its entirety.

THE MONEY-PRICE LINK

While these and other nonmonetary explanations of inflation have varying degrees of appeal, it is, nonetheless, difficult to ignore the basic long-run relationship between money and prices. As most economists agree, an expansion of money and credit in excess of the long-run output potential of an economy will invariably lead to a rise in the overall price level. This relationship is not new, of course, but its importance has become increasingly emphasized by central bankers in the conduct of monetary policy. In the United States, as you may know, the Federal Reserve has publicly announced its desired growth rates of money and credit for the year ahead since 1975. These targeted growth rates have been almost steadily lowered out of a desire to gradually reduce the rate of inflation.

Despite these good intentions, however, the actual growth rates of money and credit have tended to be in excess of our established targets, especially during the past half year. I can assure you that these excesses in money growth, both this year and last year, were neither intended nor desired by any member of the Federal Open Market Committee (FOMC). Rather, I believe these excesses were the direct consequence of the inflationary spiral itself, which distorted and obscured the very informational variables through which we have traditionally conducted monetary policy.

One informational variable that central bankers have traditionally utilized is the level of nominal interest rates. As a general rule, rising interest rates are taken as a sign of restraint. Also, high and rising interest rates are deemed consistent with trying to curb the demand for

money growth. In times of rampant inflation, however, interest rates become a very poor guide for policy and a very poor instrument for controlling money growth. That is because an inflationary premium tends to be incorporated into interest rates, which makes it extremely difficult to know what, if any, restraint is being applied by a high level of interest rates. Needless to say, this problem became quite apparent in the United States over the past half year when—despite higher interest rates—money growth accelerated rapidly.

Other informational variables that have been distorted by the inflation spiral are the various concepts of money itself. With interest rates rising due to inflation, there has been an immense change in the practices of financial intermediaries and a virtual explosion in the development of near-money substitutes. As a result, many of the traditional measures of money no longer provide the same informational content as they did in the past; nor do they serve as a reliable guide as to what policy should be. Without a doubt, some of the rapid growth in money in the United States this year can be traced to difficulties in properly interpreting the data on the monetary aggregates. A resolution of these difficulties, I should note, is now being intensively examined by the Federal Reserve.

These and other factors have led to a marked increase in the growth rates of money and credit in the United States over the past half year. And, commensurate with this growth in money, inflationary pressures have accelerated and an inflationary psychology has become more widespread. As a reaction to these developments, the U.S. dollar came under very strong downward pressure in exchange markets this fall, the price of gold soared above \$400 an ounce, and speculative activity increased sharply in other commodity markets. Quite clearly, there became a dire need for much more forceful measures of monetary restraint.

On the evening of October 6, the Federal Reserve announced a series of forceful and complementary actions designed to curb the growth of money and dampen the forces of inflation. These actions included: (1) an increase in our discount rate, (2) an imposition of marginal reserve requirements on managed liabilities of member banks, and (3) a change in the procedure by which we conduct monetary policy. Under the new procedure, less emphasis is now being placed on interest rates as a means of controlling money and greater emphasis placed on the supply of bank reserves.

The response to these actions has been both dramatic and widespread. Short-term interest rates in the United States have increased sharply, as the sizable demand for credit is now being limited by the available supply of credit. Also, the value of the dollar has improved in the foreign exchange markets and much of the speculative froth has gone out of the commodity markets. In short, the actions we took have thus far been well received and supported by both the financial community and the general public.

Of the three policy actions taken, the one receiving the most attention has been our shift to a new operating procedure to control the money supply. In some quarters, there has been considerable euphoria about this shift in procedure. Some people, for example, have hailed it as a complete victory for the monetarist school of thought and even as the ultimate solution to our monetary problems. Needless to say, many of these assessments have tended to go too far.

Without a doubt, recent events have demonstrated clearly the need for a change in our operating procedure. Pegging an interest rate to achieve our money supply targets was just not producing the intended results. Therefore, I am very much in favor of the change to the new operating procedure, which emphasizes bank reserves, and I enthusiastically

support it.

It should be well understood, however, that a reserve-targeting procedure in the United States is not a simple, risk-free technique. On a very basic level, the new procedure does not assure that our targeted growth rate of money will, in fact, be appropriate for the economy. Nor does it resolve the problem of **determining** which concept of money the Federal Reserve should try to control. Answers to these questions will still require considerable analysis and flexibility in policy operations.

POTENTIAL SLIPPAGES

On a more technical level, we fully recognize that there can be potential slippages between the growth rate of bank reserves and the growth rate of the money supply. These slippages might occur for two reasons. First, our ability to control bank reserves may not be overly precise, especially in the short run. And, second, there may be variability in the multiplier relationship between bank reserves and the money supply. The latter is very likely to be true in the very large and diffuse banking system that exists in the United States. A further consideration is that it is not reasonable to expect the Federal Reserve to ignore entirely ongoing developments in the money and capital markets or in the foreign exchange markets just to rigidly pursue a reserve-targeting procedure.

These considerations suggest, it seems to me, that not too much too soon should be expected from our shift to a new operating procedure. Many basic conceptual and technical problems still remain unresolved. Moreover, precise control of the money supply is just not likely to be achieved, especially over a short period of time. Thus, an evaluation of this new technique can only be made in an objective manner after it has been in effect for a longer period of time.

Despite these words of caution about our new procedure to control the money supply, I want

to emphasize that the new technique—along with our other recent actions—offers great promise in our battle against inflation. While it is true that the **U.S.** economy may experience a temporary period of adjustment, our recent actions were taken with longer run objectives in mind. To the extent we can reduce the growth rate of money to moderate proportions, it is very likely that inflationary expectations will be diminished, the high level of interest rates will subside, and confidence in the purchasing power of the dollar will be restored.

I am sufficiently realistic, however, to believe that our battle against inflation has only just begun. Indeed, even though the actions we have taken have been both dramatic and forceful, it is rather simplistic to view our change to a new operating procedure as the sole solution of the problem of inflation. The inflationary bias of our economy—and the economies of other countries, too—is a very deep-rooted problem. It is lodged in the basic political and philosophic thought that has influenced our economic system during the past two decades. Thus, the battle against inflation promises to be very long and arduous.

PRINCIPLES FOR POLICY

As an absolute prerequisite for our battle against inflation to be successful, I believe central bankers must do a much more effective job than we have in the past. In short, we can no longer be unwilling participants in the inflationary process. To assure that we will be more effective, I believe our policies must be guided by the following principles.

1. Emphasis should be given to a firm and restrictive monetary policy stance. By itself, a better technique to control money is no assurance that the right growth rate of money will, **in fact**, be sought. What is re-

quired to correct inflation is a significantly lower expansion of money and credit.

2. The implementation of a restrictive monetary policy must be highly credible in the eyes of the public. In any venture, it is self-defeating to promise more than is delivered. So, too, in central banking. Thus, to be credible, an anti-inflationary policy must actually achieve a significantly lower growth rate of money and credit.
3. Finally, and perhaps most importantly, restrictive monetary policies must be followed in a consistent manner. All too often, restrictive policies are put into place only for a very short period of time at the peak of the business cycle—when fighting inflation is a popular cause. For the rest of the business cycle, however, these policies are often quickly abandoned—in both the downturn and in the subsequent upturn. The net result is that policies have an expansionary bias most of the time, which does much to explain the persistence of the inflationary problem. Therefore, it follows that an effective monetary policy will need to adopt a restrictive stance consistently throughout the business cycle.

The adherence to these principles of monetary management, I believe, will enable us to achieve significant progress in curbing our chronic inflationary problem. The task ahead, however, promises to be both long and difficult and severely challenging. Nonetheless, recent anti-inflationary actions taken by the Federal Reserve should serve to forcefully underscore our desire to rise up and meet that challenge successfully. It is my fervent hope that we, as well as other central banks, will vigorously pursue this course. By so doing, we can clearly demonstrate the economic leadership that is vitally needed to restore price stability and economic vitality to the nations of the free world.

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