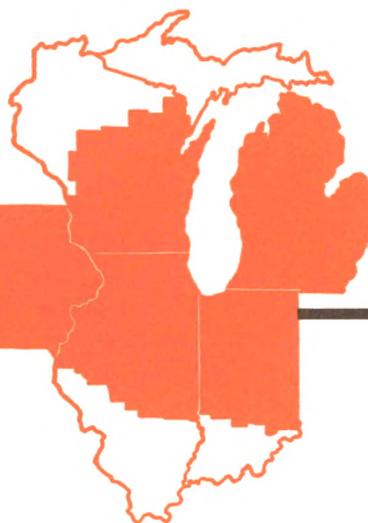


Business Conditions



August 1971

Contents

Trends in U. S. foreign trade	2
Interest rates— the volatile price of credit	7

Trends in U. S. foreign trade

On August 15, the President of the United States announced a series of broad measures to bolster the U. S. economy and the U. S. dollar internationally. Among these was a temporary 10 percent tax on goods imported into the United States. The tax was imposed as a protective measure against what the President termed unfair treatment of American products abroad, and in an effort to reverse this country's deteriorating foreign trade position. This article focuses upon the recent trends in the U. S. foreign trade account in order to provide a background for these developments.

Trade figures for the first half of 1971 indicate the United States may be heading for its first annual merchandise trade deficit in the 20th century. The trade balance (census basis) for the first half of 1971 was in deficit by \$745 million on a seasonally adjusted annual rate basis.¹

The trade position of the United States, a key factor in the balance-of-payments position of the country, has been deteriorating with disarming regularity in recent years. As the international payments position of the United States weakened during the late Sixties, increasing emphasis was placed on building a merchandise trade surplus to combat adverse capital movements in the balance

of payments. But since 1967, when there was a \$4.1 billion surplus in trade, the trade surplus has been a much less positive factor in the payments balance than had been hoped.

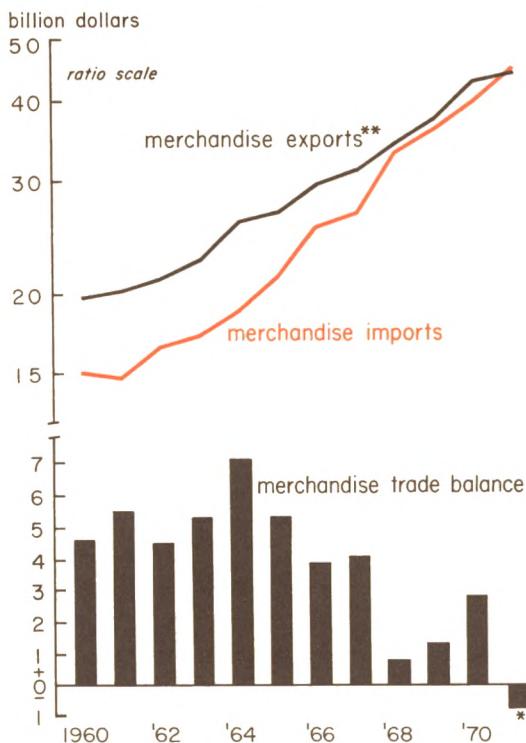
Following on the heels of smaller than hoped for surpluses of \$1 billion in 1968 and \$1.3 billion in 1969, trade figures during 1970, especially the first eight months, indicated a possible recovery might be in the making. Exports for the first eight months reached \$42.6 billion on an annual rate basis, 18 percent over the 1969 level for the same period. Imports increased at a less rapid 11 percent to about \$39.3 billion on an annual rate basis. A trade surplus of \$3.3 billion at an annual rate was attained during this period.

But the last four months of 1970 and the first six months of 1971 told a different story. Imports accelerated, setting new records. Although exports were at or near record levels during the period, the rate of growth of exports slowed. By April, May, and June of 1971, imports exceeded exports by \$235 million, \$205 million, and \$362 million, respectively. The total second-quarter deficit reached \$803 million, and the United States was confronted with its first back-to-back monthly trade deficits since August, September, and October of 1950.

The deterioration in the U. S. trade position has been especially obvious during the last three years. But the foundation for the present situation has been building for over

¹Census basis trade figures used in this article are those reported by the Census Bureau. Trade figures reported on the balance-of-payments basis include numerous regular and special adjustments, such as nonmonetary gold shipments and non-U. S. trade of the Virgin Islands.

Imports increasing more rapidly than exports



*January-June 1971 seasonally adjusted on an annual rate basis.

**Exports, excluding military grants.

20 years. As battle-scarred, industrialized nations recovered from World War II, their importance in international markets increased markedly. During the 1950s and 1960s, West Germany and Japan in particular began to pose a threat to American hegemony in world trade. Vivid evidence to this effect is seen in the gradual decline in the U. S. share of world export trade—from a 20-year high of 21 percent of the total in 1953 to 15 percent in 1970. During the same period, Germany's share more than doubled, and Japan's share quadrupled.

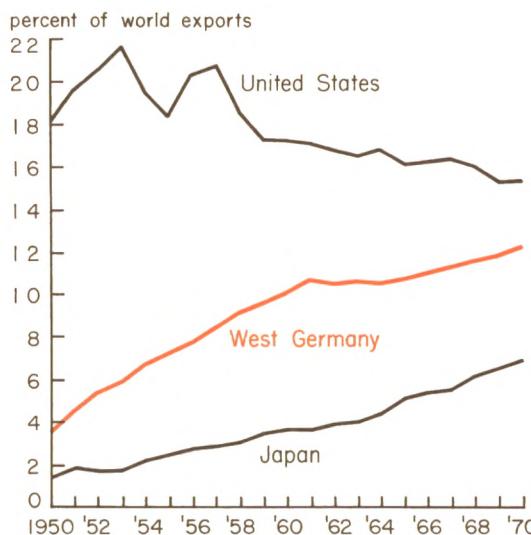
Capital goods surplus strong

Over the years, trade figures have shown a consistently large foreign demand for U. S.-made capital goods, such as electrical and nonelectrical machinery, computers, aircraft, and other goods requiring a high level of technology or capital inputs.

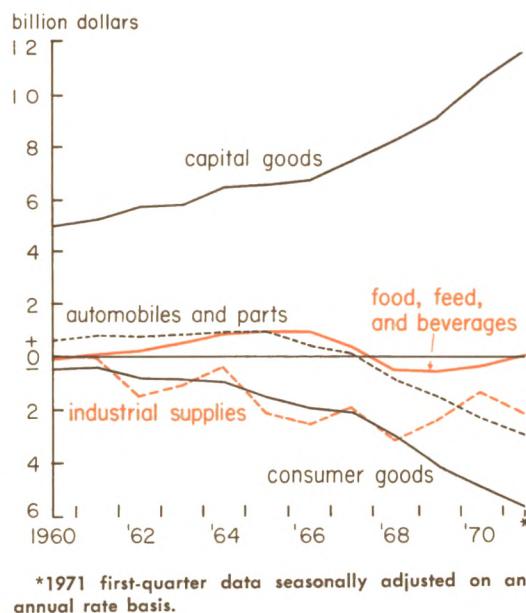
U. S. exports of capital goods more than doubled between 1960 and 1970. And since 1968, the capital goods category—especially machinery and aircraft—has been the only category in which the nation's exports exceeded its imports. In other important categories—consumer goods, industrial supplies, autos and automotive parts, and food, feed, and beverages—the United States has exported less than it has imported.

Consumer goods imports exceeded exports throughout the 1960s, and the deficit widened sharply during the latter half of the decade. Imports of industrial supplies also outstrip-

U. S. share of world exports declines



Trade balance by end-use categories—U. S. strong in capital goods



ped exports throughout most of the Sixties. Although some narrowing occurred during 1969 and 1970, recent trends and anticipated future demand indicate that the United States will continue to run a substantial trade deficit in industrial supplies. This is especially true as U. S. needs for petroleum, metal ores, and basic metal products are increasingly being provided by foreign producers.

Automotive trade with foreign countries produced a gradually increasing surplus through the early Sixties, reaching nearly \$1 billion in 1965. But in 1966 the tide began to turn. An automotive trade agreement between the United States and Canada resulted in a sharp jump in imports of automobiles and auto parts from Canada. While U. S. automotive exports to Canada also expanded

rapidly as a result of the agreement, the increase in imports was greater. At the same time, auto imports from Europe and Japan soared. The result: in 1968, the nation posted its first trade deficit in the automotive category. The U. S. automotive trade balance has had increasing deficits regularly from 1968 through the first half of 1971.

A precarious surplus

It had become increasingly probable that U. S. merchandise exports would make little, if any, positive contribution to the U. S. balance-of-payments position in 1971 as the year progressed. At midyear, Commerce Department projections estimated 1971 exports at \$45.7 to \$46.1 billion based on a 7 to 8 percent increase from calendar year 1970.² On the other side of the coin, projections place imports at \$45.1 to \$45.5 billion based on a 13 to 14 percent increase from calendar year 1970. These assumed rates of growth indicate a favorable trade balance, ranging from about \$200 million to \$1,000 million. But with total trade (imports plus exports) amounting to over \$90 billion, only a slight adverse change in actual growth rates could put the U. S. trade balance in deficit for the year. During the first half of 1971, exports were running only 5 percent ahead of the first half of 1970. Imports, on the other hand, were 15 percent greater than the first half of 1970.

Near-term prospects

A major factor determining the growth rate of U. S. trade in the short run is the growth in world demand. Marked economic slowdowns in Japan and Western Europe—mainly as a response to national policies de-

²U. S. Department of Commerce, *Commerce Today*, Washington, D. C., July 12, 1971, vol. 1, no. 20, p. 4.

signed to stem inflationary pressures—have had a depressing effect on U. S. export growth. This is especially true for investment-type capital goods that are a primary source of U. S. export strength. U. S. agricultural exports were not expected to continue the rapid growth experienced between 1969 and 1970. Agricultural exports were at a record \$7.2 billion in 1970. World supplies are strengthening, and U. S. supplies of some products are tight—especially for cotton and soybeans.

In spite of rising prices abroad, in many cases at a faster pace than in the United States, imported goods remained relatively less expensive than domestic counterparts. In short, world supply and demand conditions and relative price relationships did not bode well for a near-term improvement in U. S. exports vis-a-vis imports. The import surcharge has a potential of changing these near-term prospects. But the assessment of its impact on U. S. trade must await the final outcome of the reactions abroad to its imposition.

The West Coast longshoremen's strike, underway since July 1, adds another discordant note to the economic picture. Attempts are being made to conclude a contract settlement between shippers and longshoremen in East and Gulf Coast ports before present contracts expire on September 30. The potential for short-term economic dislocations resulting from the ongoing West Coast strike and the uncertainty surrounding the possibility of East and Gulf Coast strikes is considerable.

Based on the experience of the East and Gulf Coast strikes in 1965 and 1969, it appears that exports would be more severely affected than imports by a long dock tie-up. During each of those strikes, the percentage decline, as well as the absolute decline in

exports, was greater than the decline in imports. Typically, trade losses incurred during port tie-ups are made up by accelerated shipments—either in anticipation of a strike or after the strike is settled. In this connection, however, exports are inherently more vulnerable than imports. Foreign buyers usually can find alternative sources of supply for goods the United States would ordinarily export. U. S. agricultural exports have suffered the greatest losses during past strikes.

A factor that may mitigate the impact of a dock strike on exports during 1971, relative to past dock strikes, is the recent sharp increase in the value of U. S. exports being moved via air freight—up from less than 15 percent of the value of total air- and vessel-borne freight in 1967 to 20 percent during January through May of 1971. Interestingly, the proportion of imports arriving in the United States by air freight has remained relatively static during this period.

Changing patterns

Of far greater importance in the changing U. S. trade position has been the impact of several interrelated structural changes that have been taking place both in the United States and abroad. A few of these changes stand out.

(1) There has been a great proliferation of special trading arrangements within the framework of economic organizations as, for example, the European Economic Community (EEC). In many instances, the arrangements discriminate in favor of trade among member countries and, therefore, against trade with the United States.

(2) The attitudes of U. S. consumers toward foreign goods are changing. Increasingly, industrial and individual buyers do not automatically discriminate against foreign-produced goods. Relatively low cost foreign-

made finished goods and components are readily accepted on the U. S. market.

(3) The rapid expansion of multinational companies is encouraging the movement of goods across international borders. But, at the same time, this development poses new problems, especially for labor-intensive industries. Corporate executives often claim that, in order to compete and "stay alive" in the domestic market (maintain profits), they must move component manufacturing to foreign countries and then import the components for assembly at home. Some multinational companies have gone a step further and are completing the assembly in the foreign country and importing a finished product. Moreover, there is the possibility that these foreign-based affiliates of U. S. corporations may export finished products throughout the world as substitutes for the companies' U. S.-made products, to the detriment of U. S. exports.

(4) The completion of the "Kennedy Round" of tariff reductions, the last step to be accomplished in January of 1972, will result in about a 35 percent reduction in non-agricultural tariffs from pre-1967 levels among industrialized countries. The reductions will result in "average" tariff rates of 8.6 percent in the EEC, 9.9 percent in the United States, 10.7 percent in Japan, and 10.8 percent in the United Kingdom.³ A general and gradual lowering of tariff rates has been the cornerstone of economic policy among industrialized nations since World War II. While this approach has brought unparalleled prosperity to many nations, it also has made the many nontariff barriers to trade increasingly obvious.

Some of these nontariff barriers were

³Preeg, Ernest H., **Traders and Diplomats**, Brookings Institution, Washington, D. C.

erected many years ago when nations involved directly in World War II were struggling to rebuild their war-destroyed economies. The continuation of such measures long after the nations reached high levels of economic development has deprived consumers in those countries of the benefits of their productivity and thrift by limiting their choice in the world's marketplace. Furthermore, these barriers have also placed increasing strain on the international payments mechanism on whose smooth functioning the continued growth and prosperity of all nations are largely dependent.

Dawn of a new era?

The United States is facing a major challenge. In an increasingly competitive world, a deteriorating surplus in international trade is a symptom of problems whose resolution will involve asking difficult economic and political questions—questions dealing with changes in intranational and international political and economic structures, changes in corporate organization, changing trade relationships, and changing trade restrictions among nations. The answers will not be easy.

Multinational understanding and cooperation is prerequisite to the satisfactory resolution of today's complex trade problems. The President, in his announcement of the surcharge, emphasized the temporary nature of the measure and stated that it will be ended as soon as the instances of unfair treatment of American exports are terminated. Thus, it is hoped, future negotiations will bring about an elimination of impediments to world trade as well as the establishment of international trade and financial arrangements that will better reflect the economic realities of the Seventies—for the mutual benefit of all trading nations of the world.

Interest rates— the volatile price of credit

In the last quarter of 1969 and the first half of 1970, interest rates reached peaks not witnessed in more than a century. In the second half of 1970 and the first quarter of 1971, interest rates traced the sharpest decline in the post-World War II period and since then have moved up sharply again.

Interest rates represent the price paid for credit and could be expected to reflect all the factors that determine the demand for and supply of credit. The demand for credit arises from the desire of the borrower to change the time pattern of his purchasing power. The borrower increases his purchasing power now and agrees to reimburse the lender with future purchasing power.

The lender providing credit gives up present purchasing power in order to obtain additions to his future purchasing power. Thus the participants' preferences are such that both the lender and the borrower are better situated as a result of the granting of credit.

At any point in time, a number of different interest rates exist. These various interest rates reflect the different situations in which credit is advanced—risk of default on the part of the borrower, collateral pledged against the credit, length of time the credit is to be outstanding (maturity), tax considerations, and any factor that might affect expected future purchasing power. Still, interest rates tend to move together, with variations in the movements of different interest rates reflecting changing evaluations of the characteristics of various loans. As an example, the difference in interest rates paid on prime AAA bonds

and lower quality BAA bonds generally has been greater at the trough of a business cycle than at its preceding peak. Presumably, this reflects the market's feeling that the risk of default widens when the economy is depressed, and this "feeling" affects expected returns. If relative interest rates were to deviate from the pattern dictated by factors affecting expected returns, equilibrium would be restored by shifts in the demand and supply of funds to various credit categories. If interest rates on one type of credit are too high relative to rates on other types of credit, then more borrowers will try to avoid and more lenders will try to provide this type of credit, lowering the rate.

Changes in the level of interest rates over time are the result of a number of factors. From the previous discussion it would be expected that all these factors could be grouped into two categories: those that affect anticipated future returns from additional purchasing power in the present, and the relative preferences of individuals for present or future purchasing power. Changes in these factors are not easily observed, in themselves. Some specific determinants of these two sets of factors have been observed to have effects on interest rates. Three of these are: anticipated change in prices, fluctuations in economic activity, and monetary policy.

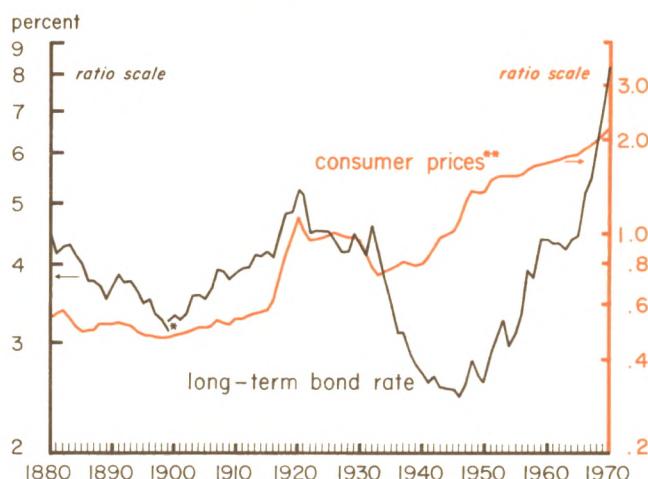
Price changes

A plausible argument may be advanced on the basis of available evidence that the prime determinant of long-term trends in interest rates is changes in prices. The interest rate,

which expresses the price of credit, is stated in nominal terms. The borrower promises to pay to the lender the principal plus a certain fraction of the dollar value of the credit obtained. What the borrower and lender are concerned about primarily is not the dollar value of the repayments but rather the real purchasing power of the repayments. In arriving at a nominal interest rate that provides for the return of a given rate of increase in real purchasing power, the borrower and lender must take the expected rate of price change into consideration. In order to provide a 3 percent rate of return to the lender in terms of real purchasing power at a time when prices are expected to rise 2 percent a year, the nominal rate should be set at 5 percent. Such an adjustment in interest rates occurs because the lender must be reimbursed for the anticipated fall in the purchasing power of money. The borrower is willing to make the adjustment because of the anticipation that assets purchased with current purchasing power will appreciate in value over the life of the loan.

If anticipated price changes are affected by current and past price changes, then interest rates are related to current and past price changes. An examination of average annual long-term interest rates and price changes indicates that a relationship does seem to exist between longer-term trends in interest rates and price changes. The period from 1880 to 1900 was one of declining interest rates and generally falling prices. Both interest rates and prices rose between 1900 and 1914¹ and then rose sharply over the period

Long-term interest rates reflect changes in prices



*Interest rate: 1880-99: high-grade railroad bond average. 1899-1965: prime 30-year corporate bond rate. 1966-70: Moody's AAA Utility rate.

**Prices (1926 = 1.00). 1880-1913: Index of a sample of consumer prices. 1914-70: U. S. Consumer Price Index.

of World War I. The postwar contraction of 1920-21, although rather short, caused a sharp fall in prices and interest rates. Interest rates continued to decline slowly over the remaining years of the 1920s, while prices remained relatively stable. The contraction of 1929-33 produced a very sharp fall in prices and an accompanying fall in interest rates.² From 1933 to 1939, interest rates continued to decline even though prices rose. Through World War II, prices rose rather steadily, but interest rates were stable because monetary

¹Until recently, periods of peace and rising price levels have been the exception rather than the rule.

²Interest rates rose in 1932 owing to demands for liquidity but generally fell over this period. The rate on less desirable BAA bonds, however, stayed high through the entire decade of the 1930s, presumably reflecting the market's assessment that risk of default on these securities was high.

policy supported the prices of government bonds. The period since 1945 has been one of generally rising prices (since 1965 at an accelerating rate) and a long-term trend of rising interest rates.

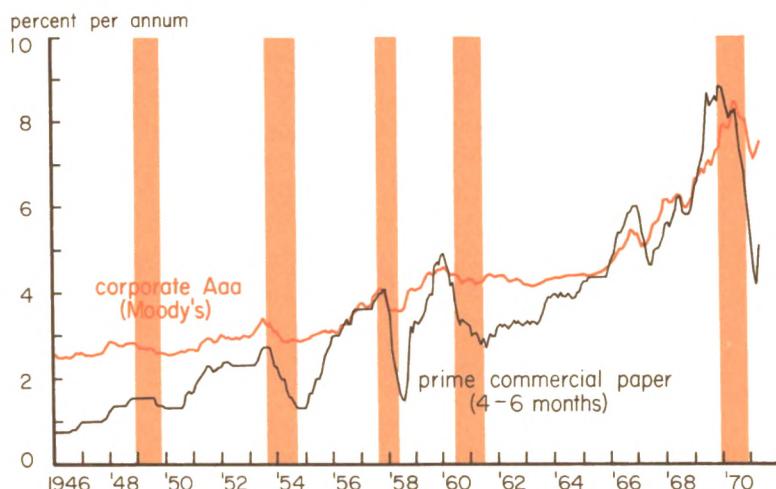
An examination of the evidence suggests that price anticipations are not easily changed. The two sharpest declines in long-term interest rates occurred after the contractions of 1920-21 and 1929-33.³ The short contraction of 1920-21 was severe; from June

1920 to June 1921 consumer prices declined 16 percent.⁴ The contraction of 1929-33 was the most severe in American history. Consumer prices fell 28 percent between August 1929 and April 1933. The downturn in the economy lasted four years, with aftereffects—psychologically, politically, and economically—lasting for many years. In the opposite direction, the sharpest increases in long-term interest rates occurred in the period 1916-20 and the period since the end of World War II. Over the earlier period, consumer prices rose 94 percent. The period since World War II appears to be one of interest rate adjustment

³The two most notable examples of interest rates and the rate of price increase moving in opposite directions occurred in the wake of these contractions. Interest rates continued to fall for a number of years, even though prices had stabilized or started to rise.

⁴Over this same period the wholesale price index for industrial commodities declined a phenomenal 40 percent.

Short-term rates fluctuate more than long-term rates over business cycles



SOURCE: Federal Reserve Bulletin.

from deflationary price expectations, engendered by the great contraction, to expectations of successively higher rates of inflation.

Economic activity

A second cause of changes in interest rates over time is fluctuation in the level of economic activity. In general, interest rates rise in periods when output is expanding rapidly, and fall in periods of decreasing or only sluggishly rising output. The cause of these movements is primarily the effect of the state of business on the credit demands of borrowers.

A chart of interest rates over the period since the end of World War II shows clearly the cyclical movements along with the longer-term upward movement in interest rates. Each successive cyclical turning point in interest rates has been higher than the corresponding cyclical turning point in the previous cycle. Over the course of the cycle, changes in short-term interest rates are greater than changes in

long-term interest rates. Since shorter-term interest rates generally have been below longer-term interest rates, the gap between short- and long-term interest rates narrows at a cyclical peak and widens at a cyclical trough. The effects of such cyclical movements in interest rates are seen most clearly in the relationship between interest rate yield and term to maturity on credit instruments. Such a relationship is referred to as the term structure of interest rates. At a cyclical trough, interest rates are markedly lower on short maturity credits than on those having longer maturities. At a cyclical peak, however, interest rates on short-term credits are little different from those on longer-term credits, and may even be higher.

The Expectations Hypothesis

One explanation of cyclical movements in short- and long-term interest rates is called the Expectations Hypothesis. This hypothesis considers alternative credit instruments of different maturities as substitutes in the credit market. According to this hypothesis, the term structure of interest rates in the market at any moment of time implicitly contains expected future short-term interest rates. If at a point in time the three-month bill rate is 3 percent and the six-month bill rate is 4 percent, then the market expectation for the three-month bill rate three months hence must be 5 percent, since only then will borrowers and lenders be indifferent between a six-month bill and two successive three-month bills.⁵ The Expectations Hypothesis explains the decrease in interest rates as one moves from shorter to longer maturity at a

cyclical peak as a reflection of the market's expectations of falling interest rates in the future.⁶ If both borrower and lender expect interest rates to fall in the near future, then the short-term interest rate will be above longer-term rates. The short-term borrower is willing to pay such rates because he expects to be able to renew the short-term credit at a lower rate in the future, and the short-term lender demands such rates because he expects that when the credit is paid back, the interest rate on reinvesting the purchasing power will be lower.

Monetary policy

A third determinant of movements in interest rates is monetary policy. By augmenting or removing reserves from the banking system, the monetary authorities affect the supply of credit and thereby its price. Through the sale or purchase of securities in the process of removing or providing reserves, the monetary authorities have an immediate influence on interest rates. In addition, banks respond to changes in their reserve positions by increasing or decreasing loans and investments, thereby amplifying the effects of changes in the security portfolio of the monetary authorities on interest rates. While the short-term effect of an easier monetary policy is to lower the rate of interest, such a policy leads after a time to an increase in economic activity that

stracting from compounding and transactions costs, it is clear that the holder would be indifferent if he expected the three-month bill rate three months hence to be 5 percent.

⁵Investigations into the term structure of interest rates have indicated that while the Expectations Hypothesis plays a role in determining the relation of interest rates to maturity, it alone is not sufficient to explain completely the interest rates on various maturities at a point in time. For a more complete exposition, see Reuben Kessel, *The Cyclical Behavior of the Term Structure of Interest Rates*, National Bureau of Economic Research, 1965.

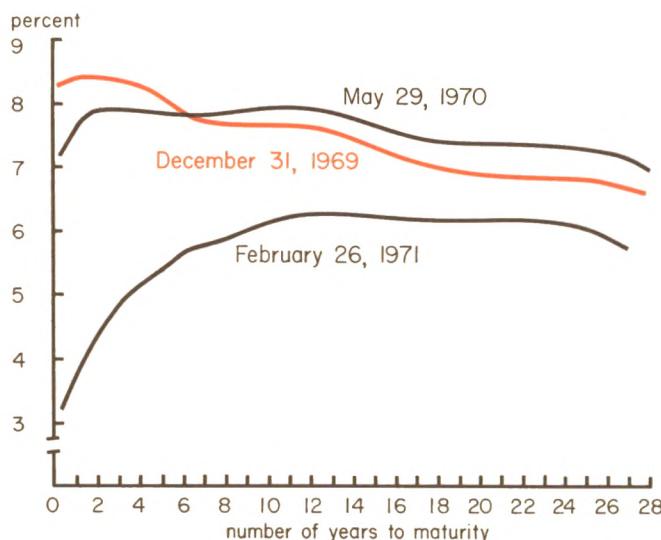
⁶The holder of the six-month bill receives 4 percent for six months. An alternative investment would be to hold the current three-month bill yielding 3 percent for three months and then purchase a three-month bill three months from now. Ab-

will tend to increase interest rates. If activity increases sufficiently to cause the rate of price rise to accelerate and engenders expectations of continuing price increases at a higher rate, then interest rates will tend to rise still further. Thus, monetary policy may have opposite effects on interest rates in the short run and in the longer run.

The recent cycle

A look at recent experience is illustrative of the interactions of these various determinants of interest rates. Interest rates began rising at a fairly significant pace in late 1965 as inflation accelerated. By the second half of 1968, long-term interest rates were very high, judged by historical standards. Monetary policy appears to have become somewhat more restrictive in the last months of 1968. The

The term structure of interest rates varied sharply over the recent business cycle



level of member bank borrowings from the Federal Reserve rose sharply toward the end of 1968. The rate that banks pay for one-day funds rose steadily.

In the first half of 1969, monetary policy tightened even more. Borrowings of member banks at the Federal Reserve and the rate banks pay for one-day money continued to rise. The growth in the money stock slowed from its growth in the latter half of 1968. Interest rates rose sharply, and commercial paper rates rose above corporate bond rates by April 1969. Though both short- and long-term interest rates rose, short-term rates came to be substantially above long-term rates, giving the "humped" term structure associated with cyclical peaks. The rate of growth in real output fell to under 3 percent in the first half of 1969.

In the second half of 1969, monetary policy imposed even greater restraint. The money stock grew only slightly. Borrowings remained high, and the rate on one-day funds for banks rose to more than 9 percent and declined only slightly toward the end of the year. Commercial paper rates and corporate bond rates continued to rise, and at times the rate on commercial paper was over 1.5 percentage points higher than the rate on longer-term bonds.

Rather unusual behavior of interest rates characterized the first half of 1970. The economy was in a recession with real output declining at an annual rate of over 2 percent. In addition, monetary policy had eased somewhat. Over similar periods in the past, interest rates have declined. Short-term

rates did begin a steep decline after the turn of the year. Some longer-term rates also declined, though at a more moderate pace. Rates on prime corporate bonds, however, continued to rise in early 1970 and declined only slightly in March and April. This behavior stands out from that of recent cyclical turns in interest rates because in 1970 short-term rates peaked before long-term rates. Heavy Treasury financing, the Cambodian invasion, and the Penn-Central bankruptcy combined to push interest rates up in May and June. It was at the end of June, six months after the peak in short-term rates, that long-term rates hit their cyclical peak.

Real output continued to decline in the second half of 1970, in part because of the auto strike in the fourth quarter. In addition, some signs of slowing in the rate of inflation began to appear. The general fall in interest rates associated with the business downturn began in June 1970, more than six months after the cyclical turning point in business designated by the National Bureau of Economic Research. As is usual in such movements, short-term rates fell more than long-term rates so that by February 1971, the term structure of interest rates showed increasing yields as credit terms moved from short to longer maturities. The fall in long-term interest rates between June 1970 and February 1971 constituted the greatest bull market in

bonds since before World War II. The absolute decline in prime corporate bond rates was more than 150 basis points, more than twice as great as the decline during 1953-54—the closest competitor.

In the first quarter of 1971, real output increased at an annual rate of more than 7 percent, aided in part by comparison with the previous strike-affected quarter. The trough in economic activity was marked by the National Bureau of Economic Research as November 1970. Interest rates, in conformity with their behavior over most cycles, hit their lows about one quarter later. As has been the pattern at most recent interest rate turning points, long-term rates turned up before short-term rates. The rise in interest rates since their lows earlier in 1971 has been sharper than the usual behavior of rates at comparable points in previous cycles.

The future course of interest rates will continue to be affected by price anticipations, economic activity, and monetary policy. The direct influence of changes in the posture of monetary policy should have only short-range influences on interest rates. In periods such as the present, when economic activity is rising from a cyclical trough, interest rates generally have risen in the past. The longer-run behavior of interest rates, however, seems likely to be determined by the success of economic policy in tempering price inflation.

BUSINESS CONDITIONS is published monthly by the Federal Reserve Bank of Chicago. Jack L. Hervey was primarily responsible for the article "Trends in U. S. foreign trade" and Robert D. Laurent and Anne Marie Laporte for "Interest rates—the volatile price of credit."

Subscriptions to **Business Conditions** are available to the public without charge. For information concerning bulk mailings, address inquiries to the Research Department, Federal Reserve Bank of Chicago, Box 834, Chicago, Illinois 60690.

Articles may be reprinted provided source is credited. Please provide the bank's Research Department with a copy of any material in which an article is reprinted.