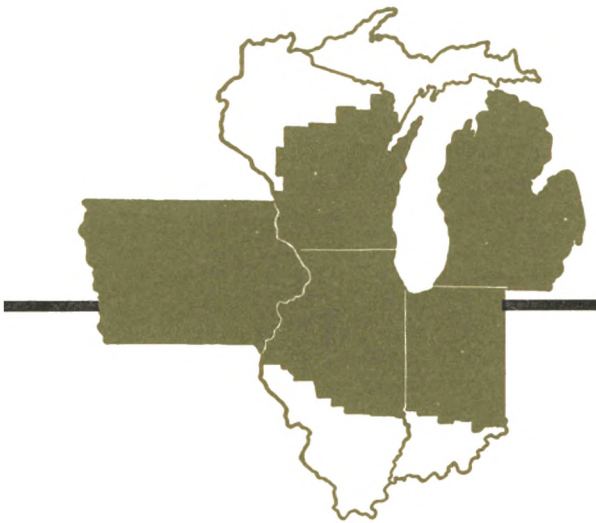
A review by the **Federal Reserve Bank of Chicago**

Business Conditions



1969 June

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THE Trend OF BUSINESS

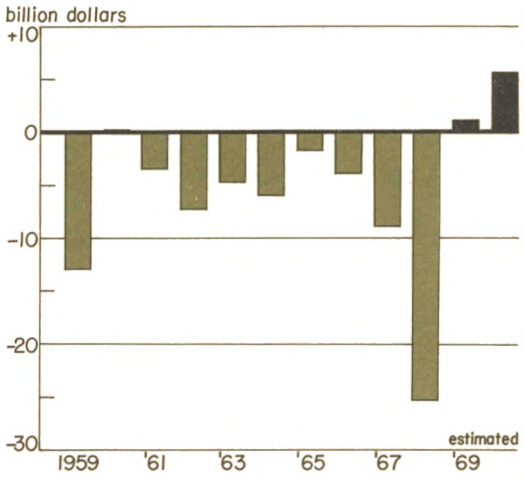
Inflationary pressures continue dominant. As midyear approaches, excessive demands on resources of labor and materials are still not significantly abated, despite restrictive monetary and fiscal policies. Increases in prices and worker compensation in recent months have exceeded rates of a year ago.

Nevertheless, a number of developments suggest the long-awaited transition to more stable growth may be at hand. The rise in total spending on goods and services has slowed. Some home builders' plans have been curtailed. Sales of farm machinery have been below last year's moderate level. Auto sales are slower than in the later months of 1968, and inventories of new cars have been large. Industrial production increased much less in April than in preceding months. Although still very low by past standards, unemployment edged slightly upward in March and April. Employment did not rise in April after a steep rise in the first quarter.

But most buyers—consumers and businessmen—have not apparently changed the plans they made on the basis of expected rapid price rises, continued full employment, and strong demands for goods and services. Such expectations are a major factor delaying the effectiveness of restrictive monetary and fiscal policies. Skepticism over prospects for moderation of price increases is of two types: (1) that the upward pressures are inexorable and *cannot* be contained and (2) that restrictive policies will be prematurely relaxed when evidence of moderation appears.

Excessively rapid growth in spending—and the accompanying wage-price spiral—can only be sustained when fueled by rapid growth of money, credit, or both. With the federal government achieving a budget surplus and expansion of private credit restrained by fewer reserves being provided to the banking system, conditions are changing. But the link between spending and credit growth varies, both in magnitude and timing. Restraint typically begins to take hold, as in the late spring of 1966, months before the fact is generally recognized.

Federal budget is moving from large deficit to surplus



Patience may be a virtue in a crucial period such as this, since drastic monetary and fiscal measures could precipitate a recession. On the other hand, substantive efforts to relieve credit stringencies in particular sectors—such as residential construction, municipal securities, small business, or agriculture—through general monetary-policy actions could neutralize the needed restraint and perpetuate, even accelerate, the inflation.

Spending and productivity

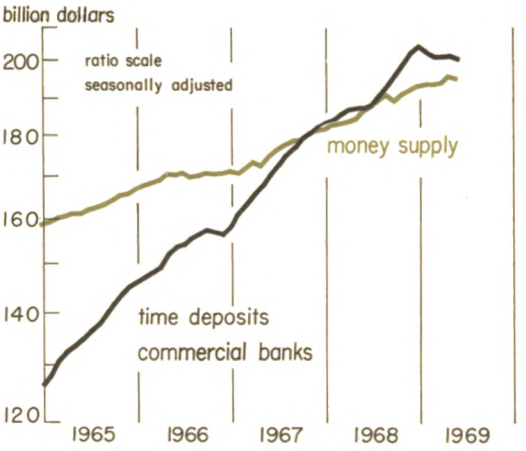
Preliminary estimates show that total spending rose in the first quarter at an annual rate of 7 percent, compared with 10 percent in the second quarter of 1968. After adjustment for price changes, the first quarter rise in spending was 3 percent, less than half the rate of rise of the second quarter of 1968.

The slower growth in spending and output in the first quarter was accompanied by a faster rise in employment. Nonfarm employment averaged 940,000 more than in the fourth quarter—the largest quarterly rise in three years.

As employment rose faster than production, output per manhour declined slightly, thereby intensifying the pressure of large wage increases on prices. Output per manhour increased 3.3 percent last year—about the same rate as the average of the past 20 years but less than in most recent years. Output per manhour usually declines only when output is reduced, as it was in the first quarter of 1967. The loss in productivity in the first quarter of 1969 is consistent with the view that efficiency declines when pressure on labor resources becomes too great and labor turnover and absenteeism rise.

Substantially more workers were hired in manufacturing in March than a year before. But the hiring was almost entirely to replace workers who had voluntarily left their jobs.

Growth in money supply and time deposits has slowed in 1969



Layoffs were slightly fewer than a year before. Claims for unemployment compensation in the nation and in all Midwest states except Michigan were less in April than in the same month last year. Claimants for unemployment insurance are, of course, experienced workers who are not likely to be out of work long under present conditions.

The leveling of employment in April was reported for both manufacturing and nonmanufacturing. The volume of help-wanted ads for a wide variety of jobs and reports of personnel managers suggest that one reason employment did not rise in some areas in April was a shortage of suitable recruits.

Construction near peak?

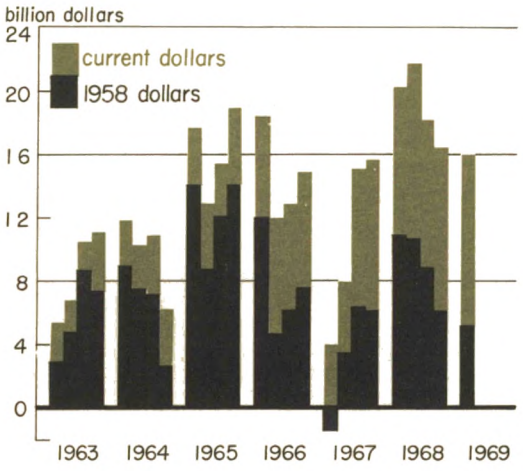
Construction put in place in the first quarter exceeded $91 billion on an annual rate basis—9 percent more than a year before.

Private construction accounted for most of the rise. Residential construction was especially strong. Because of budget restrictions on federal projects and difficulties in funding some state and local projects, public construction rose only 4 percent.

Construction contracts reported by F. W. Dodge were 29 percent higher in January and February than in the same months of 1968. But the March-April total was only 6 percent higher than a year before and residential contracts were 1 percent lower.

Other evidence also indicates that restricted availability of labor, materials, and credit is beginning to curtail increases in spending on construction. Housing starts were at an annual rate of more than 1.7 million units in January and February, but the rate dropped to 1.5 million in March and April. New housing permits granted and reports of home builders' plans suggest the rate may decline further.

Gross national product
is rising at a reduced rate



When credit stringencies became important in the first quarter of 1966, housing starts were at an annual rate of more than 1.4 million units. By the fourth quarter of that year the rate had declined 35 percent—to a low of less than 1 million.

Most housing experts do not expect a sharp decline in residential construction in 1969. Inflows of savings to savings and loan associations are holding up better than in 1966, the Home Loan Banks are ready to lend larger sums to these institutions, and the Federal National Mortgage Association is better prepared to support the secondary mortgage market. Usury laws have been liberalized in many states, allowing home buyers to better compete for funds. Illinois and Michigan are notable exceptions. Most important, apartments account for a larger proportion of housing units. Promoters of apartments can tap sources of funds inaccessible to buyers of single-family homes. They are not usually restricted by usury ceilings and can offer to share equity with other investors.

Scarcity of construction workers and some materials suggests that faster growth in construction spending would mainly serve to accelerate the rise in construction costs. The physical volume of construction would be affected less. Prospective needs for residential, commercial, and government construction are large, and full use of resources can be expected for years to come. Public concern, therefore, could well focus on means to increase the availability of men and materials and eliminate antiquated construction practices and regulations. This would permit additional funds to be used more effectively.

Retail trade and consumer income

Retail sales reached a new high of $29.4 billion (seasonally adjusted) in April. For the first four months of this year, sales were

6 percent higher than a year before—about the same as the increase in personal income after taxes. Stores selling durable and nondurable goods participated about proportionately in the increased sales. A substantial proportion of the rise in sales represented higher prices.

The recent increase reverses a level trend in the second half of 1968, which ended in a decline for December. The failure of consumer purchases of goods to advance from the third to the fourth quarter of 1968 was given by some analysts as a major reason for projecting a substantial slowing in total activity in the first half of 1969. They thought production of consumer goods was outrunning demand and that excess inventories would require production cutbacks. This view now seems to have been premature.

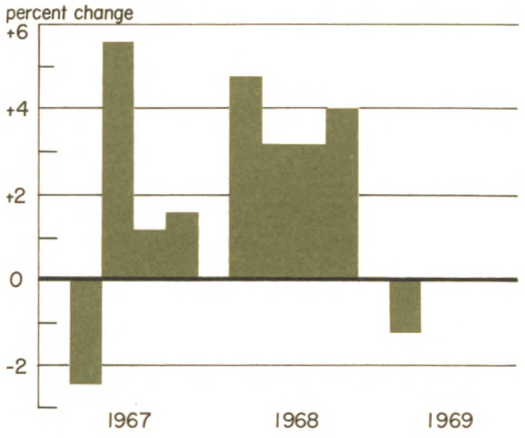
Personal income after taxes increased about 8 percent a year from 1963 through 1968—a sustained surge that was unprecedented. The smaller rise so far this year, compared with last year, reflects the 10-percent income-tax surcharge[1] and the increase in Social Security taxes, effective January 1, 1969. For a number of reasons, as the year moves on, the year-to-year margin of gain in after-tax income will tend to widen. The comparison will be with periods when the surcharge was in effect, a growing number of wage and salary earners will pass the $7,800 income on which Social Security taxes are paid, and wage and salary increases are averaging higher this year than last.

Surveys of consumers indicate they have confidence in their financial positions and intend to purchase durable goods at about the same rate as last year. So far this year, the proportion of income saved by consumers has remained well below the 7.3 percent rate of 1967 and the first half of 1968, which now appears abnormally high. Consumer credit outstanding has continued to rise at a fairly rapid rate.

In short, developments do not suggest a slowdown in consumer spending that would contribute to stabilization of the inflationary trend.

[1]The income tax surcharge was effective April 1, 1968, but withholding did not begin until July 1. Mainly for this reason, final payments on 1968 income tax liabilities were unusually large.

Output per manhour declined in the first quarter



Data for total Private Economy, percent change from previous quarter at annual rate.

Another big auto year

Almost 3.1 million new passenger cars (foreign and domestic) were delivered to Americans in the first four months of this year. This was slightly more than in the same period last year and only 2 percent less than the record set in the same period in 1966. In dollar-volume, sales were probably at a new high for the four-month period although, after seasonal adjustment, lower than the fall of 1968.

If the first four months account for a third of the auto sales for the year—as they typically do—sales this year will total about 9.2 or 9.3 million. That would be about midway in the range of forecasts made at the start of the year but short of the 9.6 million record set in 1968. Sales were inflated last year by 300,000 or 400,000 units that would probably have been sold in late 1967 had it not been for strikes. Nevertheless, sales were especially strong between July and November —a period that was probably not helped by sales catching up after the strikes.

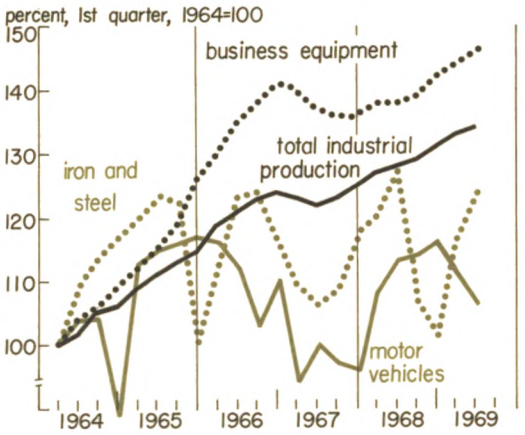
Imported cars appear to be heading for another record year—not only in numbers but also as a proportion of total sales. Despite the dock strike which reduced sales in January and February, sales of foreign cars through April were almost 5 percent higher than in the first four months of 1968.

Production of cars has been falling behind the rate of output last year by a widening margin. Although planned, this trend was exaggerated by April and May strikes at some plants. Some sales have been lost or delayed by strikes, but inventories of most models have been ample.

Inventories of new domestic cars totaled 1.7 million units on April 30—about 60 days of sales at the April rate. This proportion nearly equals the record for May 31 set in 1966 when inventories were considered excessive. Auto producers appear less disturbed by high inventories now, however, partly because of the threat of more strikes. Plans are set, nevertheless, to end production of 1969 models a week or two earlier than usual. The runs for some models will be completed before the Fourth of July.

While sales of cars have disappointed some producers, sales and output of trucks have exceeded expectations. Production of trucks has been more than last year and there are long waiting lists for many models, especially extra-heavy trucks. Industry spokesmen foresee sales of 1.9 million trucks this year—up from the 1968 record of 1.8 million.

Business equipment
continues to lead the
rise in industrial production



Steel orders hold up

One of the surprises of 1969 has been the strength in demand for steel. In April, steel output was within 3 percent of the all-time high set a year before, prior to the strike deadline. In the Detroit area, output was 4 percent less than the peak last year. In the Chicago area, the gap was less than 2 percent.

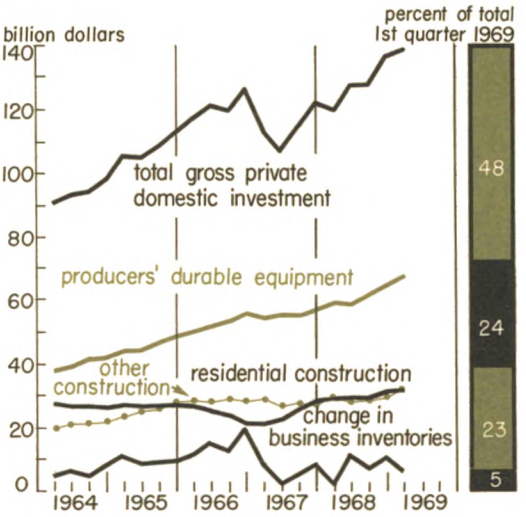
Steel output has declined slightly in the last few weeks as shipments to the auto industry slackened. But demand from other major markets has been vigorous. (Farm machinery is an exception.) Some plants are operating at practical capacity, often because of labor shortages in major steel-producing areas. Industry projections of mill shipments of steel this year have been raised recently to amounts

approximating last year's near-record of 92 million tons. Production of steel may reach a new high this year, partly because mill inventories will probably rise instead of declining as in 1968.

One reason for the industry's optimism is the unexpected reduction in pressure from foreign competition. Imports of finished steel reached 18 million tons last year—almost 17 percent of domestic supplies. It was thought that imports would be about as large this year if stringent quotas (whether voluntary or involuntary) were not applied. Now it appears that imports will be substantially less than last year.

Worldwide demand for steel has increased as a result of prosperity in most industrial countries. Some American producers have supplied additional quantities of steel to European users, reversing the trend of recent years. European capacity to produce steel in the types, grades, and sizes required has apparently been overestimated.

Producer equipment
outlays outpace investment
in construction and inventories



Inventories rise with sales

The book value of inventories of companies engaged in manufacturing and trade rose in the first quarter at an annual rate of $10 billion—less than in the fourth quarter of 1968 but at about the average rate of the past 18 months. Business sales rose even faster than inventories. The result was a decline in the ratio of stocks to sales—from 1.56 in December to 1.54 in March.

The stock-to-sales ratio for all business was the same at the end of March as a year before. For manufacturers, the ratio was lower than a year before. For retailers, it was higher. For manufacturers and retailers together, it was lower than when sales growth slowed in early 1967.

Inventories of most companies appear in line with the intentions of management. Steel inventories are rising again and delivery times have lengthened for some types of steel. Cutbacks in output of farm equipment have corrected an inventory imbalance that developed earlier this year. With assembly lines due to shut down earlier than usual, auto inventories will be reduced rapidly in July and August.

Many manufacturers report they would be more comfortable with larger inventories. In April, 39 percent of the purchasing managers in the Chicago area reported a slowing in vendors' deliveries. This proportion has been growing recently and is now more than twice as large as a year ago.

Rising inventories are needed to support rising sales and new orders. But inventory accumulation is also stimulated by lengthened delivery times, threats of work stoppages, and prospects of higher prices. Prices of non-

ferrous metals—especially copper, aluminum, and nickel—and products containing substantial quantities of these metals have been in the forefront of the recent price rise. But prices of most other classes of finished goods—durable and nondurable—have also been increasing.

Manufacturers' backlogs of orders were at a record $88.4 billion at the end of March. At 1.67, the March ratio of order backlogs to shipments was lower than a year ago or two years ago but substantially higher than from 1962 to 1965. Apparently most companies are avoiding forward commitments that might prove burdensome if sales failed to meet expectations. Also, some companies are apparently holding back inventory accumulation because of limited financial resources. Nevertheless, the huge volume of goods in the pipelines could create problems for some companies if the general uptrend in business activity lost momentum. Inventories have seldom appeared excessive as long as sales were rising rapidly.

Machinery and equipment

The uptrend in shipments and orders of machinery and equipment continued through April. Expenditures on producer equipment have been rising sharply since mid-1968. Purchases in the first quarter were 14 percent higher than a year before and appeared to be moving still higher.

New orders for machinery and equipment have followed an erratic but generally rising trend for two years. Order backlogs reached a new high of $22.7 billion at the end of March, compared with less than $21 billion a year before. With the rapid increase in shipments of machinery and equipment, there has been no clear tendency for backlogs to rise relative to shipments.

In the tax-reform proposals presented to Congress in April, the President recommended repeal of the 7-percent investment tax credit on equipment purchases. Earlier indications of Congressional support for this change suggest to most observers that the recommendation will be adopted.

For the past three years expenditures on producers equipment have averaged 7.1 percent of total spending on goods and services —the highest annual percentage since World War II. Most projections of total spending, and of spending on equipment, indicate a further rise in this proportion in 1969.

Full impact of repeal of the investment tax credit would not be felt until 1971. This is for several reasons: equipment ordered before April 21, 1969, the date the President recommended repeal of the tax credit, would still be eligible for the credit; many types of equipment have lead times of a year or more; many capital expenditure programs are so far along that loss of the credit would not affect planning; a large volume of unused investment credits is available and could be carried forward as long as seven years; and for most companies the proposed cut in the corporate surtax from 10 percent to 5 percent beginning January 1, 1970, would more than offset the repeal of the tax credit. In addition, a Treasury study is underway that may lead to liberalization of depreciation for tax purposes.

Clearly the proposed change is not expected to dampen the boom in equipment spending in the short run. Rather, it is part of a program to restructure the tax system and realign fiscal priorities with changes in economic conditions.

Continued restraint needed

Review of recent developments does not provide conclusive evidence that the rate of inflation has been slowed, much less that the boom is firmly under control. There are, how-

ever, enough signs to recall the 1966 experience and to suggest caution to consumers and companies undertaking new commitments—a decline in housing starts, large car inventories, postponements of capital issues, loss of time deposits at banks, slower growth in checking deposits at banks, and savings accounts at other institutions.

Spokesmen for the Administration and the Federal Reserve System have reaffirmed their determination to pursue policies of restraint as long as necessary. The experience of 1966-67 shows policy makers not only that excessive demand can be curbed without a recession but also that they must stay alert to prevent a new inflationary surge.

Eurodollars — an important source of funds for American banks

Interest rates—under pressure from inflation, strong credit demands, and restrictive monetary policy—have moved to near-record highs. The public's demand for certificates of deposit at banks has declined as yields on competing money-market instruments moved above the maximum rates banks are allowed to pay for time deposits. And reserve and liquidity positions of banks have been squeezed as CDs ran off.

In these circumstances, banks have reduced their holdings of government securities and increased their borrowing from Federal Reserve banks while adjusting their loan and investment policies. At the same time, some banks, particularly those with foreign branches, have turned to a source of funds virtually unknown only a few years ago—the Eurodollar market.

Liabilities of American banks to their foreign branches (mostly "borrowings" of Eurodollars) stood at about $10 billion in late May, after having risen about $3 billion since the end of 1968 and more than $8 billion since mid-1966. Eurodollars have apparently found a permanent place in the American financial structure.

What are Eurodollars?

Eurodollars are dollar-denominated deposits at commercial banks outside the United States. Most, but not all, are in Europe. Such deposits can be initiated by:

- Foreign holders of dollar-deposits at American banks transferring their deposits to foreign banks.
- Foreigners receiving payments by checks drawn on accounts at American banks, depositing the dollars in banks in their countries.
- Americans transferring their dollar deposits in American banks to foreign banks.
- Holders of convertible currencies (such as German marks) exchanging them for dollars and depositing them in a foreign bank.

Note: The Research Library of this bank has compiled a bibliography of articles and books dealing with Eurodollars and Eurodollar market. Copies are available on request.

The bank receiving the deposit establishes a dollar-denominated liability to its depositor. This is Eurodollars.

But the process by which Eurodollars come into existence does not usually stop there. The original dollar deposit can be loaned and redeposited and, in the process, new dollar-denominated liabilities, and assets, created. Thus, the total of Eurodollars outstanding—currently estimated at well over $20 billion dollars—can be viewed as a superstructure of dollar-denominated deposits in foreign banks underpinned by dollar deposits in American banks.[1]

Origin of Eurodollars

Eurodollars are only one of several foreign-currency denominated deposits loaned and borrowed by banks and corporations throughout the world. Deposits denominated in British pounds (Eurosterling), German marks (Euromarks), Swiss francs (Eurofrancs) are held and traded by banks outside the countries to which these currencies are domiciled.

This practice, which dates back to the early history of banking, stems from its convenience and profitability to banks and businesses engaged in international transactions. Deposits denominated in pound sterling were common in the 1920s, when the pound was a major trading currency.

The growth of dollar-denominated deposits since the dollar emerged after World War II as the major exchange medium in international transactions was hampered at first by exchange restrictions imposed abroad. A limited market in dollar-denominated deposits, nevertheless, developed in the early 1950s as a result of practices followed by some communist countries. Anxious to hold dollars but concerned that their deposits might be blocked or confiscated in return for the expropriation of American property if held in their name in American banks, these countries placed their dollars with banks in Western Europe. These banks then lent the dollars to Europeans, while maintaining dollar-denominated liabilities on their books in favor of the East-Europeans.[2]

The move by many countries to virtually free convertibility of currencies in 1958 gave banks and residents of those countries an opportunity to hold dollar deposits and to invest dollars at yields higher than those offered by American banks. Removal of exchange restrictions also allowed banks and residents of other countries to swap their currencies for dollars and invest the proceeds in the Eurodollar market.

Certain institutional features in the domestic economies of the United States and many European countries encouraged development of the market in Eurodollars. One of the most important was the Federal Reserve

[1]Unlike the U. S. dollars held by foreigners, Eurodollars are not direct claims on the resources of the United States. They are only claims on foreign banks, and it remains for these banks to provide the dollars from their reserves when the claims are exercised. The "creation" of Eurodollars by foreign banks does not lead to an expansion of U. S. liabilities to foreigners.

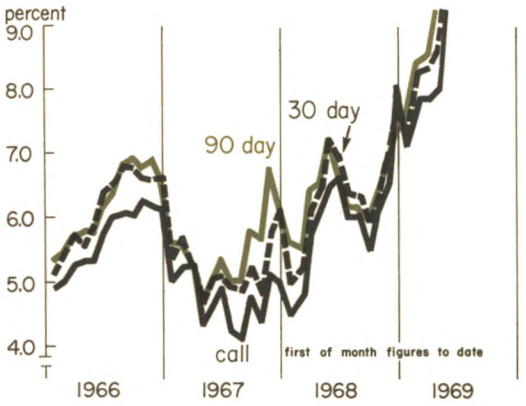
[2]The following possibly apocryphal but nevertheless plausible story suggests how communists may have been instrumental in giving a name to dollar-denominated deposits. One of the major suppliers of dollar deposits to European banks in the early 1950s was a "branch" of the Russian state bank in Paris, the Banque Commerciale pour l'Europe du Nord, S.A., whose international cable code is "Eurobank." Since most transactions in foreign-exchange markets are transacted by cable, transfers of dollars to or from that bank bore its cable-code designation. Foreign-exchange traders and banks engaged in dollar transactions soon began to refer to dollar deposits obtained from that bank as "Eurodollars." The name apparently stuck even after other suppliers entered the market.

regulation governing the payment of interest on deposits by American banks. Regulation Q prohibits payment of interest on demand deposits held in American banks (deposits with maturities of less than 30 days) and prescribes the maximum rates banks can pay on time deposits. With the prescribed rates considerably lower at times than the rates foreign banks paid on dollar deposits, this regulation provided a powerful incentive for holding dollar deposits abroad.

Another factor was the dissimilarity in economic growth in the late 1950s between the United States and major European countries. In the United States, the economy was sluggish and interest rates low, while in Europe, largely as a result of postwar reconstruction and creation of the Common Market, there was a boom accompanied by high interest rates. These encouraged retention of funds in Europe.

Still another factor was the shortage of money-market instruments suitable for short-term investment in Europe. Given the preference of European investors for liquid assets and the relative underdevelopment of the money markets there, the Eurodollar deposit provided users and suppliers a convenient means of profitably employing short-term funds.

Interest rates on all maturities of Eurodollar deposits have reached new highs in 1969



As the international movement of trade and capital increased, there was increasing need for convenient short-term financing in a generally acceptable currency. Unlike British banks after World War I, American banks were slow to capitalize on the special position of the dollar after World War II. In the late 1950s and early 1960s, many American banks with strong domestic ties were just beginning to recognize the growing need for international banking services. Their failure to provide such financing earlier left a vacuum in international financial markets that was quickly filled by European banks using Eurodollar deposits. By 1959, Dutch, Swiss, Scandinavian, and German banks had become substantial lenders of Eurodollars. As the demand for Eurodollars increased—and with it the interest rates offered on such deposits—these banks sometimes found suppliers even among central banks of Europe and Asia. The Eurodollar market was rapidly developing into a truly international market.

Functioning of the market

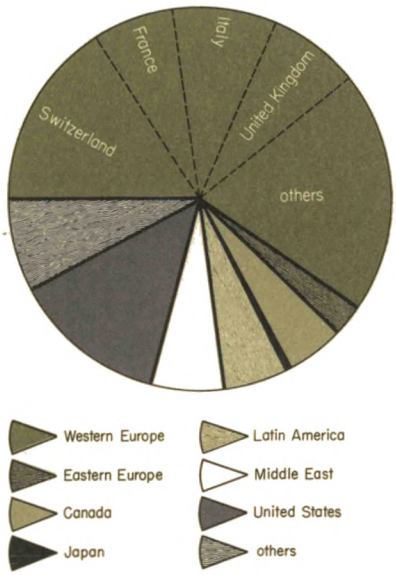
Transactions in the Eurodollar market consist primarily of the acceptance and placement (borrowing and lending) of dollar deposits. Maturities of deposits and loans range from "call" to one year and more, with most falling between one and six months.

Several factors influence supply and demand in the market. In addition to interest rates on various maturities, users and suppliers of Eurodollars must also consider the cost of converting dollars into other currency (or vice versa) and the cost of insurance against exchange rates changing while the

Eurodollar deposit or loan is outstanding—the cost of "forward cover."

A variety of participants are attracted to the market by the flexibility with which it can meet individual needs. Corporations, banks, and sometimes individuals have developed the practice of placing funds in the Eurodollar market temporarily when yields are attractive. But the supply is not limited to commercial sources. Official monetary institutions also place funds in the market for various reasons and through various means. The Swiss National Bank and the Bank for International Settlement in Basle, for example, placed more than $800 million in the market late last year to ease seasonal pressures and the impact of speculative flows of funds that were threatening to disrupt trade by causing sharp fluctuations in interest rates.

Dollar deposits in European banks originate in all corners of the globe



SOURCE: *Thirty-Eighth Annual Report of the Bank for International Settlements,* June 1968. Data cover dollar liabilities of banks in eight European countries to nonresidents at the end of 1967.

Foreign central banks have also on occasion used the Eurodollar market to control the liquidity position of the banking system in their countries. For example, as a result of rumors last November and again this spring that the German mark would be revalued, large amounts of funds flowed into Germany, causing both a rapid and undesired increase in the liquidity of the German banking system and a severe strain on the availability of funds in the Eurodollar market. The German Federal Bank, wanting funds to be cycled back into an international market, offered to provide forward cover for funds placed in the Eurodollar market at a cost considerably below the forward rate in the commercial market. Taking advantage of this offer, German commercial banks channeled a large amount of funds in the Eurodollar market and, in the process, reduced their excessive liquidity.

Uses of Eurodollars

The most common use of Eurodollars has probably been in financing international trade, at least until recently. More than a third of the current $230 billion annual volume of world trade is financed by dollars, only part of which is supplied by American banks. The ability of American banks to meet world needs for short-term dollar credit in financing trade between foreign countries has been especially limited since initiation of the Voluntary Foreign Credit Restrainst Program in 1965. The Eurodollar market provides a convenient alternative.

Converted into domestic currencies, Eurodollars have also been used in some countries,

Japan, for example, in financing domestic credit needs. In other countries, such as Britain, they have been used in financing local governments. American companies expanding their operations abroad have relied heavily on the Eurodollar market for working capital. Foreign commercial banks have frequently borrowed in the Eurodollar market to supplement their liquidity needs and raise funds for domestic needs.

American banks in the market

Through branches abroad, American Banks have been heavily involved in the Eurodollar market from the beginning and they have shared in its growth. Between 1960 and 1968, total deposits at the branches of American banks in the United Kingdom—the center of the Eurodollar market—increased from $1.1 billion to $11.7 billion. At the end of 1968, almost 90 percent of the deposits of these branches were denominated in currencies other than sterling—presumably dollars.

Foreign branches of American banks have followed much the same pattern in their Eurodollar activities as other foreign banks. They have used Eurodollar deposits to make loans to corporate customers and to participate in the interbank Eurodollar market. They have also "swapped" Eurodollars into other currencies so they could make foreign-denominated loans. But in addition to these usual practices of foreign banks, they have also placed Eurodollar deposits at the disposal of their home offices in the United States.

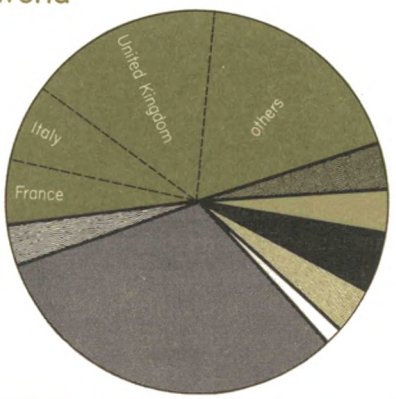
Until late 1964, liabilities of American banks to their overseas branches were never more than $1 billion. The balances rose slightly in 1965, but until mid-1966 they remained well below $2 billion.

In late 1966, the picture changed. American banks came under a severe squeeze from strong credit demands and restrictive monetary policy. As interest rates rose in the money market, banks had a large runoff of CDs. To cushion the impact, banks turned to their branches for Eurodollars. Liabilities of American banks to their foreign branches rose sharply, reaching $4.3 billion by December 1966.

As monetary pressures eased in early 1967, American banks reduced their use of Eurodollars, but the level of borrowing remained high by pre-1966 standards. In the second half of 1967, it began rising again until, in November, the volume of borrowing passed the peak reached in 1966.

With the continued buildup in monetary pressures in 1968, liabilities of American banks to their foreign branches surged ahead. After a short decline from the large amounts outstanding in late 1968—due partly to unsettled conditions in foreign-exchange markets and partly to seasonal patterns—the rate of increase rose in the wake of tightening credit conditions in early 1969. Toward the

. . . and they are used throughout the world



SOURCE: *Thirty-Eighth Annual Report of the Bank for International Settlements*, June 1968. Data cover dollar claims of banks in eight European countries on nonresidents at the end of 1967.

end of April, the total outstanding had reached more than $10 billion.

It is possible to view 1966 as a turning point in the Eurodollar activities of American banks. Their experience with the Eurodollar market during the credit crunch of that year demonstrated the market's flexibility in meeting their needs. Banks discovered that the capacity of the market to generate large amounts of funds in response to movements of interest rates was conducive to active competition for call deposits and time deposits with maturities of less than 30 days. At the same time, the absence of rate ceilings on time deposits abroad allowed them to compete for longer-term deposits in the Eurodollar market at a time when Regulation Q prohibited such competition in American markets. These features of the Eurodollar market gave the banks greater flexibility in managing their liabilities.

The competitive advantage of the Eurodollar market as a source of funds for American banks has also been strengthened by certain technical factors that tend to reduce the effective cost of Eurodollar funds. The Eurodollar balances American banks obtain through their foreign branches are carried on the books as liabilities to the branches. Because of a Federal Reserve Board ruling that a bank and its branches form a single legal entity, balances due a branch are not treated as deposits in assessing reserve requirements and Federal Deposit Insurance Corporation insurance fees. The result is a lower effective cost of Eurodollar time deposits obtained through an overseas branch than similar deposits obtained in the American market at the same interest rate. A bank has full use of the funds it receives from the Eurodollar market, while it must pay the insurance fee on funds obtained in the domestic market and set part of the funds aside as reserves.

The effective cost of Eurodollars is further reduced by factors arising from rules governing the transfer of funds between branches and their home offices. The rules allow a bank to reduce its total deposit liabilities subject to reserve requirements for one day by the amount of funds being transferred between it and the branches.[3] This enables the bank to invest, for one day, the funds that it would otherwise be required to hold as idle reserves.

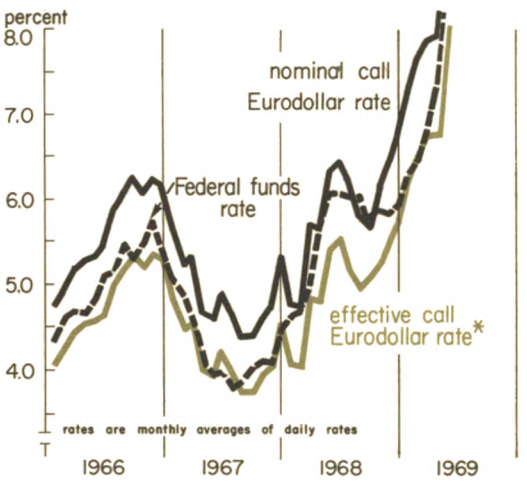
All these considerations no doubt played a part in increasing the reliance of American banks on the Eurodollar market both in day-to-day management of their reserves and as a source of loanable funds. Banks have sometimes been led to tap the market because of the favorable constellation of interest rates that made borrowing in the Eurodollar market cheaper. The persistent favorable differential between the one-day Eurodollar rate (adjusted for "cost-savings" to banks using

[3]The Board of Governors of the Federal Reserve System recently proposed an amendment to its rules governing member bank reserves that would prevent such reduction.

Use of Eurodollars by U. S. banks has been on the rise since 1966

SOURCE: *Federal Reserve Bulletin*. For weekly data see May 1968, page A104 (1964-68 data) and May 1969, page A83 (1969 to date).

The effective cost of short-term Eurodollars stays below the cost of Fed funds



*The effective rate was computed by adjusting the nominal rate for saving in reserves.

funds of such maturity) and the rate on Federal Funds was probably one reason for the continued large borrowing of Eurodollars. At other times, it has been the effect of Regulation Q that, by keeping banks from obtaining funds in this country, caused them to turn to the Eurodollar market. Sharp increases in the liabilities of American banks to their branches in late 1966 and again in late 1968 have undoubtedly been the result of these developments.

Implications for credit policy . . .

The increased activity of American banks in the Eurodollar market has added a new dimension to the Federal Reserve's responsibilities for monetary management. The problem has been, on the one hand, the possible impact of Eurodollar borrowing on bank reserves and, therefore, on the ability of the banking system to extend credit and, on the other, the possible redistribution of reserves in favor of banks borrowing in the Eurodollar market.

For an individual bank, a Eurodollar deposit obtained by its branch and transferred to the home office represents a net addition to its ability to extend loans and acquire other earning assets. But the deposit obtained by the branch and carried on its books as a dollar-denominated liability to foreigners does not represent a net addition to resources of the American banking system as a whole. Such a deposit has already existed in the American banking system—held in most instances by a foreigner in another American bank. Thus, one bank's gain is another's loss. Total reserves of the entire banking system remain unaffected.[4]

But because of the technical distinction between "deposits" and "due to branch" accounts, the effect of Eurodollar borrowing is a transformation of deposit liabilities subject to reserve requirements into reserve-free liabilities. For the banking system as a whole, required reserves are reduced (or excess reserves expanded) by the amount formerly needed to back the original deposit. Given the current reserve requirements for various classes of deposits, such a reduction in required reserves can range from 3 percent of the amount of Eurodollars transferred (if the original deposit was a time deposit at a bank with total deposits of less than $5 million) up to 17.5 percent (if the deposit was a demand deposit in a reserve city bank with total deposits of more than $5 million).

This potentially expansionary effect of

[4]Since a branch bidding for dollars abroad does not know what American bank they are deposited in until the transaction is completed, banks often purchase their own deposits. If they did not purchase them, however, the deposits would probably be purchased by another bank and, therefore, lost to the bank holding them.

Eurodollar borrowing by American banks can be readily offset, however, by the Federal Reserve through its open-market operations. The monetary authority's control over the aggregate reserve base is in no way diminished by banks borrowing in the Eurodollar market.

In some respects, however, the redistribution of reserves in favor of banks with ready access to the Eurodollar market remains a relevant issue. Some observers have argued that the ability of some banks to compete for time deposits that are exempt from reserve requirements—especially at times when regulation limits the power of other banks to compete—can lead to a disproportionate share of the "burden" of restrictive monetary policy being borne by banks without access to the Eurodollar market. Banks without foreign branches may be forced to sell more securities (usually at capital losses) or to reduce their lending more than banks with such access.

Analysis of the available evidence shows, however, at least for the most recent experience, that this concern may have been exaggerated. During the current period of monetary restraint, total assets of the American banks that borrow most of the Eurodollars have declined relative to the total assets of other large banks. Their total deposits have also declined, relative to those of other large banks, reflecting mostly the fairly large runoffs of large CDs. Borrowing by these banks from domestic sources has declined as a proportion of all such borrowing by large American banks, indicating that borrowing of Eurodollars has merely substituted for domestic sources of funds.

But more subtle aspects of the situation nevertheless emerge. Banks borrowing in the Eurodollar market increased their share in the total business loans outstanding. As domestic monetary policy became restrictive, the ready access of some large banks to Eurodollars may have allowed them to avoid curtailment of business lending to some extent.

. . . and balance of payments

While it is not clear that the Eurodollar activities of American banks present no conflict with the domestic objectives of U. S. monetary policy, there is no doubt that recent increases in Eurodollar borrowing by American banks have contributed significantly to the achievement of an important international objective—improvement of the country's balance of payments. The huge surpluses recorded on the official reserve transaction basis in 1968 and again in the first quarter of this year can be attributed largely to the activities of American banks in the Eurodollar market during those periods.

Active bidding for Eurodollar funds by American banks contributed to rising interest rates in the Eurodollar market. This—and at times speculation flights out of particular currencies—attracted increasing numbers of foreign investors who converted their currencies into dollars and made them available to American banks.

As the volume of conversion increased, more pressure was put on exchange rates and foreign central banks were brought into the foreign-exchange markets. The central banks, obligated under international agreements to maintain exchange rates of their currencies within a small range relative to the dollar, provided the market with dollars out of their reserves to keep the dollar-exchange rates of their currencies from dropping below agreed limits. Thus, in many instances, the dollars acquired by American banks came directly from the reserves of the foreign central banks.

Since the reduction in dollar holdings of foreign central banks counts as items improving this country's balance-of-payments on

the official transactions basis, borrowings by American banks contributed to the achievement of a surplus.[5]

Eurodollars in perspective

The emergence and growth of the Eurodollar market has provided a fascinating demonstration of the capacity of competition and free markets to develop new institutions in response to economic needs.

The market has not yet been tested under all conditions, however. Its fluidity and responsiveness to changing conditions, which contributed so significantly to its growth, could create severe strains for some participants in the future. But one thing seems certain: the market has established itself as a significant and continuing force tending to link national and international money markets—and therefore national economies—more closely.

[5]Without precise data, the effect of recent Eurodollar borrowing by American banks on the liquidity balance—which is computed as the total change in liquid liabilities to foreigners, both official and private—is harder to establish. Nominally, Eurodollar borrowing by American banks results in a shift in the ownership claims on the United States from foreign holders to the branches of American banks abroad. But because foreign branches of American banks are foreign entities, the transfer of funds does not change the amount of foreign claims on the United States. Whether a shift in claims between foreign holders and foreign branches of American banks changes the liquidity balance depends on the maturity of the original claim.

If the claim was long term (with a maturity of more than one year) before it was transformed into a short-term Eurodollar deposit, the transfer would increase the liquidity deficit. American banking's short-term liabilities to foreigners would be increased and its long-term liabilities reduced. And since only the changes in liquid liabilities are counted in computing the balance of payments on this basis, the deficit would be increased.

If, however, the original claim was short term, the transfer into Eurodollars and repatriation by branches of American banks would not change the liquidity deficit.

Eurodollars and exchange rates

The cost of borrowing Eurodollars is influenced, in addition to interest rates, by a whole constellation of exchange rates. Here is an example using hypothetical figures to illustrate the point.

A German importer wants to borrow funds to buy goods from a British exporter. He needs the equivalent of 1 million pounds for three months. To raise this amount, he can borrow German marks at his own bank at, say, 10 percent a year and convert the marks into pounds at 9.6 marks per pound. After three months, he would repay the bank 9,840,000 marks (principal plus interest).

Alternatively, he can borrow Eurodollars, again say, at 10 percent, and convert them into sterling at $2.39 per pound (the current rate). If at the maturity of the loan, he can obtain dollars for marks at 4 marks per dollar, his total cost will be 9,799,000 marks (9,560,000 marks to purchase $2,390,000 for repayments of principal plus 239,000 marks to purchase $59,750 for payment of three months' interest). This is 41,000 marks cheaper than if he had borrowed marks for exchange into pounds.

The advantage exists, however, only as long as the borrower can be sure that when the loan matures he can purchase dollars with marks at 4 marks per dollar. The advantage of borrowing in the Eurodollar market would be wiped out if the mark depreciated to say, 4.03 marks per dollar, the lower limit allowed under international agreements. At that rate, the borrower would have to pay out 9,872,492 marks in repayment of the dollar loan—more than if he had borrowed marks.

To ensure against such a drop in the exchange rate, he can "hedge" his loan in the "forward" foreign exchange market.

In that market, foreign-exchange dealers contract to buy or sell foreign currencies for future delivery at specified rates of exchange. The rates at which they offer such contracts are posted as forward rates.

Forward rates of various currencies can be higher or lower than the spot rates, depending usually on relative interest rates in the different countries but also on the market's estimates of future movements in rates.

The German importer could protect himself against the possibility of an unfavorable change in the mark-dollar exchange rate by buying "90-day forward dollars"—a contract specifying delivery to him of dollars for German marks three months later. Dollars for delivery in 90 days were recently selling in the German exchange market at a discount of about 7 percent a year—that is about 3.930 marks per dollar. At that rate, the importer would have to pay 9,627,517 marks for the $2,449,750 he needed to repay his Eurodollar loan. That would be 212,483 marks less than if he had borrowed marks instead of Eurodollars. Clearly, it would be to his advantage to finance his imports in the Eurodollar market.

Multiple expansion of Eurodollars

The mechanics of Eurodollar expansion can be seen in the steps by which foreign banks obtain dollar deposits and extend dollar-denominated loans. Assume, for example, that an American resident responds to the higher interest rates paid on dollar deposits at British banks by transferring $1 million from his account with a bank in New York to one in London. The transfer leaves the American with a dollar deposit in a London bank while the London bank has a dollar deposit in the New York bank.

The London bank has learned it can meet dollar withdrawals by holding dollar deposits with American banks equal to only about 10 percent of its dollar liabilities. Therefore, it extends a $900,000 loan to a British importer and credits his account that amount.

The importer uses his dollar balance at the London bank to pay for imports from a French exporter who wants to be paid in dollars. The Frenchman deposits the draft drawn on the London bank at a Paris bank, requesting that a dollar-denominated time

New York Bank

Assets	*Liabilities*
	−$1,000,000 demand deposit of an American
	+$1,000,000 demand deposit of a London bank

London Bank

Assets	*Liabilities*
+$1,000,000 demand deposit in a New York bank	+$1,000,000 call deposit of an American

deposit be established for him. The bank credits his account $900,000 and routes the draft to London for collection.

London Bank

Assets	*Liabilities*
+$900,000 loan to a British Importer	+$900,000 demand deposit of a British Importer

On receipt of the draft, the London bank transfers ownership of $900,000 on deposit with the New York bank to the Paris bank.

London Bank

Assets	*Liabilities*
—$900,000 demand deposit in a New York bank	—$900,000 demand deposit of a British Importer

Paris Bank

Assets	*Liabilities*
+$900,000 demand deposit in a New York bank	+$900,000 time deposit of a French exporter

New York Bank

Assets	*Liabilities*
	—$900,000 demand deposit of a London bank
	+$900,000 demand deposit of a Paris bank

The Paris bank now has a $900,000 liability to the French exporter and a $900,000 asset at the New York bank. Although ownership has changed, foreign claims on the New York bank are still $1 million—$100,000 owned by the London bank and $900,000 by the Paris bank. But the volume of Eurodollars has increased to $1.9 million—$1 million in primary Eurodollars on deposit with the London bank by an American and $900,000 in secondary Eurodollars on deposit with the Paris bank.

This process of dollar lending and redepositing can continue until all the direct dollar-claims are being used as reserves against dollar-denominated deposits. In theory, the volume of Eurodollar deposits that banks could create through their lending operations can be determined by the same formula as for domestic deposit expansion: the reciprocal of the reserve ratio times the influx of primary Eurodollars.

Assuming the 10-percent reserve ratio used in the example is used by all banks participating in the Eurodollar lending, the total volume of Eurodollars that could be created would be ten times $1,000,000—$10,000,000. If so, the balance sheet of all the foreign banks combined would finally show, as liabilities, $10,000,000 of Eurodollar deposits and, as assets, $1,000,000 deposit in American banks and $9,000,000 of dollar-denominated loans.

In practice, however, there are many "leaks" that reduce the deposit-expansionary potential. Eurodollars are usually redeposited among banks, with each bank in the chain putting aside a portion as reserves. While inter-bank deposits "net out" in the combined balance sheet (that is, they do not add to the creation of Eurodollars), the reserves put aside reduce the amount that can be lent. Also, the recipients of Eurodollar loans may fail to redeposit the proceeds in the Eurodollar market. In such case, the expansion of Eurodollars ceases completely. This occurs, for example, when a Eurodollar deposit is

borrowed by an American bank.

Assume that the Paris bank in the example above lends part of the deposit it received from the French exporter to the London branch of a Chicago bank. The balance sheets of the participants change as follows:

Paris Bank

Assets	*Liabilities*
—$810,000 demand deposit in a New York bank	
+$810,000 time deposit in the London branch of a Chicago bank	

London Branch of a Chicago Bank

Assets	*Liabilities*
+$810,000 demand deposit in a New York bank	+$810,000 time deposit of a Paris bank
—$810,000 demand deposit in a New York bank	
+$810,000 due from the home office	

Chicago Bank

Assets	*Liabilities*
+$810,000 demand deposit in a New York bank	+$810,000 Due to the London Branch
—$810,000 demand deposit at a New York bank	
+$810,000 Balance at the Federal Reserve	

New York Bank

Assets	*Liabilities*
—$810,000 Balance at the Federal Reserve	—$810,000 demand deposits

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