A review by the **Federal Reserve Bank of Chicago**

Business Conditions

May 1971

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THE Trend OF BUSINESS

Housing leads construction rise

The construction industry, one of the weaker sectors in the economy in 1970, has been one of the strongest this year. Total outlays on construction were at an annual rate of $103 billion in the first quarter of 1971. Outlays on new housing rose 31 percent from a year earlier, and public construction was up 17 percent. Outlays for industrial and a number of other types of construction were lower than a year earlier. These trends probably will continue throughout the year.

The increase in construction activity in the first quarter compared with a year earlier was about twice the increase in the gross national product. Prices have increased much faster for construction than for the general economy. After adjustment for price changes the rise for construction was 4 percent, compared to 1 percent for GNP.

Total construction activity can be divided into three major sectors, each of roughly the same magnitude. Private residential construction—including nonhousekeeping units (such as motels and dormitories) and repairs and modernization—was at a rate of $36 billion in the first quarter. Nonresidential private construction—including factories, stores, office buildings, hospitals, and public utility structures—was at a rate of $35 billion. Public construction—federal and state and local combined—was at a $32 billion rate.

Residential construction has been in a strong uptrend since mid-1970. Public construction has been rising vigorously since late 1970. Nonresidential construction has been fluctuating within a narrow range for the past year and a half in current dollar terms and declining gradually after adjusting for cost increases.

Trends in personal income, profits, family formation, birth rates, private tastes, public policies, and construction costs all affect the level of construction activity over the long run. But the cost and availability of credit often play the dominant role in the short run, especially for residential building.

Construction in perspective

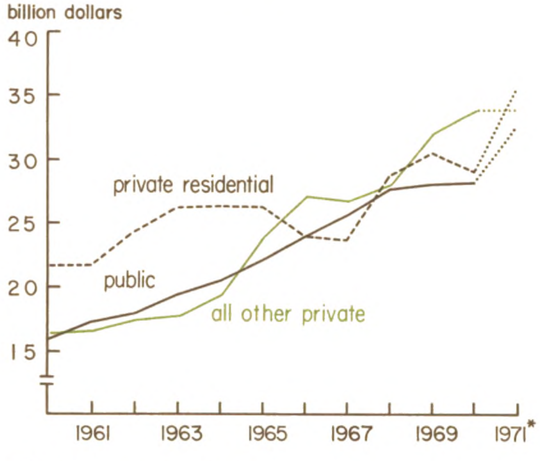
Although the various classes of construction have fluctuated substantially since World War II, total construction spending has accounted for a remarkably stable portion of total economic activity in the postwar era. From 1950 through 1965 outlays on new construction accounted for 11 percent of the gross national product. For individual years this proportion ranged only from 10.5 to 11.8 percent. In the years following 1965 construction declined as a proportion of total spending. Last year's ratio, 9.3 percent, was the lowest since 1947. In real terms the decline was even larger because construction costs have been rising faster than the general price level. In 1971, construction spending is almost certain to rise faster than total spending and perhaps approach 10 percent of GNP.

In the years immediately following World War II the demand for housing was intense. The return of servicemen and a high rate of family formation, combined with rising incomes and an ample supply of funds at low interest rates, all provided a strong stimulus to home building. From 1947 through 1950 residential building accounted for about 50 percent of total construction activity. In the late 1950s and early 1960s this proportion was about 40 percent. A further decline occurred in the last half of the 1960s, and in 1970 the ratio was only 32 percent. This year the proportion of residential construction to total construction probably will rise to 35 percent or more.

Private nonresidential construction as a proportion of total construction declined in the late 1940s and reached a postwar low of less than 26 percent in 1950. From 1951 through 1964 private nonresidential construction accounted for just under 30 percent of the total. With the capital expenditure boom starting in 1964, private nonresidential construction rose both absolutely and as a proportion of the total, and this sector became the largest of the three major components of construction. Last year private nonresidential construction was 37 percent of the total, the highest ratio since 1946 when total construction was at a very low level. This proportion will decline in 1971.

Public construction rose as a proportion of the total through most of the postwar period. Accounting for less than 20 percent of total construction in the late 1940s, public construction's share rose to 32 percent in 1966 and has been relatively stable since.

Outlays for housing and public construction surge in 1971



*1971 figures are estimates.

Prices of structures soar

Construction costs have trended upward ever since World War II and at a faster pace than the rise in the general price level. Moreover, the spread between the rate of the rise in construction costs and the rate of rise in the general price level has widened. Using the Department of Commerce composite index, the cost of new structures (exclusive of land) rose 34 percent from 1950 to 1960, while the average of all prices in the private economy rose 26 percent. From 1960 to 1970 construction costs rose 46 percent, while all prices increased 27 percent. In 1970, construction costs averaged 7.1 percent higher than a year earlier, compared to a rise of 4.8 percent for all prices.

Acceleration of construction costs relative to other prices has continued in 1971. In the first quarter, construction costs averaged 8.4 percent more than a year earlier, while the general price level was up 4.7 percent.

Residential construction costs have increased less than the cost of nonresidential structures. From 1960 to 1970 the rise for residential structures was 38 percent, about halfway between the rise for all construction costs and the rise for all prices.

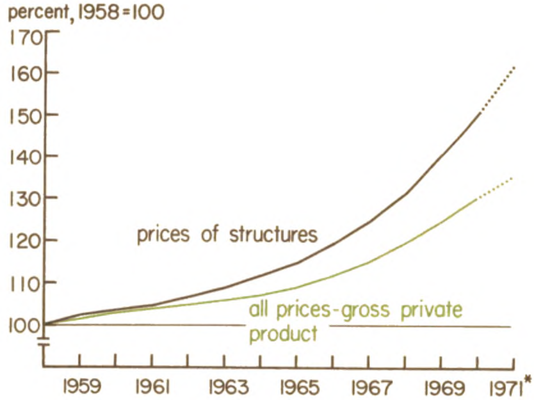
There is little likelihood that the rise in construction costs will moderate in the near future. Last year, several of the major building trade unions negotiated three-year contracts calling for average increases in wages of 15 percent annually, compared to average gains of 6 percent for union contracts in manufacturing. These building trades contracts generally reflected union bargaining power rather than supply-demand conditions in 1970—a year of widespread unemployment in construction, in contrast to earlier years of tight labor markets. Prices of important building materials, especially lumber, declined last year. In the past six months, however, prices of all building materials have risen, with lumber up very sharply.

Cycles in construction

Residential construction currently is in the midst of one of its strongest uptrends in history. New units were started at a seasonally adjusted annual rate of more than 1.8 million in the first four months of 1971, and most experts expect this rate to be equaled or exceeded for the year as a whole. If they are correct, housing starts this year will be at an all-time high by a wide margin, except for the phenomenal surge in 1950 when 1.95 million units were started.

Housing analysts now commonly add shipments of mobile homes to conventional housing starts to determine the total supply of new dwelling units. Mobile home shipments, not included in housing starts or residential construction, are expected to total 400,000 or more in 1971, about the same as in each of

Construction costs rise much faster than the general price level



*1971 figures are estimates.

the past two years. Taking these units into account, this year probably will see a record number of new housing units. Mobile homes were relatively unimportant until the 1960s.

Residential construction has been on a roller coaster in the years since World War II. In postwar recessions, declines in total economic activity in physical terms have never lasted longer than a year and have never exceeded 6 percent from peak to trough. But declines in residential construction have lasted as long as three years and have been as large as 29 percent. Each of the five major declines in residential construction in the postwar period has been at least 19 percent from the peak to the trough quarter.

Most major components of total economic activity—including private nonresidential construction and public construction—have increased more or less continuously since World War II. Not so residential construction. In dollars of 1958 purchasing power, as measured by the census bureau, outlays on residential construction have reached a rate of about $25 billion in five widely separated periods—during the peak quarters of 1950, 1955, 1959, 1963-64, and, most recently, in 1969. Probably this rate will be reached again, and then surpassed, in 1971.

It is sometimes said that residential construction is "counter-cyclical," i.e., rising when other types of activity are sluggish or declining, and declining when most other types of activity are vigorous. This is an oversimplification, but it is true that declines in residential construction tend to precede declines or slowdowns in general business—in some cases by a number of years, as in 1955 and 1963.

Increases in residential construction tend to be roughly coincident with total activity. But these increases usually have been much more vigorous in the early stages than general business revivals, just as declines have been relatively sharper.

Slumps in residential construction are often associated with reduced availability of funds and high interest rates. This factor cannot explain all the declines in housing, as, for example, in 1955 and 1959. In the long run, the rate of family formation is probably the most important determinant of housing demand. This is indicated by the failure of residential construction to show a long-term, secular uptrend since World War II. But credit availability is often a dominant factor in residential construction in the short run.

There are several reasons for the close relationship between credit availability and residential construction: (1) Credit typically accounts for a large share of the purchase price of both homes and apartments. (2) Interest as a proportion of total costs is much more important in the case of housing than in manufacturing, retailing, and most other activities. (3) State usury ceilings, as well as interest ceilings on government-insured or -guaranteed mortgages, may prevent potential home buyers from paying going rates of interest, even if they desire to do so. (These ceilings became important in many areas in 1966-67 and, particularly, 1969-70.) (4) Some institutional investors with broad investment options reduce, or stop, purchases of mortgages when private or public securities are available at more attractive rates. (5) In periods of high interest rates, individual investors may divert funds from thrift institutions (savings associations and mutual savings banks) that invest heavily in mortgages to purchases of short-term securities.

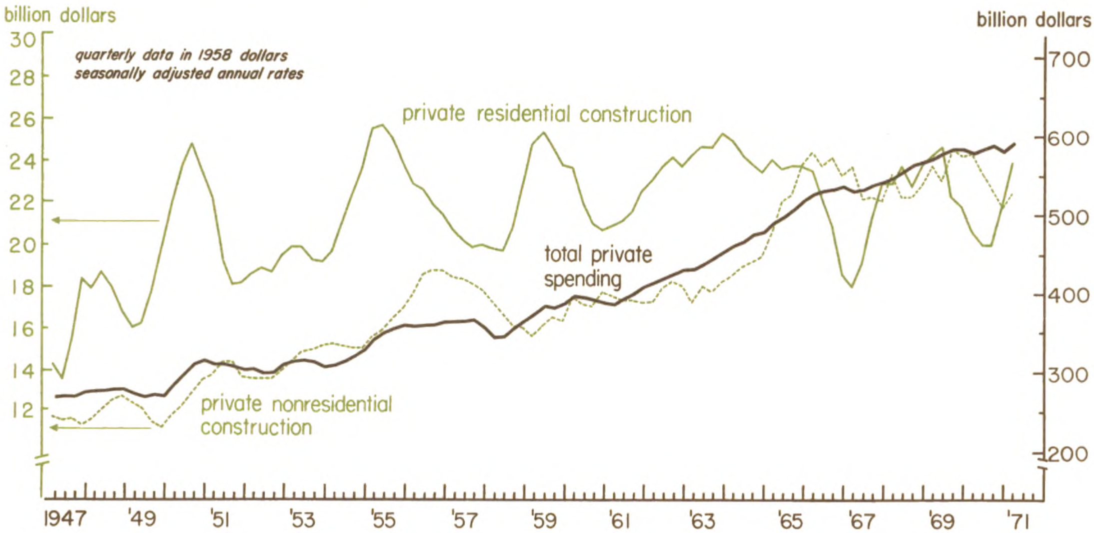
The credit factor was especially significant in explaining the declines in housing starts, and subsequent revivals, that occurred in 1966-67 and 1969-70. Housing starts had declined in 1964 and 1965 from the 1963 peak, but the decline was moderate. With tighter credit markets in 1966, a very sharp decline in housing starts occurred.

From a rate of 1.5 million units in the fourth quarter of 1965, the rate of housing starts dropped by more than one-third to less than 1 million in the fourth quarter of 1966. Late in 1967, the 1.5 million housing start rate was regained.

From a rate of more than 1.6 million units in the first quarter of 1969, credit stringency precipitated a decline in housing starts to a rate of less than 1.3 million units in the first half of 1970. The subsequent uptrend in starts, beginning at midyear, has been even more rapid than the revival of 1966.

Trends in housing starts in the urban centers of the Midwest have been generally similar to that of the nation. But in some areas of this region, notably Chicago, the amplitude of the recent housing cycle has been even more pronounced than in the nation. In part, this reflected the usury ceiling imposed by the State of Illinois.

Residential building has been far more volatile than other private activity



Changing housing patterns

The great bulk of the dwellings constructed in the 1940s and 1950s were single-family homes. In 1959, the first year for which official census data are available, 81 percent of housing starts were homes and only 19 percent were in structures with two or more units (mainly apartment buildings). The proportion of housing starts accounted for by multi-family structures rose in the 1960s, reaching 45 percent in 1969. This ratio declined slightly in 1970 but returned to 45 percent in the first four months of 1971.

A number of factors account for the rise in apartment house construction in the past decade. The number of single-person households (usually apartment dwellers) increased rapidly. Spreading use of the condominium concept permitted those who wished to own their homes to "buy" individual apartments. Liberalization of rules for depreciation for federal tax purposes made investments in apartments more profitable. Increases in land values and rising costs of construction and land development also have encouraged apartment building because a given volume of living space can be provided more cheaply in multi-unit structures than in single-family homes. Finally, certain lenders, especially life insurance companies, have preferred to purchase apartment mortgages rather than single-family mortgages in recent years because administrative costs are less in comparison to the volume of funds invested, and because usury laws typically do not cover such loans.

During the 1960s, public housing units started numbered about 30,000 annually. Most of these units were in "high-rise" apartments constructed by local housing authorities under urban redevelopment programs with federal subsidies. The intention was to bring adequate housing within the reach of low-income families. But concern over the sociological problems associated with both demolitions of existing housing and other structures and the creation of "vertical slums" have caused public officials to try new approaches to provide more adequate housing for low-income families.

New public housing projects are more likely to feature smaller structures on scattered sites. In addition, programs to renovate and modernize existing structures are being expanded. Finally, the federal government has expanded its program to subsidize rents and mortgage payments for low- and moderate-income families under programs administered by the Housing and Urban Development Department and the Farmers' Home Administration. The most important of these programs are authorized by section 235 (interest subsidy) and section 236 (rent subsidy) of the Housing Act of 1968. Subsidy programs of various types were a factor in more than 400,000 housing starts in 1970, and a government spokesman recently predicted a rapid rise to the 600,000 annual rate (including rehabilitated units) envisaged by Congress when enabling legislation was passed.

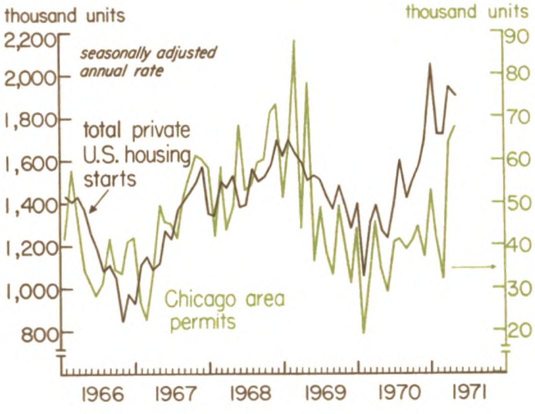
Another element in the changing residential construction picture is the potentially rapid growth of houses fabricated entirely, or largely, in factories. "Pre-fabs" have played a role in new housing since World War II, but recently output of such units, plus the newer "modular units," has increased sharply. Producers report overtime work and growing backlogs of orders. Factory-built housing has grown partly because costs of these units have not increased as much as for conventionally constructed housing.

A number of large business corporations (some, but not all, lumber companies) have devoted resources to the development of pre-fab and modular-unit houses. Most of these corporations also have promoted land development projects because lack of suitable sites has been a deterrent to home building in some areas. Many states and localities have amended zoning regulations and building codes to encourage new techniques. But barriers are still widespread.

Changes are also occurring in the residential construction industry. A growing share of new housing units is accounted for by large builders who operate on a national or regional scale, furthering a trend underway for many years.

Because of family formation, and demolition or abandonment of existing housing units, vacancy rates in nondilapidated structures are low in most urban areas. One way of offsetting higher costs of land, construction, and interest is for buyers to accept smaller, less elaborate units. Until 1970, the period since

Residential housing starts in second year of rapid climb



SOURCE: Department of Commerce and Bell Federal Savings & Loan

World War II had seen a gradual rise in the average size of new dwelling units, in line with upgrading in purchases of autos and other consumer goods. Last year the trend toward larger size units was reversed, both for homes and apartments. Apparently, a further reduction in average size of new dwelling units will occur in 1971.

Nonresidential construction

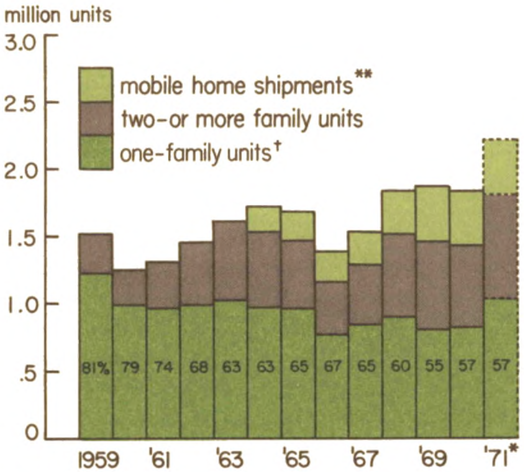
Partly because state and local governments have been able to sell a larger volume of securities, public construction activity is running at a substantially higher rate than a year ago. Among the strongest categories of public construction are waterworks, sewerage facilities, bridges, streets, highways, and recreational facilities. Outlays for new educational buildings are lower this year in most regions. Financial stringencies and slower growth, or declines, in the number of pupils have influenced this trend.

Many state and local construction expenditures are financed in large part by federal grants and aids. Direct outlays by the federal government mainly are for public buildings, military facilities, and public works, such as dams and river and harbor improvements. Important federal projects have been postponed, even when partially completed, under the austerity programs first instituted in 1968 as part of the Administration's anti-inflation policy. Many such projects presumably could be activated if conditions appear favorable. Some loosening of the restrictive policy already has occurred.

Dollar outlays on most types of nonresidential private construction in recent months have been below last year's. Physical volume is off by an even larger amount because of rising construction costs. Spending by most types of business firms and most classes of nonprofit institutions, such as religious and educational buildings, is below last year. The most notable exception to the decline in private nonresidential construction is the public utility sector—electric, gas, and telephone.

The volume of contracts and announced plans for manufacturing and commercial structures suggests that no significant revival will develop in 1971. Office buildings recently constructed or already underway are providing such large additions to floor space in the central areas of the nation's largest cities—including New York, Chicago, and Los Angeles—that real estate analysts anticipate sharply lower starts on such buildings in the next few years. Outlays on stores and shopping centers are still relatively strong. Although dollar outlays on new manufacturing facilities are expected to about equal last year's level in 1971, a larger share of these funds will be for improvements and modern-

Apartments and mobile homes account for a larger share of new housing



*1971 figures are estimates.
**Mobile home shipments data not available prior to 1964.
†Percentage in lower bars are one-family units as proportion of conventional starts.

ization rather than for expansion. This implies a smaller outlay for construction relative to equipment.

Financing construction

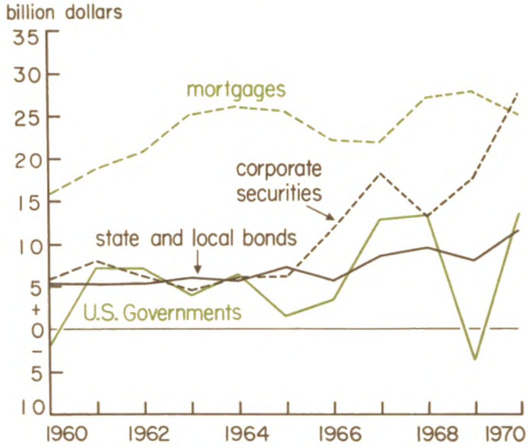
Although funds raised in any manner can be used to finance new construction (and mortgages may be used to finance the purchase of land or existing buildings, as well as for other purposes), the availability of mortgage credit, nevertheless, is closely associated with the level of construction activity. Mortgages compete directly or indirectly with all other debt and equity instruments, but for permanent financing the closest competition is with other demands on the capital markets.

In 1970, $65 billion was raised through sales of capital market instruments, including mortgages, net issues of corporate securites, and state and local bonds. This total was up 20 percent from the 1969 level, which had been a record high. The surge in sales of capital market instruments in 1970 reflected a $28 billion increase (57 percent larger than in 1969) in corporate securities outstanding and a $12 billion increase (up 46 percent) in state and local government securities outstanding. The net increase in mortgages of all types outstanding in 1970 (about $25 billion) was 10 percent less than in 1969.

Because of the smaller rise in mortgage debt and the faster rise in corporate debt in 1970, the latter exceeded the former for the first time in the record dating back to World War II. In the years prior to 1966, the rise in mortgages outstanding exceeded the rise in corporate securities outstanding by three or four to one.

The heavy volume of corporate securities offerings in recent years has played a large role in the squeeze on the mortgage market. From 1966 through 1970 corporate debt outstanding increased almost three times as

Net funds raised through security sales exceeded rise in mortgages in 1970



Note: Latest figures plotted in 1970.

much as in the previous five years. The rise in mortgages was only moderately larger in the second period.

Holders of home mortgages

The smaller rise in mortgage debt last year was concentrated in single-family home mortgages. (Home mortgages usually account for more than half of the rise in total mortgage debt.) The rise in multi-family mortgages reached a record high in 1970, while commercial and farm mortgages rose almost as much as in 1969.

According to the Federal Home Loan Bank Board, mortgage debt outstanding on one- to four-family homes (very largely single-family homes) totaled $280 billion at the end of 1970, double the amount outstanding ten years earlier. By far the largest class of holders of this debt was savings and loan associations (S&Ls) with 45 percent of the total. This proportion has increased fairly continuously from less than 30 percent at the end of World War II. The second largest holders of mortgage debt on one- to four-family homes at the end of 1970 were commercial banks. Mutual savings banks, individuals, life insurance companies, and government agencies (mainly the Federal National Mortgage Association or FNMA, now privately owned) in that order were the other important holders of home mortgages.

The share of home mortgage debt held by commercial banks has been fairly steady at about 15 percent in recent years. The share of mutual savings banks has slipped but remains above 13 percent. Individuals and others (including trust funds), the major holders of home mortgage debt prior to World War II, now are estimated to hold only about 10 percent. Life insurance companies held 20 percent of home mortgage debt as recently as 1955 but now hold less than 10 percent. Each year since 1966, moreover, life insurance companies have reported a net reduction in holdings of home mortgage debt, and this trend has accelerated.

The dramatic shift in the market for home mortgage debt in recent years is best demonstrated by an examination of recent changes in holdings by class of investor. S&Ls acquired 56 percent of the net increase in home mortgage debt outstanding in 1970, up from 50 percent in 1969. This performance was aided by borrowings of S&Ls from the Home Loan banks, which jumped from $5.2 billion at the end of 1968 to $10.5 billion at the end of 1970. (In recent months, S&Ls have been repaying loans to the Home Loan banks on balance.)

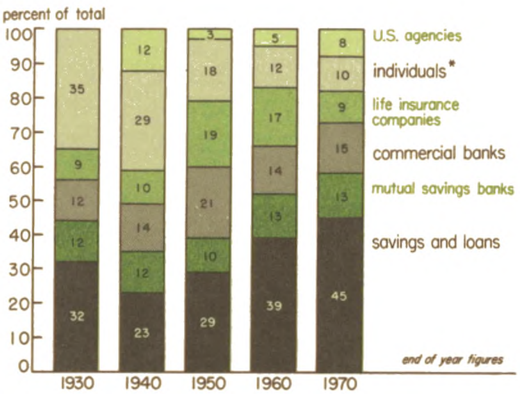
Government agencies (mainly FNMA) accounted for less than 8 percent of home mortgage debt outstanding at the end of 1970. However, these agencies acquired 25 percent of the increase in outstandings in 1969 and 32 percent in 1970.

S&Ls and government agencies combined, therefore, acquired 75 percent of the net rise in home mortgage debt in 1969 and 88 percent of the increase in 1970.

With a more ample supply of loanable funds, commercial banks and mutual savings banks have increased their investments in mortgage debt in recent months. Life insurance companies have not renewed their interest in home mortgages, although they do invest in commercial mortgages and mortgages on multi-family residential structures. By far the largest share of home mortgage loans doubtless will continue to be supplied by S&Ls and government agencies which are largely restricted by law to this type of investment.

Multi-family residential mortgages outstanding totaled $58 billion at the end of 1970. Almost three-fourths of these mort-

Savings associations hold increasing share of home mortgages



*Includes trust funds and miscellaneous holders.

gages were held by life insurance companies (28 percent of the total), S&Ls (24 percent), and mutual savings banks (22 percent). In recent years, S&Ls and life insurance companies have increased their purchases of multi-family residential mortgages faster than have mutual savings banks.

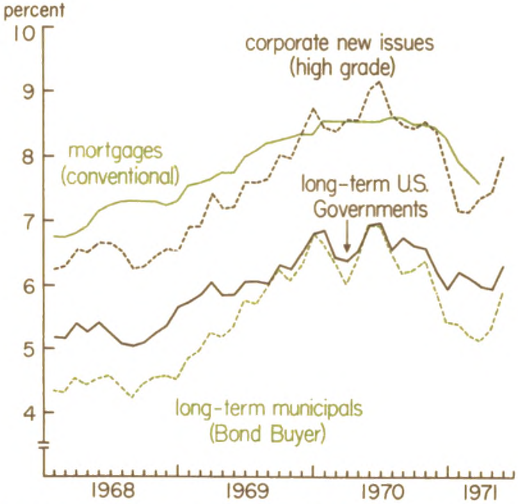
Savings growth

The inflow of funds to both S&Ls and mutual savings banks in the past year, especially the past six months, has been extremely large. Deposits at S&Ls rose $19 billion, or 15 percent, in the year ended in March, compared to a rise of $2 billion, or 2 percent, in the previous 12 months. Deposits at mutual savings banks were 11 percent higher than a year earlier in March, compared to a rise of 3 percent in the previous 12 months. In the case of S&Ls, holdings of mortgages rose 69 percent as much as the rise in deposits in the year ending in March. For mutual savings banks this proportion was 34 percent.

The extremely rapid inflow to savings and time deposits (commercial banks also have experienced large gains) is not likely to be sustained. Savings from current income have been above normal in the past year and the savings rate may well decline. Also, a large part of the growth in savings and time accounts has represented shifts from direct investments in short-term credit market instruments back to savings institutions—reversing "disintermediation"—as market yields became less favorable. The bulk of this "re-intermediation" may have already been accomplished.

Rates on home mortgages declined in late 1970 and, more sharply, in early 1971. At the end of April, effective rates on conventional first mortgages to purchase new homes (including allowance for fees and charges)

Mortgage rates down relative to other market rates since mid-1970



Note: Latest data plotted in May 1971.

averaged 7.5 percent nationally, down from 8.5 percent last October, as reported by the Home Loan Bank Board. There was also a tendency toward easing of terms, longer maturities and lower down payments. Rates on new issues of corporate bonds, despite an upturn in recent months, are down relatively more than mortgage rates compared to the peaks of last year. For short-term credit market instruments (mainly Treasury bills and commercial paper) the drop in rates, also reversed recently, has been much sharper than for long-term rates.

Mortgage rates are still high relative to any period prior to 1969. Nevertheless, the easing in credit conditions has been sufficient to stimulate a rapid expansion of new residential construction. Borrowers are accustomed to higher rates, and usury laws have been modified in most states to permit mortgage loans more leeway in competing for funds. Ease in the mortgage markets is also indicated by the fact that "equity kickers"—interest supplements on mortgage loans for apartments, commercial, and industrial structures—common in early 1970 have largely disappeared.

Looking ahead

The outlook for construction through the remainder of 1971 seems relatively clear. The residential sector will be very strong, both for single-family homes and apartments. Total public construction also will be higher, led by projects related to essential public services. Except for utilities, and possibly retail stores, outlays in the private nonresidential sector probably will be lower than in 1970. Construction costs will increase 8 or 9 percent in 1971, with advances in both wages and materials further widening the spread between the rate of rise of construction costs and the rise in the general price level. These generalizations apply in all regions of the nation.

When national priorities are discussed, references to housing, urban renewal, transportation, water supply, pollution—and public facilities generally—imply continued large outlays for new construction. Studies indicate a need for more than 2 million new dwelling units annually in the 1970s, compared to an annual average of about 1.4 million (excluding mobile homes) in the 1960s. Immense sums will be required for sewerage and waterworks. The continued growth in motor and air transport, both for passengers and freight, will necessitate heavy outlays on roads, bridges, airports, and related developments. Although sluggish in 1971, manufacturing and commercial construction projects will eventually be on the upswing again to provide for the needs of a growing economy.

The level of construction envisaged for the years to come suggests the possibility of continued strain on the nation's productive and financial resources. Accomplishing these tasks with some moderation in the rise of construction costs will require, among other things, unhampered technological progress and freedom of entry for workers in an industry long-plagued with public and private barriers to broad-scale innovation.

Anatomy of an international monetary crisis

After weeks of increasingly heavy activity in the foreign exchange markets, monetary authorities of Germany, Switzerland, the Netherlands, Belgium, and Austria in May ordered cessation of trading in foreign currencies in the markets under their jurisdiction. The market closings were prompted by increasingly large flows of speculative funds that disrupted normal trading and threatened to inundate governmental treasuries with a flood of "hot" money. The markets were reopened after the several governments undertook corrective actions. The Swiss franc and Austrian schilling were revalued by 7 and 5 percent, respectively. The German mark and Dutch guilder were "set afloat," in effect, permitted by the authorities to find their own levels relative to the dollar in foreign exchange markets. Belgian authorities, taking advantage of the existence of dual markets for foreign currencies within the country—one where the dollar price of the franc is maintained by the authorities and the other where the price is permitted to fluctuate freely in response to supply and demand conditions—decided to channel larger volumes of currency transactions into the free market.

Early indications are that the measures were largely successful in restoring calm to the markets. The international monetary system appears to have weathered yet another storm in an increasingly frequent series of storms that in the past few years have plagued its functioning. But the recent developments had a positive side in that they brought to the forefront of public attention issues with which monetary experts and responsible government officials have been coping for years in efforts to improve the functioning of the system and thereby eliminate its apparent susceptability to crises.

Prologue

The recent upheaval in the international monetary system was the product of a number of factors. Some of these have been a long time developing, others are near chronic and date back almost to the inception of the present international monetary system. Still other factors, generally of a short-run nature, entered the picture quite recently. But in a sense, all the underlying factors derive from a common denominator that has plagued mankind and society in virtually all areas of common endeavor in modern times: reconciling national interests in a multinational world. The continued smooth functioning of the present international payments system, clearly beneficial to all nations in facilitating multilateral international trade and capital flows among them, requires timely elimination of imbalances in the international accounts of any nations experiencing them. Yet, on many occasions, such elimination may entail policy measures that interfere with the attainment of the country's domestic economic goals of full employment, stable prices, and growth. And so are the seeds of crisis sown: in the long run, by the persistent failure of some participating nations, out of concern for domestic consequences, to effect timely elimination of imbalances in their international accounts; in the short run, by the failure of some countries to temper domestic monetary and fiscal stabilization policies with international considerations.

The stage

The present international monetary system functions on the basis of certain conventions agreed upon by nations participating in the Bretton Woods Conference of 1944. The conventions are formalized in the Articles of Agreement of the International Monetary Fund (IMF)—an international body instituted to aid implementation of the agreements, and now comprising 111 countries. The most important of the Bretton Woods agreements was the one designed to maintain relatively fixed rates at which members' currencies can be exchanged for each other. Under the agreement, each member except the United States defined the value of its national currency either in terms of gold or in terms of the U. S. dollar, and agreed to maintain these rates by buying and selling dollars against its own currency whenever market forces tended to push the price of its currency from the agreed-upon parity. The United States, in turn, agreed to maintain a fixed gold value for the dollar by a commitment to buy and sell gold at a fixed price of

$35 per ounce from and to the official institutions of the member countries. By these arrangements, the entire system has been tied to a common denominator—gold—while the tie has been maintained by the use of an intervention currency—the dollar.

The market forces that cause the price of a currency to rise or fall relative to the dollar are the product of the country's balance-of-payments position. When a country is running a deficit in its balance of payments (buying more foreign goods, services, and securities than it is selling abroad), the price of the dollar rises because more dollars are demanded to make payments abroad than are being received by the country's residents in payments for goods sold abroad. In this case, the authorities step in and supply the dollars from official reserves in return for domestic currency. Conversely, when a country is running a surplus in its balance of payments, an excess supply of dollars in the foreign exchange markets ensues, causing the price of the dollar to drop. In this case, monetary authorities act by purchasing excess dollars with their own currency, adding dollars to official reserves.

A government's foreign exchange market operations not only maintain a fixed exchange rate relative to the dollar in the face of supply and demand imbalances but also generate internal forces tending to eliminate such imbalances. For example, in a deficit country, where authorities exchange domestic currency for dollars, the supply of domestic money available to the public is automatically reduced (unless, of course, the reduction is deliberately offset by the authorities). This tends to force cutbacks in expenditures in general, thereby reducing imports and making more goods available for export. This tends to improve the country's trade balance. Lowering of the domestic money supply also tends to drive up interest rates relative to those abroad, providing an inducement for inflows of foreign investment. The imbalance is reduced further as the country's capital account balance improves.

In a surplus country the authorities' foreign exchange markets operations lead to increases in the domestic money supply, and this generates forces tending in opposite directions: purchases of foreign goods are stimulated while lower interest rates prompt capital outflows. Since deficits in the balance of payments of one country are, by definition, the counterparts of surpluses in another country's accounts, these tendencies reinforce each other in a movement toward restoration of a global balance.

Whether or not the forces generated as byproducts of exchange market operations are sufficient to completely eliminate an imbalance depends on the underlying nature of the imbalance and on the ability and willingness of the authorities to permit the adjustment to run its course. In general, the need for reinforcing the "natural" balancing of the system is crucial for countries experiencing deficits. A deficit country's reserves, and its access to sources of foreign credit, may be limited, thus forcing the authorities' hand. If the deficit is caused by an excess of domestic spending over available domestic resources, strengthening of measures restraining domestic demand usually is necessary. If the deficit is caused by more fundamental weaknesses in the country's economy (such as, for example, lagging technological progress causing a loss of markets abroad), a realignment of the value of the country's currency may be appropriate. The Articles of Agreement of the IMF provide for such action by permitting members to devalue their currencies.

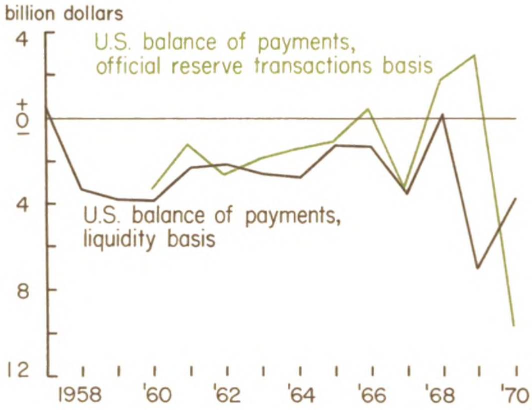
No similar urgency compels a country experiencing a surplus in its balance of payments to reinforce the system's natural balancing process. Indeed, at times, accumulation of reserves may be a deliberate policy objective. Efforts to achieve that objective may lead to the adoption of policies that systematically frustrate the natural balancing tendencies of the country's exchange market operations. Ostensibly, a country can go on accumulating reserves indefinitely. But the accumulation of reserves implies a transformation of real goods and services that would otherwise be available to the residents of the country into gold or reserve balances. Thus, there are limits to which a rational, democratic government should be willing to go. Eventually, adjustment may be initiated either through domestic policy actions (if the underlying causes of the surplus are of a temporary nature), or through an increase in the relative value of the country's currency on the world's markets (if the underlying causes are of a more fundamental nature).

The present international monetary system as devised in 1944 was thought to embrace the best of the two worlds. In the formal commitment of national governments to a regime of fixed exchange rates, the system promised protection against the competitive depreciation of national currencies that marred international commercial relationships in the 1930s. The system also offered the exchange rate stability deemed necessary for growth of international trade and flows of productive capital. At the same time, the system was thought to have enough scope for orderly adjustments to imbalances that inevitably emerge in international accounts. Given these objectives, how well has the system performed its functions?

The honeymoon

In the early years of its existence, the functioning of the system was hampered by severe shortages of reserves in war-depleted national treasuries. The authorities could not support the exchange rates in the face of huge demand for goods from abroad. Fixed exchange rates could be maintained only by imposing restrictions on the ability of citizens to exchange domestic currencies for the most sought-after currency, the dollar. Gradually, these conditions were eliminated as the United States undertook broad programs of foreign aid and development assistance and as the tempo of reconstruction in Europe reached a cresendo. By the late 1950s, full, unrestricted convertibility was achieved by the currencies of most industrial countries of the world.

Continued U. S. deficits . . .



The decade of the Fifties marked impressive expansion in world trade, in no small measure attributable to the smooth functioning of the international monetary system. But the first signs of strain began to appear at the turn of the decade.

During the decade of the Fifties, the United States recorded a deficit in its balance of payments in all years except one. Surpluses in the accounts of most European countries were the counterparts of these deficits. In large part, the "imbalances" were the result of deliberate policies designed to permit war-ravaged countries to replenish their reserves. Hardly anyone worried about U. S. deficits in the early 1950s. But by the late 1950s, with their economies booming and their treasuries replenished by gold and dollars, many countries, especially in Western Europe, began to view with concern the continuing U. S. deficit.

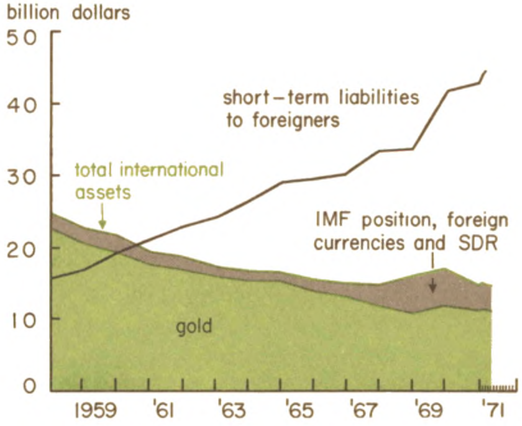
In part, the concern was due to changes in the nature of the deficit itself. As U. S. aid dollars began to be replaced largely by U. S. private investment, some countries began worrying about the growing dominance of American business in their economies. Of more importance, however, was the effect of continuing deficits on the position of the dollar as a viable reserve currency. Throughout the 1950s, the deficit was financed partly by the United States drawing down its stock of gold and partly by foreigners accumulating short-term claims on the United States that in the hands of official institutions represented their national reserves. By 1960, U. S. short-term liabilities to foreigners exceeded the value of U. S. gold stock for the first time in the postwar period. This raised questions about the ability and willingness of the United States to continue making good on its pledge to convert foreign-held dollars into gold at $35 an ounce.

In 1960, rumors that the United States might try to ease the burden of its obligations by raising the price of gold resulted in a wave of speculative buying on the London gold market that was broken only by the President-elect's reaffirmation that the United States would maintain the price of gold and would undertake measures aimed at eliminating the balance-of-payments deficit.

The gathering storm

U. S. deficits—and European surpluses—

. . . erode U. S. liquidity position



Note: Annual data except 1971 which are monthly.

continued into the Sixties. At times, governments of the surplus countries resisted the adoption of expansionary policies for fear of generating inflation. In other instances, domestic groups pressured their government to refrain from revaluation for fear of eroding a competitive advantage in foreign markets. In the United States, lagging growth and a relatively high rate of unemployment during the early Sixties made it virtually impossible to eliminate the deficit through conventional deflationary measures. At the same time, a devaluation of the dollar as a corrective measure for the U. S. deficit was deemed inappropriate because of the special position of the dollar as a reserve currency.

Then, as now, devaluation of the dollar could be accomplished only by redefining the "gold content" of the dollar, and this would automatically imply an increase in the price of gold in terms of the dollar. Such an action, it has been felt, would mean renegging on the solemn pledge of the U. S. Government to maintain the gold value of officially-held dollars abroad at 1/35 of an ounce per dollar.

Moreover, many observers argued that other countries would not let the United States "get away" with a unilateral devaluation of the dollar, even if it took such a step to correct the chronic balance-of-payments deficit. The United States, they argued, loomed too large in world trade for other countries to allow it to gain a substantial competitive edge in world markets by devaluation. According to this argument, other countries simply would have redefined the value of their currencies and maintained the same relationship of the dollar as before. The result would have been a universal revaluation of gold that would leave relative exchange rates essentially unchanged.

Continuing U. S. deficits added to the supply of liquid dollars held by foreigners. As this total continued to increase—and U. S. reserves of gold continued to decrease—the concerns that first emerged in the early Sixties intensified. The devaluation of the British pound in November 1967 triggered expectations of similar action on the part of the United States. Heavy speculative buying of gold developed, mainly on the London gold market where the price was being supported largely by the United States. The speculative wave reached crisis proportions in March 1968 and forced discontinuation of the U. S. price support operation. In its place, a two-tier gold market was established. On one tier, accessible to the public, the price of gold would be determined by supply and demand conditions. On the other tier, open only to gold trading among official institutions, the price of gold would continue to be maintained at $35 per ounce. This arrangement underscored the U. S. commitment to buy and sell gold at the internationally-fixed price and at the same time largely closed a channel for dollar/gold speculation. The channel for dollar/foreign currencies speculation remained open, however. Persistent imbalances in foreign accounts of a number of countries provided the atmosphere, and the development of the Eurodollar market provided the means, for utilizing this channel.

The Eurodollar

Not all the dollars flowing abroad as a result of the U. S. deficit were "unwanted." The role of the dollar as the world's most important reserve, intervention, and international transaction currency has remained unchallenged throughout the postwar period and has led to a sustained demand for dollars. One of the side effects of the continued demand for dollars was the development abroad of an active market in which dollar balances could be traded—the Eurodollar market. In this market, holders of dollar balances make them temporarily available to European banks in the form of time deposits. The banks, acting as intermediaries, channel these funds to temporary users in the form of dollar loans.[1]

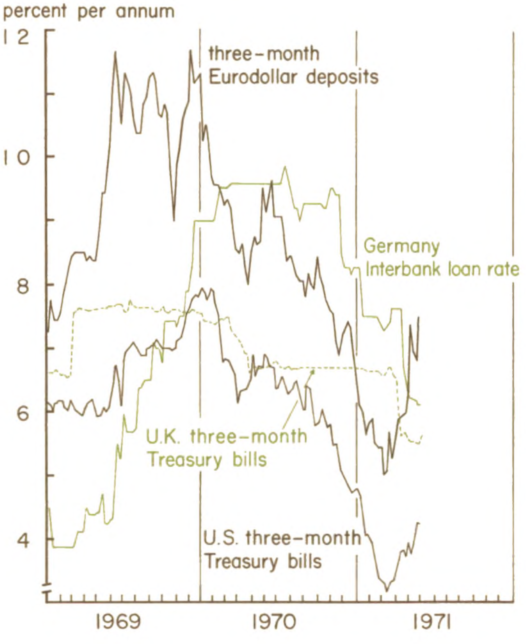
In 1968, U. S. authorities undertook to cool the buildup of inflationary pressures in the domestic economy and began to tighten monetary conditions. Caught between strong domestic demand for loans and scarcity of loanable funds, U. S. banks turned to the Eurodollar market. Through their branches abroad, U. S. banks borrowed Eurodollars in increasing volume throughout 1968 and 1969. The attractive rates that U. S. banks were willing to pay for these funds lured large quantities of dollars held by private foreigners into the Eurodollar market and induced foreign residents to convert their own currencies into dollars. Gradually, the demand for dollars in exchange markets abroad

[1]For a more detailed description of the origins and functioning of the Eurodollar market, see **Business Conditions**, June 1969.

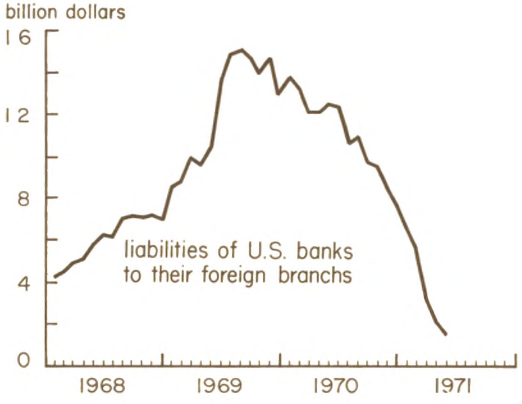
exceeded the supply. Foreign official institutions were obliged to make up the shortage from official reserve holdings. In some instances, their intervention was so extensive that it exhausted official holdings of dollar balances, and foreign governments were forced to sell gold to the U. S. Treasury to replenish their dollar balances. The United States recorded surpluses in its balance of payments (on the official reserve transaction basis) in 1968 and 1969 largely as a result of these developments.

In early 1970, monetary conditions in the United States began to ease. Money became more plentiful, and interest rates began to drop. The Federal Reserve relaxed certain regulations and thereby gave U. S. banks access to domestic sources of funds at a cost that was lower than funds available from

Disparity in interest rates . . .



. . . induces repayment of Eurodollar borrowing by U. S. banks . . .



abroad. U. S. banks began to pay off their Eurodollar loans. This reflow of dollars to Europe added to the pool of foreign-held dollars searching for profitable investment.

The speculator strikes!

Foreign holders of dollar balances found a ready investment outlet in the money markets of several European countries.

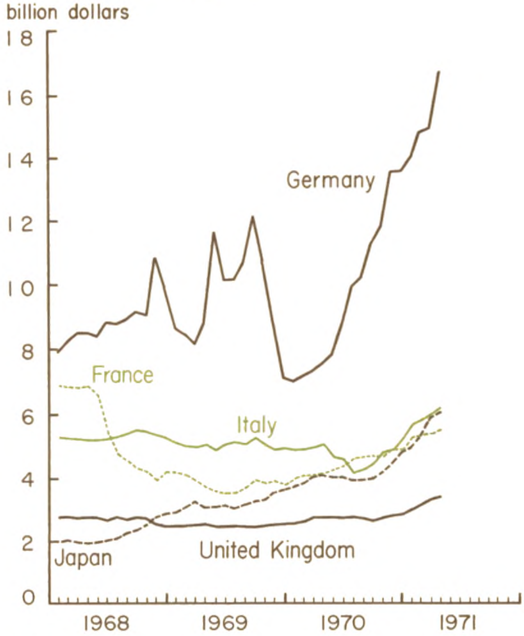
Virtually all industrial Western European countries experienced strong inflationary pressures recently. The authorities in these countries placed heavy reliance on monetary policy in combating inflation, and, as a result, interest rates rose sharply in late 1969 and remained relatively high throughout 1970. This was in contrast with interest rates in the Eurodollar market, where the ample supply of funds was exerting downward pressures on the cost of money. European banks and corporations naturally turned to the Eurodollar market to meet the booming domestic demand for funds at the lowest possible cost. They borrowed dollars and converted them into their domestic currencies. The conversions caused the prices of the currencies to rise relative to the dollar, and several of the currencies soon reached the established limits at which the central banks were obliged to intervene by absorbing the excess supply of dollars through sale of domestic currencies. The rise in dollar holdings of European central banks accelerated particularly in the early months of 1971 as the disparity between the money markets in the United States and Europe widened.

A number of policy measures adopted by U. S. and European authorities in efforts to reduce the flows of interest-sensitive dollars proved inadequate. The obvious difficulties encountered by the authorities in containing the flows of funds and in halting the buildup of inflationary pressures gave rise to suspicions that the authorities in some countries abroad might resort to currency revaluation as a means of helping to achieve both objectives. Revaluation, of course, held out a promise of quick profit for those who would buy the currency just before the action was taken and sell it at a new higher price—and a threat of loss to those who entered into contractual obligations to make near-term payment in the currency that faced revaluation. International commodity traders and corporate treasurers stood to lose unless they accelerated their payments to beat the revaluation, or unless they borrowed the currency at the old rate and held it until payment was due.

These concerns generated demand for foreign currencies, and soon the process gained its own momentum: the more a currency was bought, the louder the rumors of possible revaluation; and the loud rumors brought more purchasers into the market.

Germany, where the authorities were especially concerned with inflationary pressures, became the prime suspect for revaluation.

. . . and foreign official reserves* rise



*Convertible currencies, gold, IMF position, and SDRs.

Contributing to this suspicion were the continuing surplus in the German balance of payments despite the revaluation in 1969, the traditional German distaste for exchange controls, and statements of some public officials and certain institutions suggesting that a change in parity was under active consideration.

On May 4, over $1 billion was reportedly absorbed by the German Central Bank in order to prevent the mark from rising above its official upper bound. The next day, the flood turned into a deluge: in the first 40 minutes of trading, the central bank reportedly picked up an additional $1 billion. With that, the markets were ordered closed. Within minutes, the speculators turned their attention to other currencies as likely candidates for revaluation. Switzerland experienced an avalanche of dollars, as did other markets, and within hours four more national foreign exchange markets were closed. The international monetary crisis of 1971 reached its crest.

Epilogue

Following the closing of the foreign exchange markets, the authorities in the countries most affected by the unsettled conditions acted to eliminate the immediate causes. The governments of the Netherlands and West Germany announced that, for an indefinite period, they would not intervene to maintain exchange rates within the previously prescribed limits. In effect, the dollar-price of German marks and Dutch guilders in foreign exchange markets is to be determined by prevailing supply and demand conditions. As more marks and guilders are demanded by holders of dollars than are offered for sale by holders of marks and guilders, the price of these currencies will rise relative to the dollar. Hopefully, uncertainties will discourage speculators from taking positions in these currencies and put an end to disturbing flows of speculative funds. Moreover, to the extent that marks and guilders float upward, such a revaluation may aid in eliminating these countries persistent balance-of-payments surpluses.

Swiss and Austrian revaluation of their currencies will discourage foreign purchases of goods in these countries and increase domestic purchases of foreign goods. This will tend to reduce the balance-of-payments surpluses of these countries.

Only the passing of time will tell how effective these measures will be in eliminating the fundamental disequilibrium that was the underlying cause of the most recent crisis. The lesson for the future, however, is clear: to avoid further disruptions, all nations that participate in and benefit by the present international monetary arrangements must work together to harmonize their international economic policies and their divergent domestic economic goals to accommodate the covenants of the system—or they must work together on modifications of the system so that it can accommodate diversity.

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