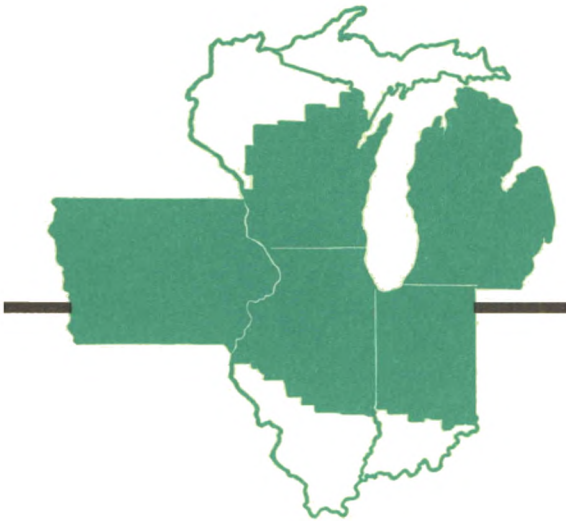
A review by the **Federal Reserve Bank of Chicago**

Business Conditions



March 1971

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THE Trend OF BUSINESS

Postwar business cycles compared

The business slowdown that began in the third quarter of 1969 is responding stubbornly to corrective actions. Although recovery undoubtedly is underway, the current revival is the most sluggish since World War II.

Early in 1971, the strongest sectors of the economy were residential construction, automobiles, and steel—each of which was recovering from a relatively low level of activity. Retail sales rose moderately in December, January, and February. But output of business equipment and defense-related output continued to decline. Evidence of a general uptrend in the economy remained unclear.

The most comprehensive measure of economic activity is real gross national product —total spending on goods and services adjusted for price changes. Real GNP in the first quarter of 1971 was up sharply from the strike-depressed fourth quarter of 1970 and may have exceeded the rate for the third quarter of 1969. But the overall performance of the economy was unsatisfactory. Total employment, and total factory output remained substantially below earlier peaks. Moreover, employment, factory output, and new orders for durable goods declined in February, after an improvement in the two previous months. Temporary setbacks in a general economic recovery are not uncommon, but the failure of these measures to continue to rise was a disappointment to policymakers.

Forecasts of the trend of the total economy for the remainder of 1971 are in general agreement that activity will rise, quarter-to-quarter, throughout the year. Opinions differ significantly, however, as to the rapidity of the prospective uptrend. Even the most ebullient projections envisage a considerable margin of unused resources of men, materials, and facilities throughout 1971.

Until business activity recovers to an acceptable level, the full story of the economic adjustment that began in 1969 cannot be told. Nevertheless, sufficient time has elapsed to permit three general statements: First, the 1969-70 decline in activity was shallow compared with declines in earlier postwar cycles; second, the time taken for a pronounced recovery to develop has been long; and third, the persistence of upward price pressures in the face of unused resources is unprecedented.

The postwar record

Not all business adjustments are classified as recessions. For the title to fit, declines in

activity must have sufficient breadth (affecting many sectors), duration, and severity. But these characteristics are matters of degree. Since World War II activity has slowed, or declined slightly, in a number of periods that were not considered, in retrospect, to have been recessions. Such dips occurred in 1947, 1951, 1956, 1962, and 1966-67.

Most students of business conditions look to the National Bureau of Economic Research (NBER), a private organization, to identify recessions. The NBER has determined that recessions began in 1948, 1953, 1957, and 1960. In each case, the evidence provided by declines in real GNP, industrial production and employment, and increases in unemployment is persuasive. Although the NBER has not offered a final opinion, most analysts now believe that the decline that began in 1969 should be counted as the fifth postwar recession.

Recessions since World War II have differed in the amplitude and duration of declines in total activity, and in the rapidity of the revivals that followed. In the four recessions from 1948 through 1961, declines in real GNP continued for either two or four quarters. The amount of these declines ranged from 1.5 to 3.9 percent. Interestingly, the largest percentage decline was in the 1957-58 period when the downtrend continued for only two quarters, and the smallest percentage decline was in the 1960-61 period when the downtrend continued for four quarters. The postwar recessions have been mild compared to business declines of the 1920s and 1930s when output dropped by one-third or more.

How does the recent decline in activity compare with the postwar record? The comparison is influenced by the auto strike in the fourth quarter of 1970. Real GNP had increased slightly in the second and third quarters of 1970, and there was a widespread expectation that the modest uptrend would continue through the year. If the first quarter of 1970 had been the low, the 1969-70 decline in real GNP would have lasted only two quarters and amounted to only 1.0 percent. Taking the fourth quarter as the low, the decline from the peak was 1.4 percent, but still slightly less than in 1960-61.

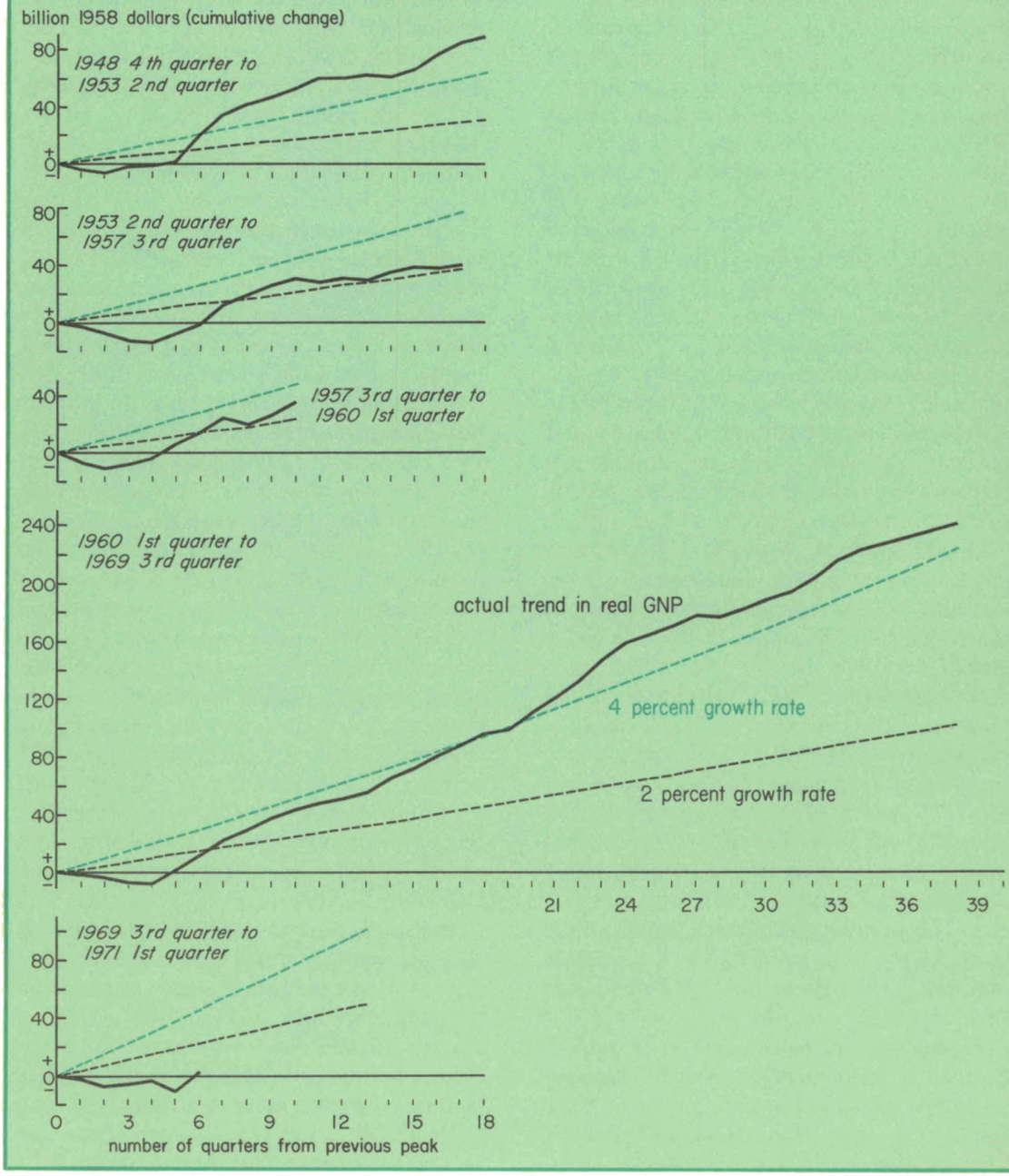
Turning to the recovery phases of postwar recessions, the record shows variations in the vigor of these uptrends. One method of gauging the strength of a recovery is to compare the length of time necessary for real GNP to rise from the recession low to a level surpassing the previous high. In the first three postwar recessions, this phase took three quarters. The recovery of real GNP to a new high took only one quarter in 1961, however, following a mild downturn. This achievement may have been duplicated in the first quarter of 1971 as activity rebounded from the fourth-quarter low.

The duration of a business fluctuation can be measured from a pre-recession peak to the quarter in which the peak is surpassed—the entire period of decline and revival. In three of the postwar recessions, it took five quarters to regain the earlier peak. In the 1953-55 period, following the end of the Korean War, the economy took seven quarters to complete the cycle. If real GNP regained the 1969 quarterly peak in the first quarter of 1971, the "round trip" will have taken six quarters.

Regaining an earlier peak after a slump is only an interim goal for a dynamic economy such as that of the United States. Because the potential labor force and the capacity of productive facilities rise from year to year, satisfactory performance of the economy requires continuous growth in real activity.

Real GNP has grown at an average annual rate of 4 percent in the postwar period. This

Real GNP resumes growth; recent decline followed record upswing



does not mean, however, that real GNP has grown at the 4 percent rate from the peak of one business cycle to another. Only in two of the postwar cycles—1953-57 and 1960-69—did real GNP regain the 4 percent growth rate before another recession began. To permit a comparison of the strength of all postwar recoveries, the accompanying charts show actual trends relative to both 2 percent and 4 percent growth rates from pre-recession peaks in real GNP.

In the first four postwar recessions, the time required for real GNP to regain a 2 percent rate of growth over the pre-recession peak varied from six quarters in 1948-50 to eight quarters in 1953-55. If real GNP rose at a steady 6 percent annual rate from the fourth quarter of 1970, the 2 percent growth rate from the 1969 peak would be achieved in the fourth quarter of 1971—a period of nine quarters. But most forecasts of activity indicate a less rapid recovery, implying that the 2 percent growth rate from the third quarter of 1969 will not be achieved until well into 1972.

Production and employment

In most postwar business cycles, quarterly peaks and troughs in industrial production—output of mines, factories, and electric and gas utilities—usually have coincided with peaks and troughs in real GNP. In percentage terms, however, the declines in industrial production have been substantially greater.

Manufacturing output, especially durable goods, and mining output fluctuate more than the general economy for a number of reasons. First, purchases of machinery and equipment, both by producers and consumers, tend to be concentrated in periods of prosperity. Second, manufacturing and mining are more likely to be interrupted by strikes than are such activities as services and government. Third, inventory growth is usually large in periods of high-level activity, while inventories usually are reduced in periods of recession.

In postwar recessions, declines in industrial production from the peak quarter to the trough quarter have ranged from 6.6 percent in 1960-61 to 12.1 percent in 1957-58. In the fourth quarter of 1970, industrial production was 6.7 percent below the peak level of the third quarter of 1969. About half of this decline probably was associated with the auto strike. In the first quarter of 1971, industrial production recovered, but remained below the level of the third quarter of 1970.

Although industrial production usually revives simultaneously with real GNP, it takes longer, one or two quarters longer, for industrial production to return to earlier peaks. Most current forecasts imply that industrial production will not regain the peak level of 1969 until well into 1972.

Peaks in wage and salary employment often occur in the same quarters as peaks in real GNP. But there is a tendency for employment to lag in the early part of the recovery phase. Large increases in output per man-hour, typical in business expansions, reduce the need to hire additional workers.

Although the recent business expansion culminated in the third quarter of 1969, total wage and salary employment continued to rise through the year, and reached a record high in the first quarter of 1970. The uptrend in total employment continued despite declines in manufacturing employment. In part, this development reflects the inability of many employers to recruit enough workers during the boom of the late 1960s.

In most postwar recessions, the percentage decline in total wage and salary employment has been about the same as the decline in real GNP. In the fourth quarter of 1970,

employment averaged 1.3 percent less than in the first quarter, compared with a peak-to-trough decline of 1.4 percent in real GNP. Declines in both measures were influenced by the auto strike. It is not yet clear whether employment is rising in early 1971. For the year as a whole, employment gains are expected, but not at a rate sufficient to reduce unemployment significantly.

Unemployment in the cycle

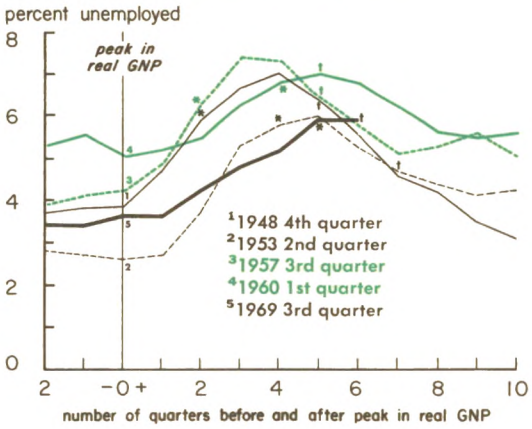
According to the government definition, an unemployed person is someone who does not have a job and who is actively seeking work. It is possible, therefore, for unemployment and employment to decline simultaneously, if net withdrawals from the labor force occur. Similarly, when employment is rising vigorously, unemployment may also increase because more wives, students, and older people decide to seek work, perhaps on a part-time basis. In most periods of substantial change, however, unemployment (usually expressed as a percent of the total labor force) moves in the opposite direction from employment.

The quarterly low for the unemployment rate in most postwar business cycles has coincided with the high for employment, and the high rate for unemployment with the low for employment. In upswings, therefore, improvements in both employment and unemployment usually lag behind the recovery in the general economy.

The recent expansion in activity presents a special case. Unemployment averaged 3.4 percent of the labor force, both in the fourth quarter of 1968 and in the first quarter of 1969. This was the lowest rate since the end of the Korean War in 1953. During 1969, unemployment rose slightly, while total employment continued to rise.

Unemployment increased sharply in 1970,

Unemployment rate increases but remains below levels reached in earlier postwar recessions



*GNP trough.
†GNP surpasses previous peak.

reaching 5.9 percent of the labor force in the fourth quarter, the highest level since 1961. In the first quarter of 1971, the average unemployment rate probably was about the same as in the fourth quarter of 1970. If unemployment does not increase from the recent level, it would compare favorably with the peak rates recorded in previous postwar recessions—7.0 percent in 1949 and 1961 and 7.4 percent in 1958.

But many observers expect the unemployment rate to rise further in 1971, even if employment increases. A large number of young people will enter the labor force, and additional wives may seek jobs to supplement family income. In addition, the civilian labor force is being increased by the reduction in the armed forces—already down more than 500,000 since late 1969—with further cuts planned for the remainder of 1971.

Inflation and labor costs

Price inflation has persisted in the past

year, despite declines in activity. Continued price inflation during business slowdowns has occurred in the past, but not to the same degree as in the recent experience.

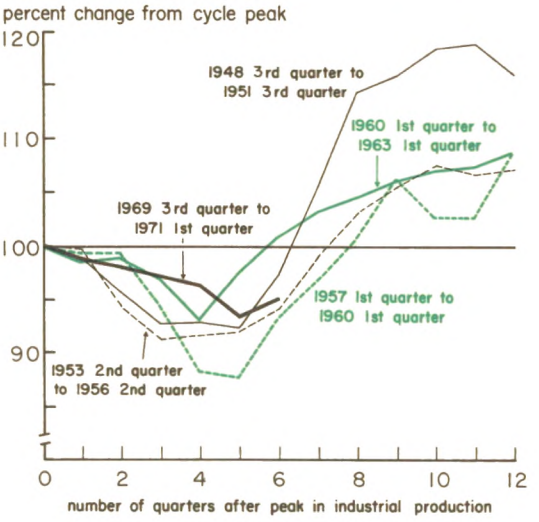
The implicit deflator for the gross national product is commonly used as a measure of the general price level. The deflator is obtained by dividing GNP in current dollars by real GNP expressed in 1958 dollars. Constant dollar GNP (in 1958 prices) is estimated by adding the various components of total spending after these have been deflated individually by appropriate prices indexes.

The average price level (measured by the GNP deflator) in the fourth quarter of 1970 was up 5.3 percent from a year earlier, and up 6.5 percent from the third quarter of 1969, the peak level for activity. This was a faster rate of price increase than in the five quarters preceding the peak in activity. Acceleration of price inflation in a business decline is unprecedented in the postwar era as shown in the following table:

Peak in GNP		Change in the price level	
Year	Quarter	Five quarters before peak	Five quarters after peak
		(percent)	
1948	4th	+7.2	−2.5
1953	2nd	+1.8	+1.4
1957	3rd	+4.9	+2.7
1960	1st	+2.0	+1.9
1969	3rd	+6.0	+6.5

Even as recently as the first half of 1967, when the uptrend in activity was halted temporarily, the rate of price increase slowed to a significant degree, only to accelerate as activity picked up. Price increases in wholesale markets have been less frequent in recent months, but the general price level continues to advance at a rapid pace. Some slowing in the rate of price inflation is generally expected in the remainder of 1971, but most forecasters believe that the price level will rise a least 4 percent for the year as a whole.

Auto strike depressed industrial output, but dip remains mild compared to past contractions



Upward price pressures in recent years have been associated with a rapid rise in labor costs per unit of output in manufacturing. Using the same five-quarter comparison as for the general price level, the rise in labor costs accelerated during the recent decline in business activity. The earlier postwar experience was quite different, as seen in the following table:

Peak in GNP		Change in labor costs per unit of output in manufacturing	
Year	Quarter	Five quarters before peak	Five quarters after peak
		(percent)	
1948	4th	+4.9	−3.6
1953	2nd	+2.2	+1.9
1957	3rd	+4.1	+2.1
1960	1st	−0.4	+0.7
1969	3rd	+5.0	+7.8

The trend of labor costs per unit of output in the late 1950s and early 1960s is even more favorable than is indicated in the table.

Although there were moderate increases and decreases from time to time, labor costs per unit of output in manufacturing were on a virtual plateau from the fourth quarter of 1958 to the first quarter of 1966. In these years, increases in hourly compensation were offset by gains in output per man-hour.

In recent years, average increases in output per man-hour have been disappointingly small, while average increases in worker compensation have increased sharply. These trends have been associated with "cost push" inflation and reduced profit margins.

The way ahead

The economy is now in the upward phase of the shallowest business recession of the postwar period. Before recovery to acceptable levels of activity is achieved, however, the current business adjustment probably will be recalled as the longest of the postwar period. The economy has resisted the stimulus of expansionary monetary and fiscal policies. Monetary policy has been stimulatory for more than a year. Effective income tax rates were reduced in the first half of 1970 when the 10 percent surcharge was removed. Social security payments and welfare expenditures rose in 1970 and will rise again in 1971. Wages and salaries have continued to increase as boosts in compensation have offset declines in employment and shorter workweeks. Expansionary forces, however, have contended with powerful obstacles.

The past year has been marred by widespread labor disputes that culminated in the long auto strike of the fourth quarter. Work stoppages have slowed increases in personal income and have hampered efficiency. Labor disputes had a greater effect on spending for finished goods in 1970 than in any year since World War II.

In addition to strikes, total activity has been restrained by reductions in defense spending and in the size of the armed forces. These cutbacks have been reminiscent of the declines in defense activity associated with the end of the Korean War.

Another factor contributing to the sluggishness of the economy has been the adverse psychology of businessmen, lenders, and consumers. The current business adjustment was preceded by an unparalleled business expansion that lasted almost nine years, and ended in a period of accelerating price inflation. The shock effect of a decline after such a long expansion has been pervasive.

The experience of the United States with price inflation despite growing margins of unused resources has been duplicated, often in a magnified form, in most other industrialized nations. Throughout the world, governments are grappling with problems of economic stabilization that resist the usual formulas. In some countries, direct controls over prices and wages have been employed, usually with indifferent success. Although steps in this direction have also been discussed in the United States, policmakers in the United States are proceeding on the premise that the path to economic recovery and reduced rates of price inflation can best be accomplished with minimal restraint on individual freedom and initiative.

Recessions and depressions

When World War II ended in August 1945, widespread apprehension existed concerning the possibility of a postwar recession resembling the extremely sharp downturns of the 1920s and 1930s. In the business decline of 1920-21, industrial production (output of mines and factories in physical units) dropped by almost one-third from the peak quarter to the low, or "trough," quarter. In the downward phase of the "Great Depression," from 1929 to 1932, industrial production declined by more than a half. Another drop of one-third occurred in the 1937-38 decline. Quarterly data for real GNP are not available for these years, but declines in total activity presumably were almost as large as declines in industrial production. Unemployment averaged almost 25 percent of the labor force in 1932 and 1933, and 19 percent in 1938.

In the Employment Act of 1946, passed in February, Congress declared it to be "the responsibility of the Federal Government to use all practical means . . . to promote maximum employment, production and purchasing power." The Act also (1) directed the President to prepare an annual economic report containing a program for carrying out the policy; (2) created the Council of Economic Advisers to the President; and (3) established the Joint Economic Committee of Congress to review the economic report. With minor amendments the Employment Act of 1946 continues to serve as the government's basic guideline for economic policy.

Since 1946, a number of "automatic stabilizers"—instituted for the most part in the late 1930s, but expanded and liberalized periodically—have helped to maintain purchasing power during business contractions. Among these are unemployment compensation, social security, welfare programs, and farm income supports. The progressive income tax, which takes less proportionately from the income stream in recessions, also is classified as an automatic stabilizer.

The automatic stabilizers have performed a vital function in maintaining purchasing power and relieving distress among those groups most severely affected by slumps in business activity. But these programs have been supplemented, when deemed appropriate, by counter-cyclical monetary and fiscal policy actions. In times of sluggish activity, the Federal Reserve System has increased the availability of money and credit. In the fiscal sector, government expenditure programs have been increased, taxes have been reduced, and lending programs have been expanded.

The automatic stabilizers and countercyclical monetary and fiscal policies have achieved a large measure of success. Since World War II, business declines have not approached the amplitude of the recessions that occurred between the two World Wars. Many sectors have been affected in these postwar adjustments, some severely, but declines in total activity and employment, and increases in unemployment have been moderate by prewar standards.

Some dictionaries define a "depression" as a deep, and long-extended, decline in business activity, and define a "recession" as a milder form of the same phenomena. In the late 1930s, the 1937-38 setback commonly was referred to as a recession to distinguish it from the decline in activity that started in 1929. In recent years, the term depression has fallen into disuse, perhaps because of the limited scope of business adjustments since World War II.

The challenges for small banks

Expansion of remarks of Mr. Robert P. Mayo, President of the Federal Reserve Bank of Chicago at the Group I Iowa Bankers Association Meeting Sioux City, Iowa February 12, 1971

One of the most persistent and controversial questions in American banking concerns the role—indeed the continued existence—of the smaller, locally-owned and controlled, unit bank. Depending on the definition one chooses to adopt, there are from 2,500 to over 6,000 such banks in the nation. Their future is a matter of vital concern to bankers, the public, and bank supervisory officials.

Those most directly affected are the officers, employees, and stockholders who are associated with the smaller banks. Naturally, their lives are intimately affected by the future performance of such institutions. Their concern has found expression in the organization of numerous state, regional, and national associations dedicated to the preservation of "independent banking." Others with more than a passing interest in the matter are the officials of big city banks who would like to expand their operations, either by branching or the establishment of a multiple-bank holding company.

Bank supervisory officials have a somewhat different interest in the matter. Their primary concern is with bank solvency as it affects the stability of the payments mechanism. In addition, their decisions to approve or deny transactions which would consolidate or eliminate small banks often depend heavily on what can be learned regarding the ability of such banks to render adequate services in the future.

All of these groups, though their interests differ and in some cases conflict, benefit from objective knowledge of the situation as it exists. Public discussion of the merits and shortcomings of the uniquely American phenomenon of the small unit bank has long been an arena for the exchange of charges and propaganda by acknowledged self-interest groups. And on some occasions, the validity of the propositions offered seems to have been considered secondary to their effectiveness in convincing the public to support one point of view or another. My objective will be to try to lay bare some of the issues. I make no claim to ultimate answers, but I think I can help to outline the existing evidence in an objective fashion.

Definitions

A logical starting point for such a discussion is with a definition of a "small bank."

Although any definition is necessarily arbitrary, there is much to be said for designating as "small" any commercial bank with $5 million or less in deposits. Such a definition seems to encompass most banks whose size may present particular problems. It also conforms to a deposit-size category for which published data are available.

My basic task is to discuss in general terms the "viability" of small banks. Here the term "viability" is not used in the narrow sense of ability to survive—though that is certainly a major ingredient of "viability." I am thinking of the term more in the broader sense of a bank's current profitability and adequacy of service, and the likelihood that it will be able to continue rendering such service profitably a decade or more in the future.

Some background information

The problems of small banks are comprehensible only within the peculiar framework of American banking and banking regulation. The United States' unit banking system—comprising more than 13,000 separately incorporated banking firms, each with its own board of directors, place of business, and chief executive officer—is unique in all the world. In no other country is there such a profusion of banks. This has been abetted by an historic aversion to concentrated financial power—and the associated reluctance in many states to embrace branch banking. It has been encouraged further by a permissive entry policy stemming from competition between federal and state chartering authorities within our similarly unique dual system of bank regulation. The seeds of the American free enterprise system indeed found fertile ground in the field of banking.

The establishment of new banks took on a feverish pace in the early decades of this century, fed by continued population growth, a broadly-based prosperity, and the unprecedented demands generated by World War I. In 1921, the number of commercial banks in the United States reached an unheard-of level in excess of 30,000. It soon became clear that the banking system was far overexpanded. During the generally prosperous 1920s, the return to prewar levels of demand for foodstuffs and raw materials produced a virtual agricultural depression that lasted until World War II. The consequences for rural banks were disastrous. About 500 banks failed yearly between 1921 and 1929; the total for the decade was almost 6,000.

With the advent of the depression, the decade-long ripple of bank failures reached the proportions of a tidal wave; in the years 1930 through 1933, 8,000 banks failed. The introduction of federal deposit insurance removed the major cause of bank runs, and tighter regulation and more restrictive entry policies slowed bank failures to an annoying trickle after 1933. By the early 1940s, consolidations and voluntary liquidations combined to reduce the number of banks to approximately the present level. Since then there has been no apparent trend either up or down, and since 1954 the number of U. S. banks has not exceeded 14,000 or fallen below 13,000.

The number of banks tends to exaggerate the degree to which banking in the United States is a diffused, decentralized industry. As Federal Reserve Governor George W. Mitchell has noted on several occasions, looking only at the number of banks can be misleading. As one views the distribution of banking resources, the picture is quite different. Three-quarters of the commercial banks in the United States are unit banks. However, they account for less than one-third of the deposits and serve only one-third of all banking customers. At the other end of the

spectrum, the largest 1 percent of banks account for more than half of total deposits. The 20 largest banks alone account for nearly one-third of all commercial bank deposits. Indeed, it is as though the United States possessed two banking systems; one, on the European plan, composed of a relatively few giant banks with vast international operations and extensive branching systems; the other, with five-sixths of the number of banks but only one-sixth of total deposits. The second group serves some 7,000 one-bank communities and other small towns and rural areas.

Branch banking has gained at the expense of unit banking in recent years. On December 31, 1969, in addition to the 13,000-odd head offices of commercial banks, there were more than 20,000 branches and limited-service offices at which some types of banking business could be transacted. As late as December 31, 1950, there were only about 5,000 branches of commercial banks in the United States. Although some of the increase in the number of banking offices resulted from the conversion of independent banks to branches following mergers, the overwhelming majority—on the order of 80 percent—were established *de novo*. But, primarily because of the differing laws governing branching in the several states, this growth was concentrated in certain areas. Unit banks still far outnumber branch banks. As of December 31, 1969, there were almost 4,000 banks, or 28 percent, operating at least one branch, as opposed to about 1 percent in 1900 and 10 percent in 1950. But the great majority of the nation's banks—more than 10,000—remain unit banks. Most, though not all, of the 7,000 insured commercial banks with less than $5 million in deposits—our arbitrarily defined small banks—are among these 10,000.

Although relatively modest in terms of national totals, the banks at the lower end of the size scale are still the sole source of banking services for an absolutely large and, even in relative terms, significant fraction of the American population. Primarily for this reason, their performance in providing these services is a matter of broad concern with important implications for public policy.

Current profitability of small banks

Undoubtedly, the simplest argument one could make for the proposition that small banks are viable is that they exist. But mere existence does not indicate whether a bank is doing a good job relative to some objective standard of performance that is both technologically feasible and economically attainable. Both continued existence and observed profitability can be evidence of a protected market position rather than "viability." Fortunately, there are ways of determining whether observed profitability is due to primarily to desirable economic performance or to the absence of competition. Therefore, it may be of interest to look at what the data show regarding the profitability of small banks.

There is some question as to which of several alternative measures of profitability is most appropriate for assessing the success of banks. One question concerns the appropriate base against which profits should be measured. Because capital ratios are subject to supervisory influences and for that reason are likely to vary greatly between banks with little relation to basic economic factors, some economists prefer to measure profitability relative to total assets. However, it seems clear that what bank stockholders are more interested in, and what bears most directly on decisions to enter the industry, is the return on equity. Hence, profitability is better measured in relation to total capital accounts.

Another problem relates to the choice be-

Bank profitability by deposit-size class, 1968
All U. S. commercial banks

	Deposit-size (million dollars)								
	Less than 1	1 to 2	2 to 5	5 to 10	10 to 25	25 to 50	50 to 100	100 to 500	500 or more
	(percent of total capital accounts)								
Net current operating earnings	9.95	12.39	13.95	15.92	17.00	17.73	17.07	18.18	17.67
Net income before taxes	8.62	10.52	11.28	12.73	13.51	13.90	13.57	14.59	12.96
Net income after taxes	6.89	8.23	8.50	9.48	9.96	10.17	10.31	10.58	9.35

SOURCE: Federal Deposit Insurance Corporation.

tween net current operating earnings and net income as measures of profitability. Because net current earnings are dependent very largely on performance during the current period, while net income figures include security transactions and may reflect decisions based primarily on tax considerations, the former has sometimes been held to constitute a less objectionable indicator of performance. But portfolio management, as reflected in profits or losses on sales of securities, is also an important element of banking performance. Especially if one considers average profitability over an extended period of time, the year-to-year distortions from tax-motivated transactions should tend to wash out. In this case, the net income figures would be expected to give the most comprehensive picture of bank profitability.

Finally, there is the choice between net income before related taxes and net income after such taxes (primarily the federal corporate income tax). In a competitive market, with investors free to make their decisions on the basis of all economic considerations, it is the net income after taxes that would tend to be equalized. Thus, the advantage given to small banks by the lower tax rate applicable to the first $25,000 of net income would be neutralized, in equilibrium, by the entry of additional resources into the market. For all of these reasons, the ratio of net income after taxes to total capital accounts is chosen as the best single measure of bank profitability. Net current operating earnings and net income before related taxes will be presented as supplementary data.

Data compiled by the Federal Deposit Insurance Corporation for all insured commercial banks indicate a marked relationship between bank size and profitability. This relationship is independent of which measure of profits is chosen.

The average earnings ratios of the banks in the first three size classes (less than $1 million, $1-$2, and $2-$5 million in deposits—or the "small banks" under the definition mentioned earlier) are lower than those of the banks in any other size class. The earnings ratios increase in each successive group through the $25-$50 million deposit class. They decline slightly for the $50-$100 million class, increase again in the $100-$500 million class, and then decline again in the $500 million and over class. The earnings ratio of the most profitable size class of banks, the $100-$500 million deposit-size class, was just a shade more than 1½ times the ratio for the least profitable class (less than $1 million) and one-fifth larger than the ratio for the most profitable of the "small bank" size classes ($2-$5 million).

These are significant differences. To the extent that they can be taken at face value, they indicate a marked inferiority in earning power of banks in the smallest size categories.

Seventh District member banks

Operating ratio data for member banks of the Seventh Federal Reserve District show the same pattern as the national data for insured commercial banks. In each year from 1961 through 1969, banks in the two lowest deposit-size classes had lower ratios of net income after taxes to capital accounts than those of banks in larger size classes. The fact that this situation prevailed in each of the last nine years suggests that there is very little chance that it could be the result of special factors operating in a particular year.

The differential in the ratio of after-tax income to capital between the largest and smallest deposit-size classes ranges from 2 to 4.6 percentage points over the nine-year period. In relative terms, the average rate of return of the largest group ranges from 1.27 to 1.66 times that of the smallest size group. Although the trend is not altogether clear, it looks as if the differential may have widened in the last three years, although a major revision of the class intervals in 1969 obscures the change during that year. Whether this is a lasting development remains to be seen; but it constitutes a marked departure from the behavior of the differential between 1954 and 1965, when it ranged between 2 and 2.6 percentage points. Changes in the populations of the several size classes attributable to growth and redefinitions of the class boundaries make impossible any definite conclusion about changes through time.

Obviously, the data indicate that small banks have poorer earnings records. It is of interest, however, to determine whether this apparent disadvantage is simply a matter of accounting, or if real, whether it reflects a conservative asset policy, a less-than-optimal pricing policy, or high costs.

There are several possible sources of bias in the reported earnings data based on the arbitrariness of accounting procedures. It has

Ratios of net income after taxes to capital accounts
Seventh District member banks

Year	Deposit-size groups (million dollars)												
	Under 2.5	2.5 to 5	Under 5	5 to 15	5 to 10	15 to 25	10 to 25	15 to 50	25 to 50	50 to 100	Over 50	100 to 500	Over 500
	(percent of total capital accounts)												
1961	7.3	8.3	New classification, 1969	9.3	New classification, 1969		New classification, 1969	10.8		New classification, 1969	11.9	New classification, 1969	New classification, 1969
1962	7.4	8.2		9.1				8.8			9.4		
1963	6.9	8.0		8.1		8.6		Classification discontinued, 1963	8.3		9.2		
1964	7.0	8.0		8.7		9.0			8.8		9.1		
1965	7.5	8.5		8.5		9.2			9.5		9.6		
1966	8.5	8.5		9.3		9.6			10.2		9.4		
1967	6.5	8.9		9.5		10.3			11.1		10.8		
1968	7.2	8.6		9.0		10.6			10.6		11.3		
1969			8.7		9.9		10.4		10.7	10.8		10.7	10.7

often been suggested, for example, that the owner-managers of small banks tend to pay themselves relatively modest salaries while building up their equity in the banks through retained earnings. In this way, small banks may be able to increase overall after-tax income. In a strict economic sense, the return on capital would be exaggerated and salary expense underestimated. However, the existence of such behavior would only strengthen the conclusions reached above, in that a correct reporting of salary expense would make even more pronounced the differentials in earnings ratios. Others have suggested the possibility of a systematic, size-related bias in reporting profits running in the opposite direction—i.e., that closely held small firms may pay their owner-managers excessively high salaries to avoid double taxation of dividends. In this case, their profits would be understated.

Evidence on the salaries paid by banks of different asset size does not support the hypothesis that small bank owner-officers take much of their profit in the form of high salaries. A 1967 survey indicates that the median officer's salary paid by banks with more than $500 million in assets ranged from 14 to 33 percent greater than that paid by banks with assets of less than $100 million, depending on the age group of the officers. To be sure, officers' salaries—and, for that matter, total salary expense—constitute a smaller share of total operating expenses for large banks than for small banks. But this is primarily a matter of a lower ratio of officers to employees at larger banks. So it appears that the lower rates of return on equity earned by small banks are real.

Remarkably enough, these low earnings ratios do not result from any obvious inefficiency in utilization of small bank assets. Although small banks tend to hold from 5 to 15 percent less of their assets in the form of loans than the largest banks—because of conservatism, liquidity needs, weak local loan demand, or deliberate restriction of credit to maintain its price—this alone would account for only a very small difference in their rate of return. Nor is the difference to be found in differences in gross yields on assets. Rather than displaying any persistent tendency to be consistently either higher or lower than that of large banks, the average return on loans of small banks doesn't seem to change much. When interest rates are high or rising, the average rate of return on loans and on total assets of large banks rises above that of small banks. The opposite seems to be true when rates are low or falling.

The ratio of total expenses to total operating revenue also fails to show any consistent relationship to size. In 1969, Seventh District member banks with deposits under $5 million had an average expense/income ratio of 78.26 percent, while those with deposits over $500 million had an average ratio of 78.72 percent.

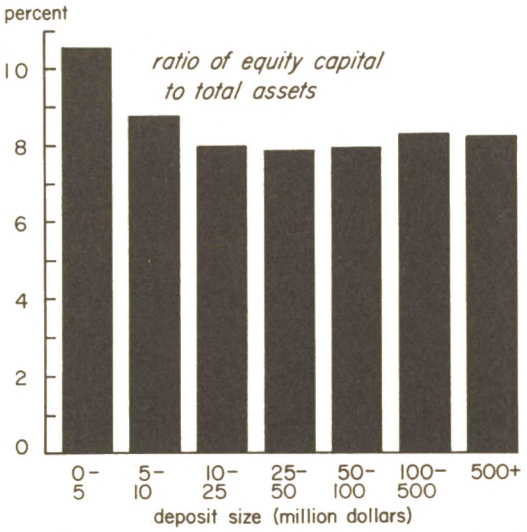
Capitalization ratios

With no systematic differences in either gross yields on assets or the ratio of expenses to revenue, the lower earnings of small banks on capital can be attributed to only one factor—a higher ratio of total capital accounts to assets. The data confirm that this is the case. In 1968, Seventh District member banks with under $2.5 million in deposits had an average ratio of total capital accounts to assets of 11.3 percent, more than 1½ times as great as that for banks with over $50 million in assets. Accounting changes in 1969 destroyed comparability with the earlier figures, but the ratio of total capital accounts and reserves—the base on which return is now measured—to total assets remains much

higher for small banks. So far as current profitability is concerned, the differences between large and small banks are primarily a consequence of the much higher capitalization ratios of small banks.

The reasons for these differences in capitalization ratios are not entirely clear. Occupancy expense ratios do not suggest any major economies of size attributable to indivisibility of bank premises. On the other hand, the great variability in loan loss experience among small banks suggests that they may be subject to considerably more risk than are large banks with a larger number of loans on their books. Small banks may also be subject to greater risks from deposit fluctuations, although the most recent evidence suggests that this depends heavily on the observation period one uses in measuring deposit changes. Finally, differences in capitalization ratios may be caused partly by regulatory pressures, although there is some evidence that banks have succeeded in substituting deposit insurance for capital as protection for depositors. Whatever the causes, however, it is clear that small banks do suffer a major earnings disadvantage.

Small banks have higher capital ratios



Note: Data are for Seventh District member banks for 1970.

Economies of scale

Although recent operating ratio data do not indicate any systematic relationship between deposit-size and expense ratios, studies utilizing economically meaningful measures of banking output and costs suggest that there are important, if modest, economies of scale in the production of commercial banking services. The results of some of the earlier of these studies are subject to doubt because of their uncritical use of operating ratio data, which—in contrast to the same type of data for more recent years—seemed to indicate declining unit costs as size increased.

By measuring size or output by the dollar volume of deposits or earning assets, these studies attribute to the economies of large size some cost savings that are actually the result of larger average size of transactions. Consequently, early studies cannot be interpreted as showing that large banks could supply at a lower cost the same mix of services small banks are called on to provide. Later studies, however, employing such physical measures of output as the number of accounts and account activity, tend to confirm the earlier findings of economies of scale in banking. The most sophisticated of these studies, published in 1968 as a research report by the Federal Reserve Bank of Boston, states:

> If a typical commercial bank were to expand all its activities (functions or products) within its existing facilities by 10 percent, total cost would rise by 9.3 percent . . ..

In other words, costs would increase by less than output, and unit costs would decline.

The fact that there are economies of scale in the production of commercial banking services does not mean that small banks are destined to disappear through merger or through competitive extinction. Many small banks serve markets that are small and geographically isolated. They could grow more rapidly than the economies of their immediate areas only if they were permitted to branch into additional markets. So long as we confine our attention to unit banks, therefore, there is no way to increase the size of such banks to improve efficiency. They may, in fact, be of optimal size for the markets they serve.

Assuming that small unit banks could be acquired by large banks and operated as branches, is it clear that such action would be economical in all cases? Because of the difficulties of obtaining appropriate data for individual branches, this question cannot be answered definitively. Preliminary evidence suggests that any cost advantages obtainable by operating a banking office of a given size as a branch of a larger bank, rather than as a unit bank, are modest.

The evidence on economies of scale is made less ominous than it might appear by the great variation in performance of banks within a given size class. Despite the systematic tendency of small banks to have higher unit costs than large banks, the most efficient small banks have lower unit costs than the average large banks. There will always be a place for the well-run, efficient, small bank. The very nature of an average, however, implies that small banks displaying exceptionally good performance are offset by other small banks whose performance is poor. Except insofar as their owners are willing to endure less-than-competitive returns in exchange for the privilege and prestige of continuing in the banking business, the future of such institutions is bleak.

Future problems

The continued "viability" of many small banks will depend on how well they are able to cope with expected increases in what Mr. Howard Crosse, formerly of the Federal Reserve Bank of New York, has called "prospective costs." These are the levels of costs which the bank may reasonably expect to incur in the near future, as opposed to its current operating costs. In many cases, because of imperfections in the labor market or other special conditions, the costs banks experience currently are far lower than their "prospective costs."

A common example is the experienced and trusted employee who is nearing retirement age, and who, because of his attachment to the community and the satisfactions of his job, has been willing to accept a salary lower than a man with comparable qualifications could earn elsewhere. It is very unlikely that the man in question can be replaced with a younger man except at a considerably higher pay scale. The salary differential between large and small banks is much less for younger officers more willing and able to seek alternative employment. To use a term from a somewhat different context, the replacement cost for an older employee is sharply higher than his original or historic cost. Failure to take account of such a factor in planning for the future is the equivalent of living off one's capital. The particular example used to illustrate the problem of increasing "prospective costs" is familiar to bankers in the guise of the "management succession problem."

A potentially more dangerous threat to the continued satisfactory functioning of small banks is the development of new banking

services and technology that requires both specialization of labor and large indivisible pieces of mechanical or electronic equipment. It is argued that, because the minimum size of bank able to take full advantage of cost-reducing and service-expanding innovations is quite large, small banks will eventually be forced to combine, in one way or another, into larger banking organizations. To state this view is not to demonstrate its validity.

The fact that only large banks find it feasible to operate their own computers is not equivalent to saying that small banks cannot enjoy the benefits of a computer. Many small banks already purchase computer services from independent data processing firms on a time-sharing basis; some purchase such services from their large city correspondents. Incidentally, many banks have found entry into the computer age to be anything but an unmixed blessing. Predicted cost reductions often have not been realized, or have been realized years later than expected. More recently, competition in the provision of computer services on a time-sharing basis has developed to the point where few banks are able to report a profit on this type of business. Despite these reservations, however, there remains a presumption, shared by many within the banking community and elsewhere, that there are indeed benefits of efficiency and improved service to be realized by combining existing small banks into units large enough to take full advantage of a continually evolving computer technology.

Serving the community

Of all the questions having to do with the present and future role of small unit banks, none is more important or more difficult to answer than that of how well they have served the "convenience and needs" of their communities. Small bank officials are fond of expounding on the friendly, personal service rendered by locally-owned banks and citing evidence that such banks tend to make more unsecured loans than the cold, businesslike branches of big city banks. Advocates of bigger banks and expanding branching are likely to retort that hard financial facts are a better basis for allocating society's scarce capital than the personal likes and dislikes of a country bank president, and to go on to cite figures indicating that large banks consistently place a larger proportion of their assets in loans, which contribute directly to community developments, than do small banks.

There have been a number of studies designed to throw some light on how well banks of various sizes meet the needs of their communities. For example, a recent survey of more than 2,000 banks in the Seventh District indicated that only three of 17 non-credit consumer services were more likely to be offered by small banks than large banks. These were one-statement banking, insurance agency, and automatic customer bill payment services. It was hardly surprising, moreover, to learn that the most dramatic differences were in trust services, foreign banking services, and in-plant banking. Of 19 non-credit business services, only one—insurance agency services—was offered with greater relative frequency by small banks. All the others—including credit information, lock boxes, bank statement reconciliation, payroll accounting, business income/expense record keeping, equipment leasing, managerial services, and freight traffic services—were offered with greater relative frequency by large banks.

It is obvious that what appears to be a marked superiority on the part of large banks in rendering services is primarily a reflection of the differences in demand between urban and rural areas. Even if there is a latent de-

mand in small bank markets for such services as portfolio management, securities registration, freight payment, and trust services, it is clear that this demand could not be very great. That being the case, it is doubtful that a large bank acquiring such a small bank and operating it as a branch would find it economic to offer all these services at the branch office. In many cases—as has become apparent to us in the course of processing applications for mergers and holding company acquisitions in the Seventh District—a promise to provide trust services, for example, at an office where they were previously unavailable often means no more than that a customer inquiring about such services will be referred to the trust officer at the bank's head office. This, obviously, adds nothing to what a unit bank can do by referring customers to its correspondent.

What appears to come through from these data is that the provision of services depends largely on the banker's capacity to recognize the demand for services in his area, and to fulfill the demand through his ability to turn the benefits of technology to his own and his customers' advantage.

Rural credit needs

To some of your customers, in particular the farmer, the ability to obtain credit when and in the quantities he needs it, will be of much more direct interest and immediacy than the variety, quality, or even price of services. For many years, the availability of bank credit was not a problem. The great liquidity built up in the postwar years enabled rural banks to meet demands for agricultural credit without difficulty. As loan-deposit ratios and the average size of farms have continued to grow, however, the situation has changed; rural banks are reaching the limits of their lending capacity in two distinct but related senses.

First of all, most rural banks no longer have the excess liquidity they did 20 years ago. Loans have increased at a much faster pace than deposits.

The other complication faced by rural banks in servicing the credit needs of their farm customers is the continuing rise in the average size of loan requests. After doubling between 1956 and 1966, the average size of farm loans has continued to increase at a comparable rate in more recent years. This means that a continually growing proportion of farm loans approach the legal lending limits of the farmers' local banks.

These developments, plus projections of substantial growth in farm credit demands, suggest that many small banks will find it difficult to meet the credit needs of their communities from the banks' own resources. Appropriately, attention has been directed toward devising new means to channel funds to rural banks. Proposals currently under consideration call for encouraging banks to discount farm loans at Federal Intermediate Credit Banks, expanding seasonal borrowing privileges at the Federal Reserve discount window, and providing government guarantees for some new type of debt instrument to be issued by rural banks to make feasible the development of secondary markets.

But as useful as these types of measures may be, banks should not rely on them to rationalize their own inaction in other ways. As I argued last October in Des Moines, small banks must respond if we hope to improve these credit flows. The correspondent bank system, for example, is very much alive. Through aggressive and imaginative use by both small and large banks this system can provide an even more efficient channel for the flow of funds between capital surplus and deficit areas.

Conclusions

I firmly believe that the viability of the small bank depends largely on the willingness and ability of small bank management to grasp the opportunities available. We can review, discuss, and evaluate the most sophisticated of economic studies, but we would still come to the conclusion that these are poor substitutes for the test of the marketplace. The only conclusive proof of the continued usefulness of small banks would be their customers' demonstrated loyalty in the face of convenient alternative sources of banking services. In too many cases, however, artificial barriers to competition prevent such a test from taking place.

We can and should be striving to remove the obstacles that obstruct the free workings of the market. Just how this should be done and to what lengths any liberalization of the banking laws should be varied are difficult issues. I do not pretend to know how they can best be resolved. My intention has been to go to the roots of what, in my view, are serious questions affecting the future of the banking system in the United States. And with these words, I pass this hot potato back to you.

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