

Economic Pause, Acceleration, and Excesses

1967 in Retrospect

NINETEEN SIXTY-SEVEN was the seventh consecutive year of economic expansion. Real product rose about 3 per cent from the end of 1966 to the end of 1967, compared with 4 per cent in the previous year. During the recovery and expansion from early 1961 to late 1965, production rose at an average 6 per cent per year. The growth of production, however, was uneven during 1967, giving rise to a more than normal concern over the course of the economy.

An examination of public statements made as the year 1967 unfolded demonstrates the changing economic climate. As the year began, activity was beginning to falter, and there was pessimism about the outlook. In the December 1966 issue of this *Review* the outlook for 1967 was evaluated as: "At year-end it appears that the combination of monetary and fiscal developments may not have to be so restrictive in the coming year as it has been since the spring of 1966. Total demands for goods and services have probably slowed, and a further reduction might cause an unwarranted contraction of employment and real product."

By spring industrial production had declined with inventories remaining at undesirably high levels, and many feared that 1967 would be a year of recession. In the April issue of this *Review* the question of "Economic Plateau or Downturn?" was examined with the conclusion that "this question cannot be conclusively settled at this time (early April)."

Both monetary and fiscal actions were very expansionary in the winter and spring, and the outlook brightened quickly. By late May, Darryl Francis, President of the St. Louis Federal Reserve Bank, noted that economic activity was responding to the stimulus.¹ Gardner Ackley, Chairman of the President's Council

of Economic Advisers, testified at the Joint Economic Committee on June 27 that "Three months ago, there were grounds for uncertainty about the need for a tax increase, but now those uncertainties have been eliminated. There is no longer any danger of recession, and there is no escape from the responsibility of imposing additional fiscal restraint."

During the summer and fall, economic activity accelerated rapidly, and the remaining fears of recession were gradually replaced by concern over excessive spending and inflation. A survey in August by the National Association of Business Economists revealed that most members felt that inflation would be the nation's greatest economic problem in the coming year. Chairman Martin, of the Board of Governors, testified to the House Ways and Means Committee on November 29, that "Inflation is no longer just a threat, it is a reality. Its pervasive effects are now spreading through many aspects of our economic life. The advance in prices has been rapid and widespread. Wage increases continue to be far in excess of productivity gains."

To provide perspective for the economic problems of 1968, the following article: 1) examines economic events leading up to 1967; 2) traces the pause in the winter and spring; 3) discusses some of the restraining forces on economic activity in this period; 4) outlines the rapid economic expansion during the summer and fall; 5) reviews the underlying forces bringing about the acceleration; 6) examines the U.S. balance of payments with other nations, and 7) ends with a few conclusions bearing upon the problems of the immediate future.

The review of the year stresses the roles of monetary and fiscal actions of the Government. Much of the monetary analysis is based on one major assumption; namely, that the amount of money supplied relative to people's desires to hold money as an asset causes changes in spending (see pages 4 and 5, *Money in a Modern Quantity Theory Framework*). The impact of fiscal actions is assumed to be best measured by changes in the high-employment budget.² Other views

¹The September Federal Reserve *Bulletin*, states on page 1552 that at the May 23 meeting of the Federal Open Market Committee, "Mr. Francis expressed the view that monetary policy had been highly stimulative thus far in 1967, that fiscal policy was providing an increasing stimulus, and the economy was responding relatively quickly. On the grounds that a marked increase in demands for goods and services was likely later in the year and that monetary policy actions had their main effects after some time lag, he thought some firming in the money market should be sought now to guard against the development later of excessive demands and associated inflationary pressures."

²For a discussion of the high-employment budget concept, see "Estimates of High-Employment Budget: 1947-1967." by Keith Carlson in the June 1967 issue of this *Review*.

of the nature of monetary and fiscal influence may have as much explanatory value, but no attempt is made here to evaluate alternative theories.

Background

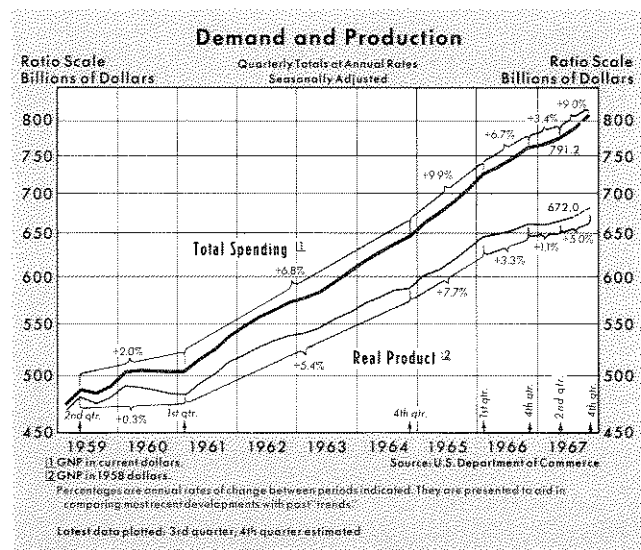
The current economic expansion began in early 1961 and is the longest period of continuous economic growth in the history of the nation. In retrospect, it appears that much progress has been made in economic stabilization, though recessions were narrowly missed in late 1962 and early 1967, and excessive demands and inflation developed in 1965, 1966, and again in 1967.

From early 1961 to the end of 1964, total spending on goods and services rose at a 7 per cent annual rate. Except for a short period of hesitation in late 1962 this was a period of steady economic expansion. Real output increased at a 5.4 per cent rate, which was faster than the estimated 4 per cent rate of growth in productive capacity. As a result, unemployment was reduced from about 7 per cent of the labor force in early 1961 to less than 5 per cent in late 1964, and industrial plant utilization rose from 75 per cent to 86 per cent of capacity. These gains were accomplished in an orderly fashion without great frictions, shortages, or imbalances, and the trend of prices did not deviate substantially from a 1.5 per cent upward trend rate.

Major tools of economic stabilization were moderately stimulative in this period of balanced economic expansion. Growth in the money stock of the nation was at a 2.7 per cent annual rate from mid-1960 to mid-1964, compared with an average 2 per cent rate in the previous decade. The influence of fiscal actions on the economy, as measured by the high-employment budget, moved toward ease. The surplus, which was about \$15 billion in 1960, declined to about \$6 billion in 1964 as expenditures rose and tax rates were reduced.

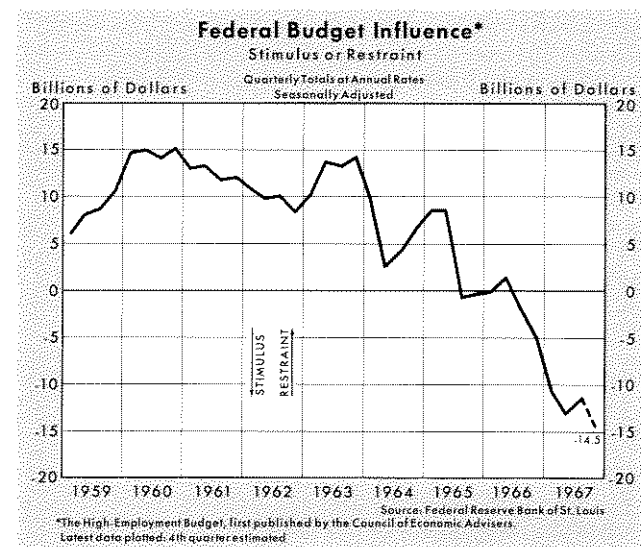
From late 1964 to early 1966, economic activity expanded rapidly. This period was marked by the acceleration of military purchases for Vietnam. Total spending on goods and services rose at a 10 per cent annual rate. Most of the increase in demand was matched by a 7.7 per cent rate of gain in real output. The rapid expansion in output reduced unemployment from about 5 per cent to less than 4 per cent of the labor force and increased industrial plant utilization from 86 per cent to over 90 per cent of capacity. Overall prices rose at a 2 per cent annual rate from late 1964 to early 1966, but considering the rise in total demand, the rate of inflation was less than might have been expected.

Fiscal and monetary actions were very expansionary



in the 1964 to early 1966 period. The Federal high-employment budget was stimulative; it moved from a surplus of \$6 billion in 1964 to a near balance in early 1966. Expenditure programs for both defense and welfare were increased and certain excise tax rates were cut in 1965. Demands for credit to finance the build-up in war materials became intense. Interest rates rose; yields on highest-grade corporate bonds went up from 4.40 per cent in late 1964 to about 5.00 per cent in the spring of 1966.

The monetary authorities provided reserves to member banks in order to avoid a sharp tightening in credit conditions in response to the strong credit demands. The reserves provided for a rapid expansion in commercial bank credit. This, in turn, caused the growth of money to accelerate from the 2.7 per cent rate in the mid-1960 to mid-1964 period to a 4 per cent rate from mid-1964 to the spring of 1965, and further to a 6 per cent rate to the spring of 1966. The acceleration in



Money in a Modern Quantity Theory Framework

THERE has been considerable discussion in newspapers, magazines, and professional journals concerning the effectiveness of various tools of stabilization policy. Often the debate is concerned with the influence of fiscal policy versus monetary policy, or with whether monetary actions are measured better by changes in the money supply or in interest rates. It is not usually pointed out that alternative assumptions about the role of money in economic developments are basic to each of these arguments. This note discusses one commonly-held theory of the role of changes in money as an economic stabilization measure. This theory is referred to as the "modern quantity theory of money."

Central to the theory is the basic economic principle that prices and quantities are determined in individual markets by forces of demand and supply. It is postulated that the demand for money by spending units is similar to their demands for other assets. Individuals allocate wealth among all assets, including money, by comparing the benefits accruing to them in the form of services and income from each asset and their current prices.¹ If there is a discrepancy between desired and actual holdings of any asset (including money balances), the discrepancy is closed by making purchases or sales. These actions change the prices and desired holdings of other assets and in turn set off adjustments by other asset holders. In this way changes in the demand for or the supply of one asset influence prices and quantities held of many other assets.

The Demand For Money

Money can be used in several ways. First, it can be exchanged for present consumption goods which add directly to one's well-being. Second, it can be exchanged for real or financial assets in the expectation of receiving future income, in the form of interest, dividends, or capital gains. Third, money can be held as an asset which renders distinct services in the form of reduced transaction costs and the opportunity to acquire goods or earning assets in exchange for money. Given more dollars, an individual allocates them among the three uses in such a way that the benefits from the marginal dollar put to each use is equal to the benefits from the marginal dollar used in each of the other two ways.

The reader should be aware of some basic concepts and terminology regarding references to the demand for money. The demand for money refers to the demand on the part of individuals and businesses to *hold* an amount of money (usually defined as private demand deposits plus currency) under different circumstances. The demand to *borrow* funds to spend is *not* what is meant by the demand for

money. Confusion between the demand for credit and the demand for money to hold often leads to misinterpretation of the role of interest rates and money in economic analyses.

Another basic concept is the distinction between the demand for money and an amount of money demanded. The demand for money refers to a schedule of different amounts of money desired to be held or demanded at each level of interest rates.² A change in the quantity or amount of money demanded refers to a movement along a demand schedule with respect to interest rates due to changing supply conditions. A change in the demand for money refers to a shift in the demand schedule such that a greater or smaller amount of money is demanded at each level of interest rates.³

Influence of Interest Rates on the Demand For Money

Spending units allocate a given amount of wealth among various combinations of money, assets intended for immediate consumption, and real and financial assets which earn interest or render services over time. Instead of holding money, one could have more goods for consumption purposes or hold more financial and real assets which earn interest. Postponed consumption and foregone interest are the costs of holding money. These foregone opportunity costs are called the "price" of holding money. At given levels of income and wealth an individual would desire to hold less money (and thus more of other assets) at a higher rate of interest than at a lower rate because the price of "consuming" the services rendered by money would be higher; that is, the interest he would forego by holding money is greater.

Influence of Income, Wealth, and Prices on the Demand For Money

The amount of money an individual desires to hold at any point in time depends to a large extent on his income and wealth. Individuals have different preferences and consequently hold different amounts of money, even when they have the same income and wealth. However, the same person usually wants to hold more money when his income or real wealth is greater than when it is smaller. Similarly, the greater the income or real wealth of an economy, the greater the total demand for money.

One effect of price level changes on the demand for money is that when the level of prices increases, one's nominal wealth increases. The effect of this is that, given

¹ Underlying the desire to hold all assets are the benefits or services derived from such holdings. The benefits received from some assets such as food result in its immediate destruction; hence, these assets are acquired in every time period. Some other assets such as consumer and producer durables yield benefits over a much longer asset life and they are acquired periodically. Finally, financial assets, including money, yield benefits as long as they are held. Some services may be acquired without holding an asset directly, for example, haircuts.

² A schedule is a list of alternatives; for example, if the rate of interest is 5 per cent, spending units may desire to hold \$135 billion, but if the rate of interest is 4 per cent, they may desire to hold \$140 billion.

³ An increase in demand is a shift in the schedule such that at a 5 per cent interest rate, spending units may desire to hold \$137 billion instead of \$135 billion.

interest rates, an individual would desire a larger nominal balance of money. A dollar will buy less after prices rise, and in order to maintain the previous "real" quantity of money as a proportion of other assets one holds, a larger "nominal" balance is required.

At a time when prices have not increased, but are likely to increase, the demand for money declines. As mentioned previously, one cost of holding money is the consumption postponed by the individual. If the prices of goods are rising, a given number of dollars will purchase fewer consumption goods in the future than at present. Therefore, in a period of rising prices, the cost of holding money includes both the postponement of consumption and the reduced amount of consumption at some future time. For these reasons, expectations of rising prices increase the cost of holding money. As previously stated, increases in the cost (price) of holding money reduces the demand for it, and therefore increases the demand for other assets.

Money Stock and Economic Activity

With given income, interest rates, prices, and services received from holding real assets, spending units desire to hold certain amounts of real assets, money and other financial assets, and to buy goods and services. Over time, spending units sell their services and commodities produced and receive compensation in the form of immediate additions to their stock of money. The amount of money received in excess of the amount they desire to hold is used to acquire real and other financial assets and to purchase consumption goods and services. Thus, changes in the rate of spending by economic units may be viewed as part of an adjustment process which tends to close the discrepancy between desired and actual money balances. These adjustments help to bring about another part of the process. Commodity prices and yields on financial and real assets change as individuals and businesses speed up or slow down the rate at which they pay out the existing amount of money.

Most assets are produced in response to changes in their prices; hence, changes in demand call forth changes in the amount supplied. By contrast, changes in the money stock in the short run are essentially independent of factors influencing the demand for money. Several studies have shown that changes in the money stock are little influenced by such factors as changes in income, commodity prices, and interest rates.⁴ The basic determinant of changes in the actual stock of money is the rate at which reserves and currency are supplied to the banking system and to the public. Federal Reserve open-market transactions are a major factor affecting reserves, and are therefore a potential source of discrepancy between actual and desired money balances.

A Federal Reserve open-market purchase leads to the following sequence of events. First, Government security dealers receive demand deposits in exchange for Government securities; higher prices (lower interest rates) on the securities acquired induces the dealers to make the exchange. But in most instances, dealers do not desire to hold the additional demand deposit. In the normal course

of their business they rebuild their inventory of securities or repay debt, and as a result, money is passed on to other sellers of securities. These adjustments by dealers spread the new balances throughout the country very rapidly. Prices on securities (interest yields) change until a new equilibrium is reached in the securities market.

Second, as a result of an open-market purchase, commercial banks receive reserves, which are nonearning assets. As with any economic unit, banks have a demand for cash, for income earning financial assets, and for real assets. With given yields on various assets and with a large injection of new reserves, banks will have more reserves than desired. This discrepancy will be eliminated by banks exchanging demand deposits for financial assets (loans and investments). Spending units are willing to sell securities to banks (or borrow) as long as the interest rate charged by banks is less than the expected yields from hiring labor services and from other assets. These spending units, in turn, exchange the demand deposits received for additional services of labor, for goods and services, and for real and other financial assets.

In this manner other spending units come to receive additions to money balances in excess of desired amounts. They change their rate of spending to eliminate this discrepancy. Since the money stock is little affected by demand forces, spending does not destroy the money balances, but merely passes them to someone else. The process continues until new levels of income, prices, interest rates, and so forth, are reached and spending units desire to hold the existing stock of money.

Summary and Conclusion

Growth in the output and wealth of a country is determined primarily by growth in population and technology, together with people's time preferences and attitudes toward uncertainty. However, total production may deviate from its long-run trend as a result of any one of a number of disturbances. An outside influence which changes the prices and quantities of some assets initiates a chain of adjustments in the prices and quantities of other assets in the direction of re-establishing an equilibrium. A discretionary change in the money supply initiated by monetary authorities is such an influence.

Among all assets, money is considered unique because of the services it renders and because of the control which monetary authorities can exercise over it. The demand for money in the short-run is little affected by those factors which determine the supply. Therefore, if the stock of money is increased at a rate which deviates from growth in its demand, the resulting discrepancy will cause a chain of adjustments involving all other assets. These adjustments are observed in the form of changes in spending (quantities acquired of consumption goods and services, real assets, and financial assets), and of changes in prices (including interest rates).

Growth in the money stock can serve as an indicator of the thrust of monetary actions on economic activity, but it need not be a source of disturbance to an economy since its growth can be controlled. Money is not the only possible indicator of monetary actions, and it is certainly not the only potential source of disturbance to stable growth.

LEONALL C. ANDERSEN
JERRY L. JORDAN

⁴Some of these studies are discussed by Leonall C. Andersen in "Three Approaches to Money Stock Determination," this Review, October 1967.

monetary growth was probably very expansionary, since a faster rise in the money supply than in the desire to hold money as an asset causes spending to rise.

From early 1966 to late 1966, the rate of growth in total spending slowed. From the first to the fourth quarter, spending went up at a 6.7 per cent annual rate, compared with the 10 per cent rate from late 1964 to early 1966. Relative to the ability of the economy to produce as it approached capacity, however, total demand remained as excessive in this period as it had in the previous period. The upward climb in overall prices rose from the 2 per cent rate in the earlier period to a 3 per cent rate.

Early in 1966 output reached virtual capacity, and could only grow as the stock of capital, labor, and other resources grew. While price increases accelerated, some prices were inflexible in the short-run, and the strong demands caused shortages to develop. These shortages became a restraining force on total spending, since many contracts could not be completed or were delayed because key parts were not available. Real output, which had been rising at a 7.7 per cent pace from late 1964 to early 1966, slowed to a 3.3 per cent rate from early to late 1966.

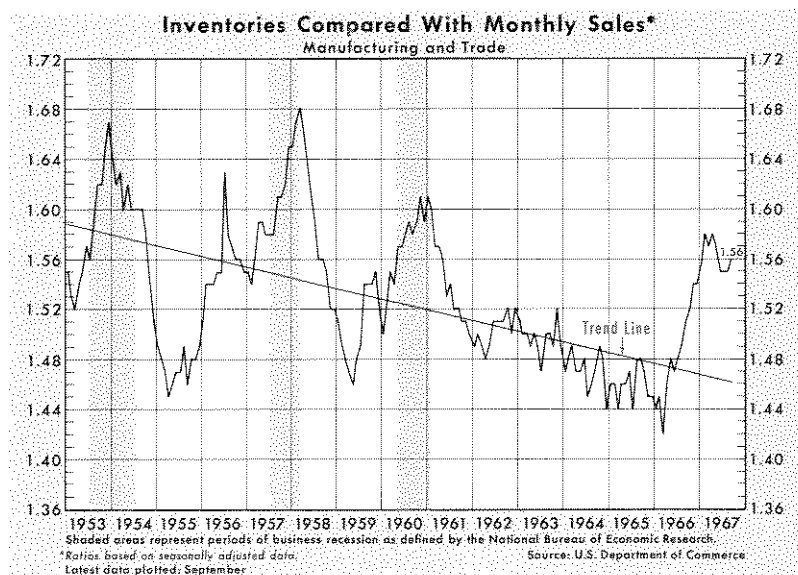
The slowdown in aggregate spending in 1966, however, cannot be fully explained by capacity limitations. From the first to the second quarter growth in consumer purchases declined sharply. Special factors, such as concern about automobile safety and expectations of improved new models, caused some potential customers to postpone buying. Although overall fiscal actions were stimulative in the period as a whole—the high-employment budget moving from near balance in early 1966 to a \$5 billion annual rate of deficit in late 1966—there was some fiscal restraint in the spring, particularly on consumers. Proposed excise tax cuts on automobiles and on telephone calls were rescinded, income tax payments were accelerated by placing withholding rates on a graduated basis, and social security taxes were raised by enlarging coverage from \$4,800 to \$6,600 of annual income.

Monetary restraint was probably a factor in the slower growth in spending in late 1966. From April 1966 to January 1967, there was little change in the money supply—a very restrictive monetary action compared with the 6 per cent increase in money in the previous twelve

months. Through the summer of 1966 the upward pressure on spending from the earlier monetary expansion probably continued.

Demands for credit accompanying the economic expansion and rising price expectations in the summer of 1966 were intense, while the supply of funds available to lend was reduced by the slower rate of growth of bank credit and money. Interest rates, which are the equilibrators of the demand and supply of funds, rose markedly, culminating in the so-called August-September “crunch.” Interest rate laws and other institutional rigidities interfered with the free market process, causing some credit flows to be cut off or reversed despite borrower willingness to pay competitive rates. As a result, pressures were focused heavily on a few economic sectors.

By the fall of 1966, however, income growth had increased the demand for money as an asset relative to the money stock, producing a restraint on spending. Some spending units began to reduce outlays to conserve cash and revised their expectations downward, and credit demands tapered off. Interest rates, after reaching a peak in the early fall, declined until early 1967. Lower rates gave an impression of an easier monetary situation despite continued slow growth in the money stock. Monetary actions usually have little effect on Federal Government spending, and they apparently had little immediate effect on the rate of inventory accumulation (since much of it may have been involuntary). Final purchases by the private sector (gross national product less Federal Government outlays and net purchases of inventories), which after growing at about a 10 per cent rate from late 1964 to early 1966 had slowed to a 4.4 per cent rate from the



first to third quarters of 1966, slowed further to a 2.6 per cent growth rate in the final quarter of 1966.

The marked slowing in the growth of final spending by consumers and businesses during 1966 was partially offset by accelerations in Government spending and by some, apparently undesired, increases in business inventories. Inventories, which had risen at a \$7 billion annual rate in the 1962-1965 period, went up at a \$12 billion rate in the first three quarters of 1966 and at an \$18.5 billion rate in the final quarter.

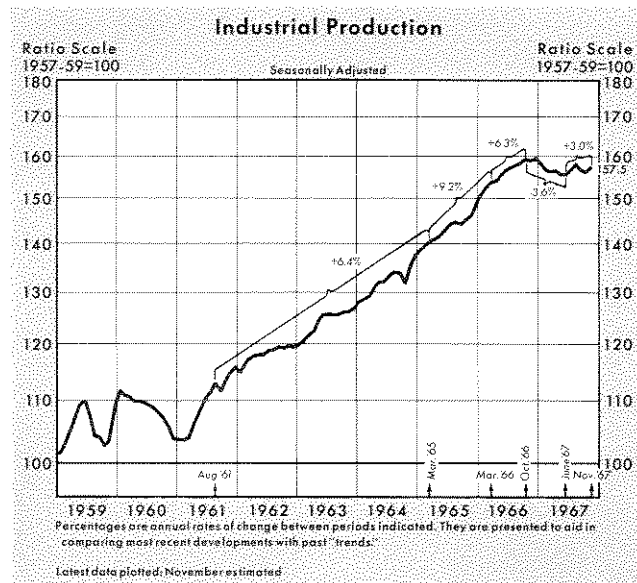
Economic Pause - Winter and Spring

The hesitation in economic activity that began in late 1966 became more pronounced in early 1967. Total spending and production slowed considerably through the winter and spring, and some sectors of the economy experienced declines. Total outlays for goods and services, which rose at a 10 per cent annual rate from late 1964 to early 1966 and at a 6.7 per cent pace during most of 1966, went up at a 3.4 per cent rate in the first half of 1967. Cutbacks in the growth of real production were even sharper, declining from a 7.7 per cent annual rate from late 1964 to early 1966, to a 3.3 per cent pace during most of 1966, and to a 1.1 per cent rate in the first half of 1967.

Government purchases of goods and services continued to grow in early 1967, but private spending was little changed on balance, remaining at about the \$600 billion annual rate. In the first half of the year, Government spending went up at a 17 per cent annual rate after rising 14 per cent in 1966, 10 per cent in 1965, and at an average 4 per cent rate in 1963 and 1964. Greatest gains were in defense expenditures, but purchases for nondefense programs of the Federal Government and spending by state and local governments also expanded.

Retail sales rose at about a 2 per cent rate from the early fall of 1966 to the late spring of 1967 after advancing 8 per cent in the previous year. Fewer automobiles, appliances, television sets, and other durable goods were sold in the spring of 1967 than in the previous fall. Purchases of nondurable goods as well as consumer services, however, continued to rise. Saving rose from 6 per cent of personal income after taxes in 1966 to 7 per cent in the first half of 1967.

Business firms curtailed their spending sharply. The biggest cutbacks were made in inventory accumulation, from an \$18.5 billion annual rate in late 1966 to a \$0.5 billion rate in the second quarter. Nevertheless, inventories apparently remained above desired levels in relation to sales through the first half. Outlays for machine tools and other producers' durable equipment were at about the same level in the late spring of 1967

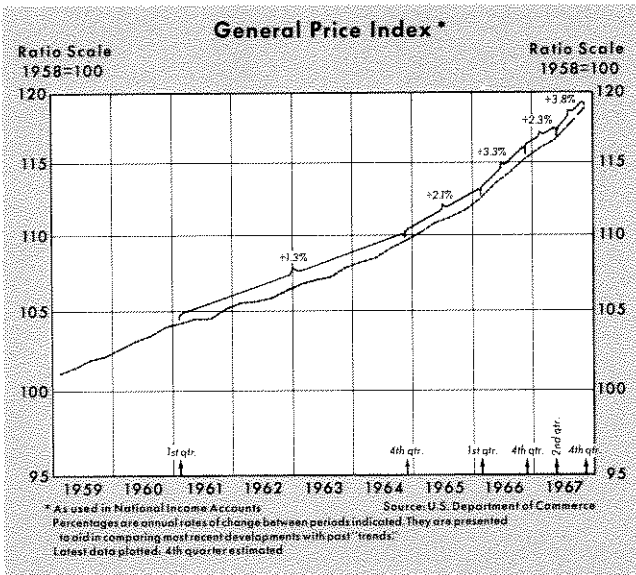


as in the fourth quarter of 1966, while purchases of plants, office buildings, and other nonresidential structures declined slightly.

The relatively high level of inventories and the slower growth in spending in the winter and spring led to cutbacks in production. Real output of all goods and services changed little from late 1966 to the spring of 1967, after growing at a 4 per cent trend rate from 1957 to 1966. Industrial production declined at a 3.6 per cent annual rate from October 1966 to June 1967, after going up at a 5 per cent trend rate in the 1957-1966 period. Production for defense continued to expand, but output of civilian commodities was severely trimmed. Construction expenditures, which had declined from a \$77 billion annual rate in early 1966 to a \$72 billion rate at year end, changed little to the spring of 1967.

Reflecting the decline in industrial production, unused capacity expanded. Employment in May 1967 was at about the level of the previous fall, and unemployment remained relatively low as businesses attempted to hoard labor, and they made adjustments by reducing the length of the workweek. By late spring about 85 per cent of industrial capacity was being utilized, down from about 90 per cent six months earlier.

Despite the pause in economic activity, inflationary pressures remained strong. Overall prices increased at a 2.3 per cent annual rate in the first half of 1967, following the 3 per cent rate in the previous three quarters. Much of the slowing reflected a changed supply situation in agricultural products, bringing about a decline in quotations for farm products, processed foods, and feeds.



Price markups in the spring of 1967, when overall demand for goods and services was relatively mild, reflected both the strong demand for military items and "cost-push" forces generated by earlier excessive total demand. Some prices, such as union wages and those set in other contracts, were relatively inflexible during earlier periods of excessive demands but moved up later at times of renegotiation. Other price adjustments had been retarded in 1966 by the guide posts. As these wages and prices worked up in late 1966 and early 1967, the increased production costs added to the inflationary pressures.

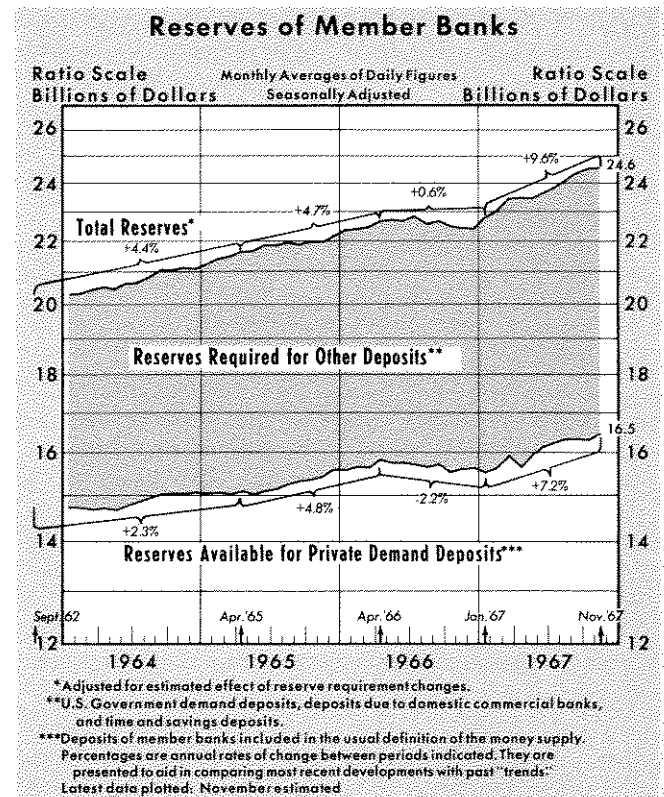
Of the two major tools of the Government for influencing the pace of economic activity, one was a stimulative force and the other was a restraining force in early 1967. Fiscal actions provided a strong upward thrust to spending; in fact, spending by Government (Federal, state and local) accounted for the entire increase in total spending. These outlays, through the "multiplier," probably had a stimulative effect on consumer and business expenditures. Monetary developments, on the other hand, probably operating with a lag, were a dampening force on private spending.

The Federal Government's high-employment budget was at a \$12 billion annual rate of deficit in the first half of 1967, \$8.4 billion more stimulative than in the previous six months. Most of the greater stimulation came from more defense spending, but welfare programs and other outlays of the Government continued to grow. In contrast, during the Korean and earlier conflicts, marked increases in war expenditures were partially offset by reductions in nondefense spending.

Monetary actions from the spring of 1966 to early

1967 had a restrictive influence on spending in early 1967. The money stock of the nation, demand deposits and currency outside banks, had changed little from April 1966 to January 1967. The growing trend in income and probably in the desire to hold money as an asset, combined with the fixed volume of money in existence, may have caused consumers and businesses to take actions designed to build up cash balances. A household or business could build up its cash only by spending less on goods, services, and investment than it received from income or sales of investments. Such adjustments, which could not add to the total stock of money, merely caused others to have reduced cash inflows, and they, in turn, had to adjust their spending. Such a process tends to continue until with reduced flows of income and changes in other economic variables, desired cash balances equal the stock of money in existence. After the money supply began to rise rapidly in the late winter, it probably took several months before the discrepancy between actual and desired cash balances was great enough to stimulate spending by much.

The marked change in the rate of money growth in the spring of 1966 occurred chiefly in demand deposits. Deposits of member banks are affected largely by the volume of reserves available to support them (i.e., deposits in Reserve Banks and vault cash). This control



under current arrangements depends upon the legal requirement that banks must hold reserves equal, on average, to about one-seventh of their deposits, and the Federal Reserve has the power to manage the volume of these reserves. From the spring of 1965 to the spring of 1966, total reserves of member banks rose 4.7 per cent, and from then until early 1967, they changed little on balance. Some reserves went to support interbank, Government, and time deposits. Remaining reserves available for private demand deposits increased at a 4.8 per cent rate from the spring of 1965 to the spring of 1966, and then declined moderately until January 1967.

Rapid Economic Expansion-Summer and Fall

Sometime during the late spring of 1967, another marked and sustained change occurred in the pace of economic activity. Total spending rose at an estimated 9 per cent annual rate in the last half of 1967 after going up at a 3.4 per cent pace in the first half. Real output of goods and services, which had changed little on balance early in the year, expanded at an estimated 5 per cent annual rate in the last half despite several major strikes. Reflecting the strength of aggregate demand relative to productive potential, inflationary pressures intensified.

The acceleration in total spending since the second quarter has reflected primarily a turnaround in outlays by businesses, but Government and consumer spending has also grown rapidly. Business inventories, which changed little in the spring, were being accumulated again in the fall, and the pace of residential construction increased.

Real output of goods and services rose in response to the greater demands. During the summer industrial production went up sharply, though in the fall interruptions from strikes caused cutbacks. On balance, industrial production rose at about a 3 per cent rate from June to November, following a decline at a 3.6 per cent rate from October 1966 to June. Construction expenditures increased at an 8 per cent annual rate from the spring to the fall, after remaining virtually unchanged from the fall of 1966 to the spring of 1967. Production of all goods and services rose at an estimated 5 per cent rate in the last half of 1967, a pace slightly faster than the trend growth in productive capacity.

Despite the increase in production since late spring, some resources were idle at year-end. The excess capacity is attributable to work interruptions caused by strikes and the lagged response of production to increases in demand. Unemployment amounted to 3.8

per cent of the labor force in the spring and rose to 4.3 per cent in the fall. About 84 per cent of productive capacity was being utilized in the fall, down slightly from the spring. Average hours worked in manufacturing, however, increased from 40.3 per week in May and June to 40.7 in October.

Inflationary pressures strengthened in the summer and fall of 1967, as pressures from rapidly expanding demands for goods and services were added to the existing cost-push forces. Overall prices have risen at an estimated 3.8 per cent annual rate since the second quarter compared with the 2.3 per cent rate of increase in the first half. Wholesale industrial prices, which were unchanged from February to July, have since gone up at a 3 per cent rate.

Expansionary Forces on Economic Activity - Summer and Fall

Both fiscal and monetary developments were very stimulative in the summer and fall of 1967. The sharpest change has been in monetary factors. Fiscal actions, which were already the most stimulative since World War II, may have become slightly more expansive.

The Government's high-employment deficit changed little, from about a \$12 billion rate in the first half of 1967 to an estimated \$13 billion rate in the second half. It does not appear that the minor move to a greater deficit since mid-year has been primarily responsible for the marked upturn in total demand and production. The marked move from a \$3 billion annual rate of deficit in the last half of 1966 to the \$12 billion rate in the first half of 1967 might have been effective with a lag.

Monetary expansion after January of this year may have been a major force contributing to the more rapid growth in total spending after the spring. Net purchases of securities by the System have been relatively large since early in the year, and these purchases have added directly to member bank reserves. In early March, the System lowered reserve requirements from 4 per cent to 3 per cent on savings deposits and on the first \$5 million of other time deposits. In early April, the Reserve Banks reduced the discount rate on borrowed reserves from 4½ per cent to 4 per cent. In late November, following the devaluation of the British pound, the rate was returned to 4½ per cent. As a net result of these actions, Federal Reserve credit, adjusted for changes in reserve requirements, has risen at a 12 per cent annual rate since January.

Largely because of the pronounced increase in Federal Reserve credit, total reserves of member banks (adjusted for the change in reserve requirements) have

grown at a 10 per cent annual rate since January. They had not grown at all from April to January.

Reserves available for private demand deposits have risen at a 7 per cent rate since January in sharp contrast to a 2 per cent rate of decline from April 1966 to January. From 1957 to 1966 these reserves rose at an average 1.5 per cent per year rate.

With the substantial inflow of reserves, commercial banks have expanded credit about 12 per cent since last December. By comparison, bank credit rose at a 1 per cent annual rate in late 1966 and at 7 per cent per year from 1957 to 1966. Bank loans have increased about 8 per cent since last December, and investment holdings have risen about 23 per cent.

Bank deposits have also risen rapidly as both borrowers from banks and sellers of securities to banks received newly created deposits. The broader concept of money, which includes all privately held commercial bank deposits plus currency held by the public, has risen at a 12 per cent rate since January. In the previous nine months, this magnitude increased at a 4 per cent rate, and from 1957 to 1966 at a 6 per cent rate.

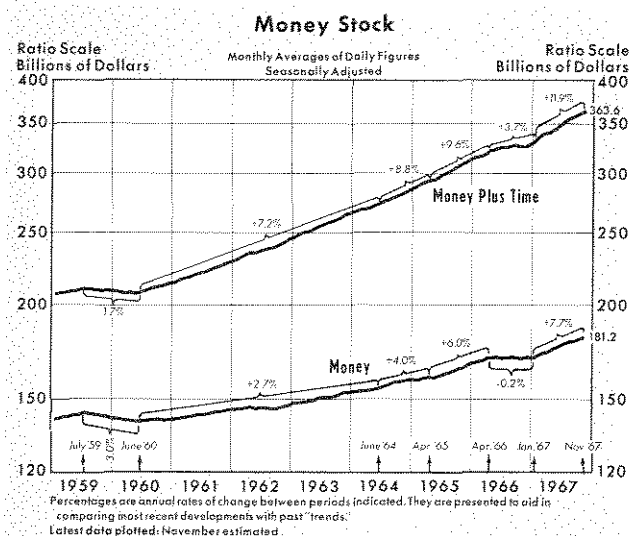
Money, as more commonly defined to include private demand deposits and currency, has risen at about a 7 per cent annual rate since January. In the previous nine months it had changed little, and from 1957 to 1966 it grew at an average 2.4 per cent rate. With the much sharper acceleration in money supply than in people's incomes and wealth in 1967, a discrepancy may have developed between the money supply and desired money holdings, creating an upward pressure on spending.

The marked change in the trend of Federal Reserve credit, bank reserves, and money in early 1967 may

have been the result of several unusual market developments. Monetary actions from day to day are directed primarily at influencing money market conditions.³ At the November 1966 meeting of the Open Market Committee, it was decided that less monetary restraint was desirable and that money market conditions should be eased.⁴

After November 1966 money market conditions eased. Net borrowed reserves (borrowings from Reserve Banks less excess reserves) fell from \$400 million in October to about zero in late January, interest rates on three-month Treasury bills declined from 5.30 per cent to 4.65 per cent, and other market conditions became more comfortable. After the fact, it appears that the easing of money market conditions reflected a contraction of credit demands rather than any action on the part of monetary authorities. The banking system did not expand and thereby continued to act as a restraining force on spending.

In economic pauses of 1953-54, 1957-58, and 1959-60, the money market conditions indicator likewise showed ease, while monetary growth lagged behind. The fast shift toward monetary expansion in early 1967 may have reflected several unusual factors affecting credit demands and money market rates. The large Federal deficits bolstered the demand for credit and induced expectations of large future credit demands. Hence, rapid expansion in bank reserves, bank credit, and bank deposits occurred at a higher level of interest rates than would have been possible in a period of a more nearly balanced budget. Also, after many businesses found that during the "crunch" of August-September 1966 short-term credit might not always be available, they sought in early 1967 to improve their basic liquidity by borrowing more long-term funds with a result that the demand for credit by businesses was abnormally intense, given the current economic conditions. Further, a large money market bank reduced the prime rate on business loans from 6 per cent to 5½ per cent in late January. This action may have been taken in advance of basic supply and demand forces, and many other banks did not follow the lead. Nevertheless, the announcement caused other market rates to fall temporarily, and then the System, following its operating guide of slightly easier market conditions, tended to supply reserves as the basic market forces reasserted themselves. Consequently, interest



³See the *Annual Reports* of the Board of Governors of the Federal Reserve System for 1966 and earlier years and the released Policy Entry Records for the first eight months of 1967.

⁴For a summary of the meeting see the *Annual Report* of the Board of Governors of the Federal Reserve System for 1966, pages 190-195.

rates probably declined more sharply than they would have otherwise.

As a result of these and other developments, money market conditions in the February through April period were consistent with a rapid increase in bank reserves, bank credit, and the stock of money. These developments had an expansive effect on economic activity and brought about an upward revision in price expectations. Credit demands were stimulated, and by late April capital market interest rates began rising. The continued rapid monetary expansion placed further downward pressure on short-term rates until June, when credit demands became so intense that short-term interest rates rose despite continued monetary expansion.

Interest rates went up sharply in late 1967, but indications are that they were not an effective restraint on borrowing and spending. From late April 1967 to early December, interest rates on highest-grade corporate bonds rose from 5.10 per cent to 6.14 per cent, and from June to early December, yields on three-month Treasury bills went up from about 3.50 per cent to 4.95 per cent. In order to be a restraining force on spending, market interest rates must exceed the anticipated level of return on real capital adjusted for price expectations. Meanwhile, rapid monetary expansion, which leads to greater spending and profit opportunities, causes upward adjustments in the expected return on capital. Eventually, the greater spending causes upward revisions in price expectations.

Changing price expectations have probably had a significant effect on market interest rates. Prices have been rising faster in recent years than in the early 1960's, and expectations of future price movements are probably being revised upward. Borrowers are more willing to seek funds and pay higher rates when they anticipate repaying in cheaper dollars. Savers and investors take into consideration the expected purchasing power of funds to be returned.

Expectations of borrowers and lenders cannot be quantified. The accompanying chart illustrates the principle, however, by comparing the market rate with a "real" rate drawn by assuming that expectations of future price developments are based on price movements in the two previous years. As price increases have accelerated in recent years, the adjustment for price expectations has grown, and the spread between market rates of return and "real" rates of return has widened. Real interest rates give a much different picture of the influence of recent market interest rate developments. Current market interest rates, rather than being at abnormally high levels, may be lower in a real sense than in the 1962 to early 1964 period.

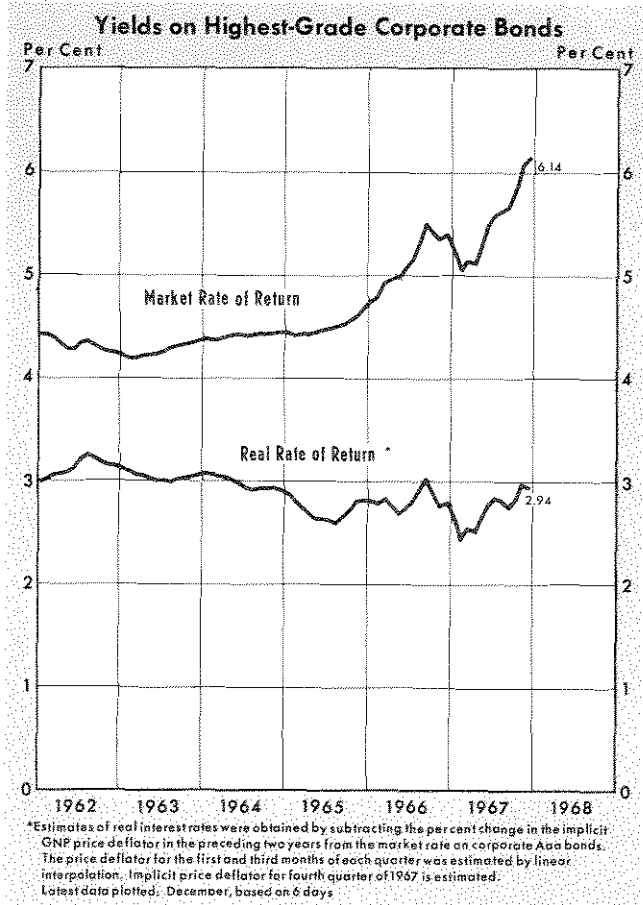
Developments in the Balance of Payments

The U.S. balance of payments in 1967, as in any year, was greatly affected by movements in total demand in the United States and abroad and in relative interest rates. In 1967, as in 1966, there were also special conditions that influenced the balance of payments, including the war in Vietnam and the Arab-Israeli war.

The Current Account—Imports, reflecting the pattern of total demand for goods and services in the U.S., grew at a 15 per cent rate in the second half of 1966, then remained unchanged in the first half of 1967. During the second half of 1967 total demand resumed the rapid growth rate of 1966. However, imports lagged somewhat behind, showing only a modest increase in the last half of the year.

Estimated income in the rest of the world grew at a relatively slow rate in the last half of 1966 due, in part, to some weakness in several Western European countries.⁵ U.S. exports correspondingly increased at a 6 per cent annual rate in the second half of 1966, down

⁵Income of the rest of the world is estimated on the basis of the growth in the imports of the rest of the world.



from a 9 per cent growth in the first half. In the first half of 1967 estimated world income accelerated somewhat, and U.S. exports also accelerated. In the second half exports are estimated to have continued to grow at a fairly steady rate. As a result of these diverse movements, the trade account of the U.S. balance of payments weakened in the second half of 1966, and improved in the first and second halves of 1967.

U.S. TRADE BALANCE			
Seasonally Adjusted at Annual Rates			
(Billions of Dollars)			
	Exports	Imports	Balance
1966 2nd Half	29.6	26.5	3.1
1967 1st Half	30.8	26.5	4.3
1967 2nd Half*	31.5	26.7	4.8

*estimated
Source: U.S. Department of Commerce

The 14.3 per cent devaluation of the British pound sterling on November 18 took place too late in the year to affect the trade picture of 1967. However, it will have some effect on the trade in 1968. There are three ways in which this effect can operate:

(1) *The Price Effect.* To the extent that British exports will be cheaper, it will provide an incentive for Americans to import more from the United Kingdom. On the other hand, United States exports to the United Kingdom will be more expensive, which will discourage some British purchases. Thus, the price effect of the devaluation will be to make our trade surplus smaller than it otherwise would have been.

(2) *The Third Country Effect.* The United Kingdom may be able to undersell the United States in foreign markets because of the devaluation. This effect is not expected to be large because the United States exports a different mix of products than the United Kingdom (largely food products and sophisticated consumer and producer durables).

(3) *The Income Effect.* If the United Kingdom can correct its balance of payments more quickly as a result of devaluation, it will be able to engage in stimulative domestic policies to encourage growth at an earlier date than would have been possible without devaluation. This rise in the income of the United Kingdom would encourage exports from the United States.

The Price and Third Country effects will hurt the U.S. balance of trade. The income effect will help. What on balance will be the net effect in 1968 of sterling devaluation is impossible to say now.

The non-trade components of the current account were weaker in 1967 than in 1966. The balance-of-pay-

ments costs of the war in Vietnam are estimated to have increased \$500 to \$600 million above the level for 1966 (from \$3.7 billion to about \$4.3 billion); Canadian Expo '67 resulted in a bulge in tourist spending in the second and third quarters of 1967 by as much as \$400 million; finally, the Middle-East crisis in June triggered a large flow of transfer payments to Israel. If there is no additional escalation of the Vietnam War, it is anticipated that its balance-of-payments costs will not rise above their present level. The other large increases in non-trade spending in 1967 will probably not continue into 1968.

In 1967 the trade balance is estimated to register a surplus of about \$4.6 billion, up from the \$3.7 billion of 1966. In spite of the temporary but heavy bulge in the non-trade accounts, the current account will also probably show some improvement in 1967, but it will be by a more modest \$200 to \$300 million to around \$5.0 billion surplus.

The Capital Account—Complete data on the U.S. capital account are available only through the first half of 1967, which, of necessity, makes a discussion of this segment of the balance of payments relatively more incomplete. A major determinant of year-to-year movements in the capital account are developments in interest rates, and secondary factors are the volume of foreign trade and the relative attractiveness of foreign versus domestic investment. Because of the unusually sharp fluctuations in the last eighteen months, interest rates have played an even more important role in determining capital movements than is usually the case.

Although the level of direct investment has increased during the last two years, the proportion financed from foreign sources of capital has become larger. Thus, the effect of U.S. direct investment abroad on the balance of payments has been reduced. This phenomenon is due not only to rising interest rates in the United States relative to Europe, but also to the administration's voluntary program to correct the balance-of-payments deficit.

The effect of fluctuations in U.S. interest rates can be especially observed in the movements of short-term capital and gyrations in the official settlements measure of the balance of payments. The rapid run-up of interest rates in the third quarter of 1966 attracted a heavy inflow of capital, especially short-term capital. When rates started to fall and liquidity positions of banks eased in the fourth quarter of 1966 and the first quarter of 1967, the short-term capital inflow was at first reduced and then reversed. There was a rebound in interest rates in June with liquidity positions of banks tightening. In the third quarter of 1967, short-term

interest rates continued rising, with a corresponding squeeze on the liquidity of commercial banks. This development in the domestic market had the effect of stopping the outflow of short-term funds in the second quarter (the net result of a continued outflow in the early part of the quarter and a sharp reversal to an inflow in June). The inflow is estimated to have continued during the third quarter.

foreign official holdings of dollar claims on the United States are considered a method of financing the U.S. deficit.⁶

In the year ending September 1967, the official settlements deficit was \$2.2 billion, while the liquidity deficit was \$1.5 billion. This compares with an official settlements deficit of \$0.7 billion, and a liquidity deficit of \$1.2 billion in the year ending September 1966. Both measures of the balance of payments have deteriorated in the last year.

INTEREST RATE SENSITIVITY OF FOREIGN-HELD DOLLAR BALANCES

	Change In		
	Average 3-Mos. U.S. Treasury Bill Rate	Private Foreign Holdings of Liquid Dollar Assets*	Overall Balance of Payments (Official Settlements)*
(Millions of Dollars)			
1966 III	+ .45	1,211	+ 405
IV	+ .17	671	- 198
1967 I	- .69	- 709	-1,282
II	- .85	94	- 682
III	+ .63	800†	+ 2

*Not seasonally adjusted.

†Estimated.

Source: U. S. Department of Commerce and Board of Governors of the Federal Reserve System.

These sharp fluctuations in foreign private holdings of liquid dollar assets have been responsible for the equally sharp fluctuations in the overall balance of payments, measured on the basis of the official settlements balance.

Overall Balance of Payments—There are two officially accepted measures of the balance of payments. The differences represent the way the dollar holdings of foreigners are viewed. The traditional measure of the balance of payments is the *liquidity balance*, measured by the change in the United States gold stock (and other reserve assets of the United States Government) and increases in liquid liabilities to all foreigners. Even if foreigners wish to hold increasing amounts of dollars because of their need for an international currency, the increases would still be considered as a part of the deficit.

A newer measure of the U.S. balance of payments is the *official settlements balance*. This measure attempts to make an adjustment for foreign holdings of dollars which are based on the foreign desire to hold dollars. The official settlements balance assumes that private foreigners and international institutions hold dollars because they want to. They are, in effect, buying the liquidity services of the dollar just as they could buy any other services which the United States sells. Therefore, the official settlements balance considers changes in private foreign dollar holdings as a capital inflow rather than as a method of financing the deficit. Only

Conclusions and Outlook

The year 1967 was the seventh year of continuous economic expansion, and for that reason may be considered another success for economic stabilization. From the point of view of "fine tuning," however, the year was the biggest disappointment since 1960. A recession was narrowly missed in the early months, per capita real income was about unchanged in the first half, and at year-end inflationary forces were strong and apparently growing.

Stabilization knowledge, tools, and skills have probably progressed to the point where better results might have been obtained. To the purist, there is little consolation in the knowledge that, with our Governmental system of checks and balances, impasses between the legislative and Administrative branches may develop. Hence, the budget continued to be an extremely inflationary force while a debate raged over whether the adjustment should be a tax increase or an expenditure cut. Meanwhile, monetary expansion, tolerated by an effort to secure fiscal restraint, may have contributed to the inflationary forces.⁷

Developments during 1967 provided tests, but certainly not conclusive ones, of two issues which have been debated for years. One is whether fiscal actions or monetary developments have a stronger influence on consumer and business spending. From the spring of 1966 to early 1967, there was monetary restraint but increasingly expansive fiscal policy. Private spending hesitated, and apparently only resumed its advance following a period of renewed monetary expansion. These developments provide support for the view that monetary developments, as they were applied, were

⁶Both the liquidity balance and official settlements balance treat a decline in the gold and international assets of the U.S. Government as a method of financing a deficit.

⁷See Policy Entry Record for the August 15 meeting of the Open Market Committee, page 7, reporting "a number of members expressed the judgment that... uncertainties about the outcome with respect to the fiscal program now under active consideration by Congress militated against a change in monetary policy at present."

relatively stronger than fiscal developments.

A second debated issue is whether changes in interest rates or changes in money stock are a better measure of monetary effect. During the summers of both 1966 and 1967, market interest rates were at relatively high levels and rising rapidly. After the 1966 period of no growth in money stock, economic activity slowed; following the 1967 period of rapidly rising money stock, spending quickened and inflationary pressures intensified. These developments provide some evidence for the view that growth rates in money are a better practical indicator of the effect of monetary actions than are interest rates. In theory, one measure is as good as the other and neither measure alone is a complete explanation of the effect of monetary actions on the economy. Money supply, according to the theory applied in this article, must be related to money demanded, while market interest rates, according to the Keynesian analysis, must be related to the anticipated rate of return on capital. The test indicates that in the periods reviewed, growth in the demand for money was relatively stable and, hence, marked changes in the growth rate of money supply had a predictable effect on economic activity. Changes in market interest rates, however, were difficult to interpret because of changes in the anticipated return on capital.

Conditions at year-end indicate that stabilization problems will present a formidable challenge during the year 1968. Late in 1967, spending is rising twice as fast as productive resources, prices are increasing in response to both past and current demands, market interest rates have risen to the point where many concerns were threatened by legal and institutional rigidities, balance of payments problems continue, and both monetary and fiscal influences are more stimulative than at any other time in two decades.

An initial problem in 1968 will probably be to contain excessive demands for goods and services. Less expansive fiscal and monetary actions may be desirable for the general welfare even though they do impinge on some activities more than others. Some have advocated selective credit controls as alternatives, but such controls restrain particular activities and also raise problems of resource allocation, interfere with freedom, and are difficult to administer.

Even if a slowdown in spending growth can be gained within a reasonable period, upward pressures on prices from past excessive demand (called cost-push) will probably continue for a period. As a result, while inflationary expectations are being reduced, the economy may experience both more price increases and more unemployment than would be optimal in

the long run.

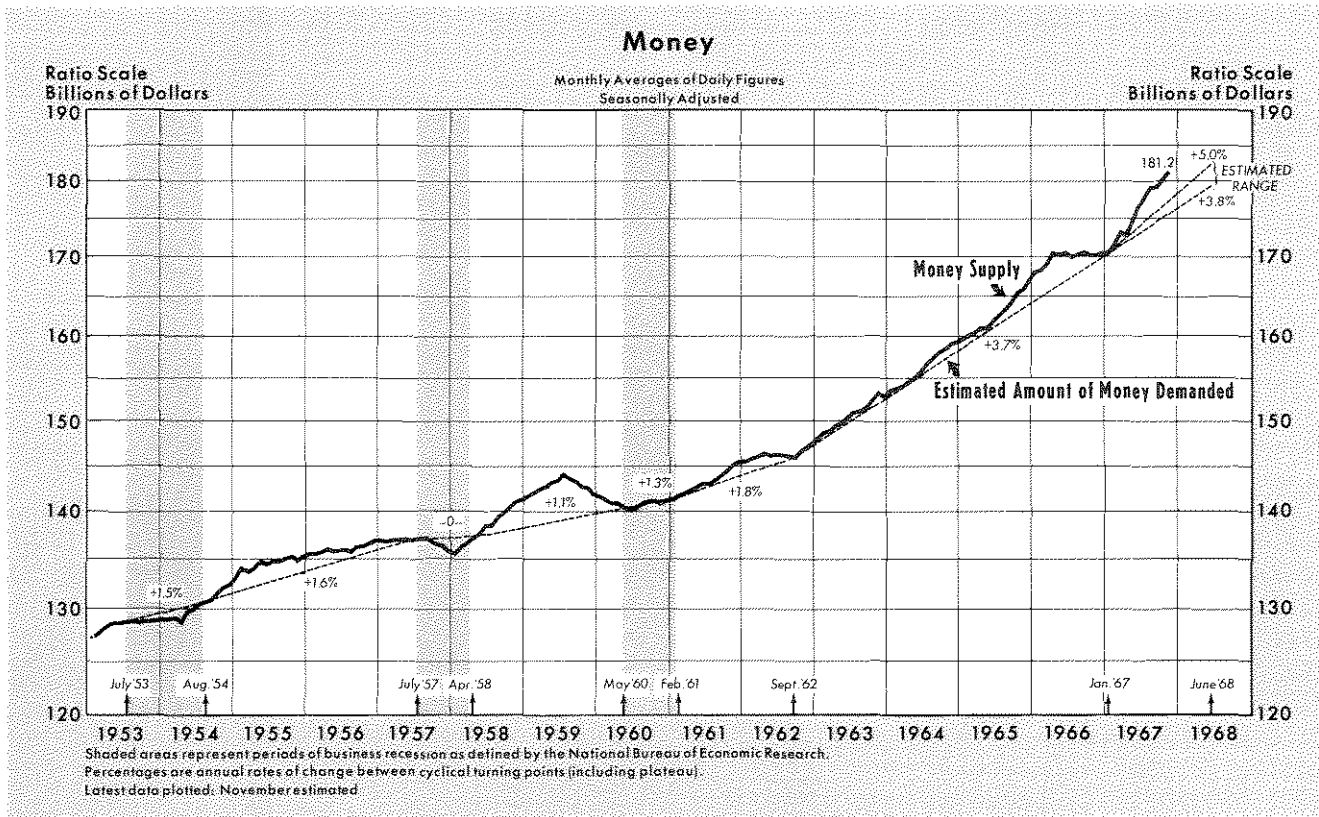
Further, any slowing of the excessive demands could "snowball" into inadequate demands. If growth in spending moderates and inflationary expectations recede, equilibrium interest rates are likely to decline, perhaps sharply. Under such conditions, expansion of bank reserves, bank credit, and bank deposits might seem redundant. But, if great care is not taken to continue monetary expansion in line with the growth in the demand for money to hold, economic contraction may develop at a time when interest rates are moving down.

Insight into the demand for money to hold can be gained by examining some evidence of its behavior over recent business cycles.⁸ The three shaded areas on the accompanying chart are periods of cyclical decline in economic activity as selected by the National Bureau of Economic Research; in other periods there was economic expansion.

A line illustrating the amount of money demanded has also been placed on the chart. It was drawn by assuming that at each cyclical turning point, peak or trough, the amount of money desired was exactly equal to the amount supplied (activity at these points was neither expanding nor contracting and at such times our hypothesis states that money supplied is exactly equal to money demanded). In the fall of 1962 and in early 1967, when economic activity reached a plateau, it was also assumed that money supplied and demanded were in equilibrium. These turning points and plateaus were then connected by lines of uniform rates of change. The slopes of these lines give approximations of average rates of change of money demanded over phases of cycles.

Several observations can be made from an examination of the chart. First, explanation of all cycles can be made by assuming that demand for money to hold rises at relatively uniform rates, and that a discrepancy in money demanded and money stock causes a change in spending. In the chart, money supplied exceeds that demanded in each period of expansion (consistent with the hypothesis that increases in spending reflect attempts by individual spending units to purchase goods, services, and securities with excess cash). Similarly, the amount of money supplied is less than

⁸This analysis is based on a hypothesis that a change in spending is a process by which money demand is brought into final equilibrium with money supply. The money supply is largely determined by Federal Reserve actions. Temporary equilibria between amount of money demanded and money supply are accomplished through changes in interest rates and other relative prices. Changes in cash balances, interest rates, and other prices affect spending, income, wealth, and expectations, which in turn cause shifts in the demand for money.



the amount demanded in each period of recession (also consistent with the hypothesis).

Second, growth in money demanded has been relatively stable from one cyclical phase to the next, indicating that the growth rate in desired balances does not change rapidly. As a result, marked and sustained changes in the growth rate of the money supply have generally been associated with cyclical changes in economic activity.

Third, changes in the growth rates of money demanded were usually in the direction of the growth rates in money supply.⁹ Changes in the amount of money supplied initially brings about changes in interest rates and other relative prices; these in turn, cause changes in spending. Spending affects incomes, wealth, prices, and expectations; and through these, the growth rate of money demand. The process continues until money demand is in final equilibrium with money supply.

⁹The spurt in production in early 1960, following the settlement of the major steel strike, may have delayed the cyclical peak by one to four months. In terms of the hypothesis, the sudden availability of steel products may have reduced the demand for money to hold for a period. If the cyclical peak had occurred any time in the January-April period, there would have been no exception to the rule that changes in the growth rate of money demanded are in the direction of equating money demanded with money supplied.

A review of the past fifteen years indicates that the growth rate in money demanded has been increasing. From 1953 to early 1961, when economic expansion was interrupted by several recessions, the growth appears to have ranged from zero to a 1.6 per cent annual rate. From early 1961 to the fall of 1962, money demanded rose at a 1.8 per cent rate; from the fall of 1962 to early 1967, money demanded rose at a 3.7 per cent rate.

Currently, money demanded may be rising in the 3.8 to 5 per cent per year range. Since the amount demanded tends to adapt to the supply, it probably is going up faster than the 3.7 per cent rate from 1962 to early 1967. The relative stability of money demanded in the short run indicates that it cannot be rising faster than at about a 5 per cent rate. Continued increases in the stock of money at rates faster than 5 per cent per year would probably cause unduly large demands for goods and services while a slower than a 3.8 per cent rate of money growth, calculated from January 1967, is apt to cause the expansion in total demand to be inadequate for a desired level of output.

Movements in the currency component of money provide a rough guide to the growth rate of the demand for money. Although the supply of demand deposits is largely determined by the Federal Reserve,

REVIEW INDEX — 1967

Month of Issue	Title of Article	Month of Issue	Title of Article
Jan.	<i>Private Demand Weakens 1966: A Year of Continued Expansion in the Central Mississippi Valley Prospective Prices for Food and Farm Products in 1967</i>	July	<i>Pause in Economic Expansion Continues Farm Credit Developments in the Central Mississippi Valley</i>
Feb.	<i>Changing Credit Conditions The Federal Budget and Economic Stabiliza- tion Annual Report of Operations of the Federal Reserve Bank of St. Louis Bank Deposit Growth in the Eighth Federal Reserve District</i>	Aug.	<i>Saving, Investment, and Economic Outlook Farm Income and Price Trends</i>
March	<i>Economic Activity Weakens Economic Theory and Forecasting</i>	Sept.	<i>Economic Activity Accelerates Economic Progress in the Central Mississippi Valley</i>
Apr.	<i>Economic Plateau or Downturn? 1966—A Year of Challenge for Monetary Management</i>	Oct.	<i>Economic Activity Expanding More Rapidly Three Approaches to Money Stock Determina- tion International Monetary Reform</i>
May	<i>Bank Profits Rise Sharply The Domestic Economy in Transition</i>	Nov.	<i>Money, Interest Rates, Prices, and Output Monetary Policy, Balance of Payments, and Business Cycles—The Foreign Experience</i>
June	<i>Changing Structure of Interest Rates Estimates of the High-Employment Budget: 1947-1967 Automated Check Processing</i>	Dec.	<i>Economic Pause, Acceleration, and Excesses— 1967 in Retrospect</i>